Want to be happy? Aim high.
Discover the link between goal-setting and satisfaction. Page 2
These results may help many a perplexed economist understand why—despite that at least 20 percent of American homeowners hold underwater mortgages—surprisingly few have opted for strategic default. Read more on page 16.

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The perennial question of how much power and control a manager should share with staff has always been a difficult one. The question is even more pressing in today’s workplace, given technology’s potential to offer employees more job autonomy than ever before.

Past research has shown that more freedom is better: increased decision-making power leads to greater satisfaction and job performance because staff feel more in control of their work. But how does increased freedom—and decision latitude, a broader array of choices—affect employees’ perceptions of their managers as leaders?

Professor Sheena Iyengar and doctoral candidate Roy Chua created two lab experiments to test how increased job autonomy and decision latitude affected how managers are perceived. In the experiments, participants were presented with a hypothetical work scenario in which a manager offered them greater or fewer choices in how to accomplish their work. For example, a software engineer offered two, four, or six different programming languages to complete a computer project.

Afterward, participants were questioned about the manager’s leadership qualities. Additionally, a separate survey was given to a group of MBA students asking about how much job autonomy their past managers had given them in each work situation and how they perceived each of the managers.

Through the three studies, Iyengar and Chua found that striking a balance is key: more decision-making power for employees increased perceived leadership effectiveness and agreeableness of managers, but too much freedom caused managers’ images as effective leaders to suffer because they were perceived as less conscientious.

“Managers who don’t give their employees choices in how to do their work are perceived as dictators or authoritarians,” Iyengar says. “And managers who offer too much freedom are perceived as warm but incompetent.”

Iyengar explains that there is a happy medium: managers who offer employees limited choices in their approach to work—some options, but not too many—are perceived as warm and competent. “Employees think of those managers as effective leaders because they feel that they have spent time thinking about their goals and have been more strategic about what choices they want their employees to contemplate,” Iyengar says. “In that situation, they think of the choices their managers have given them as empowering.”

To be effective leaders, managers must offer employees the right amounts of choice and flexibility.
People often set low goals that are easier to reach with the belief that doing so will guarantee happiness. But does this approach actually protect the goal-setter and lead to greater satisfaction? The answer may lie partly in how people measure their performance—whether against their initial goal or the pinnacle of what is possible in a given situation. For example, is a student who aims for a B on a test satisfied when they earn that grade, or are they disappointed because they could have earned an A?

To find out whether those who set low goals are as satisfied as those who set higher goals, Professor Gita Johar and former doctoral candidate Cecile Cho, now assistant professor at the University of California, Riverside, looked at goal setting in the context of financial decision making and puzzle solving. They predicted that individuals who felt a need to avoid future disappointment would set low goals to avoid the disappointment that could come from not meeting higher goals.

Johar and Cho asked study participants to set “desired percent return on investment” goals that they thought would satisfy them, first subtly priming some of the participants to set low performance goals while leaving others to set goals without any such influence. Participants then took part in a simulation scenario where they had to invest the money based on stock information provided by the researchers.

Afterward, Johar and Cho provided feedback, telling all participants their investments met their performance goals. Participants were then asked how satisfied they were with their performance. Ironically, those who set low goals up front to avoid future disappointment were less satisfied than those who set high goals. The researchers ensured that the results could not be explained by differences in the actual level of performance. Even though people expect to compare their performance to their initially set goals, they end up comparing it to what could have been and are therefore doomed to disappointment when they set low goals.

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### Want to Be Happy? Aim High.

#### The Idea
To be happy in the long run, set ambitious rather than modest goals.

#### The Research

People often set low goals that are easier to reach with the belief that doing so will guarantee happiness. But does this approach actually protect the goal-setter and lead to greater satisfaction? The answer may lie partly in how people measure their performance—whether against their initial goal or the pinnacle of what is possible in a given situation. For example, is a student who aims for a B on a test satisfied when they earn that grade, or are they disappointed because they could have earned an A?

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#### The Application

##### Marketing Managers
You can use this research to better understand how to increase consumer and employee satisfaction. In general, encouraging individuals to set ambitious but attainable goals may lead to more satisfaction and greater happiness than encouraging low goals that are easier to reach. Consumer satisfaction often suffers because consumers tend to forget their initial expectation for a product and evaluate the product relative to foregone options (what could have been). Reminding consumers of their initial—and often more modest—expectations would ensure that satisfaction is not negatively affected when using a product.

##### Business Professionals
The takeaway for individuals: don’t sell yourself short. Aim high if you want to be happy, especially in the long run. Johar says that individuals are often poor judges of predicting what will make them happy, so rather than trying to forecast whether attaining a certain goal will lead to satisfaction, people will be happier if they set relatively high goals and strive for them—and up to a point, whether they reach them or not.
THE APPLICATION

Marketing Managers

You can use this research to more accurately predict likely consumer preferences for your firm’s products and services.

The poker players spent much more time on the information presented about the products—taking in 85 to 90 percent of the information compared with 60 to 70 percent for a standard conjoint study. Conjoint poker also better predicted market share, and participants reported enjoying the game more than those who took the traditional survey.

Although playing conjoint poker takes more time and is more complex than a standard survey, participants need not be skilled poker players to compete, and most users reported they would do it again and would only ask for the same amount ($5) of compensation.

How can market researchers get people to pay more attention and treat their experimental choices more like real choices?
With their words, leaders take charge, issue commands, and inspire. Who hasn’t been roused by a great speech or been inspired to join in when someone lays out an articulate, convincing case for action?

“The image of a leader that often comes to mind is someone who is expressive and charismatic and has presence,” says Professor Joel Brockner, whose research focuses on managerial decision making and organizational change.

“Speaking up is part of leadership, but we also think the receptive side of leadership has gotten short shrift,” adds Professor Daniel Ames, whose own research examines, in part, judgment and behavior in organizational settings. Ames and Brockner, along with then-doctoral student Lily Benjamin Maissen (now a PhD), recently took a closer look at what they view as an important complement to the expressive aspects of how leaders are influential.

The researchers gathered hundreds of reports from former colleagues of MBA students in the core leadership course. The researchers first asked the colleagues, who had worked with the students for years, to assess their former coworkers’ skills and habits. The survey included questions measuring how influential the students were, such as whether they were able to persuade others, direct meetings, and turn conversations in their favor. The survey also asked the former colleagues to evaluate the students on expressive communication: were they able to make points effectively, communicate openly, and use vivid images when making arguments? Finally, the survey asked how skilled the students were as listeners. Were they able to take criticism? Did they encourage people to open up and share information? Did they build on what they heard in conversations?

Leaders maximize their influence when they balance speaking out with listening up.
The researchers then analyzed what factors from the survey responses predicted whether coworkers reported students as being influential. “We found over and over that above being charismatic or expressing things well, people who listened well are particularly influential,” Brockner says of the results. “And the particularly interesting part is that the whole of being influential is greater than the sum of the individual parts: expressing yourself well in combination with listening well makes you more influential than would be expected by simply adding these two skills together.” They also found that verbal expression and listening are positively correlated: better listeners were better at expressing themselves and better talkers were better listeners.

Why is listening so important? “Good listeners, as we know from a lot of research, learn from others,” Brockner says. “There is an informational basis for this. For example, as a manager, if I listen, I learn what makes you motivated, thereby putting me in a better position to motivate or influence you. There’s also a relational basis. When people feel ‘listened to’ they feel more trusting and form stronger bonds. With that, they are more willing to go along with what you ask.”

The gold standard of good listening is not measured by how quiet you are. It’s about doing things to let the other person know that you are seriously considering what he has to say.”

Whereas the evidence in this study comes from MBA students, both researchers work with hundreds of executives a year, including in the School’s Executive Education programs, where they see the same pattern of results. “We repeatedly find that listening is a crucial part of being effective and influential as a leader. And we also often find that people don’t know how they come across as listeners,” Ames says. He acknowledges that there are no real secrets to being a better listener, but there are some behaviors that can take effort to change. Ames and Brockner offer a few suggestions for influential listening:

**5 STEPS FOR INFLUENTIAL LISTENING**

1. **Don’t follow your instincts**—at least not always. “Listening is sometimes most valuable when it clashes with your instincts and impulses,” Ames says. “In a conflict, when someone is disagreeing with you and you really don’t want to hear him out, that is exactly when listening is most useful.”

2. **Capture your own attention.** Listening is difficult in part because we have a lot of brain capacity, Ames says. “We can process language at 300 to 500 words per minute. But most people speak around 100 words per minute. So we have extra capacity that makes it challenging to manage our attention—instead we look at the person walking across a room or consider an idea bubbling up in our minds.” One way to manage your own attention is to put that extra capacity to work by making more effort to draw out your counterpart through questions or to organize in your own mind the points they are making.

3. **Stop interrupting.** For just one week, every time you want cut off another person and forge ahead with your own point, wait. Instead, ask a question. Ames says, “It is a way to reflect on your habits and get more out of others by understanding their points more completely.”

4. **But don’t be quiet.** “The gold standard of good listening is not measured by how quiet you are,” Brockner says. “It’s about doing things to let the other person know that you are seriously considering what he has to say.” Elicit information, ask questions, make direct eye contact, and, whatever you do, don’t engage in other activities while you claim to be listening.

5. **Implement.** The real litmus test is what you do after the conversation, Brockner says. “The most persuasive thing a manager can do is to implement what people are saying. The rule should be that as long as another’s recommendation is not worse than what you as a manager would do—you should not hold your staff to a higher standard than you hold yourself—then act on the suggestion. Otherwise you’re losing an opportunity to show that you are good listener and to build relationships and trust.” And if the idea is worse? “You still need to come back with a reasonable explanation in a way that lets the recipient know his views were seriously considered.”

**Conclusion**

In the end, the researchers say, there is no horse race between being a talkative leader and a listening leader. Instead, it’s the interaction between being a good communicator and a good listener that is at the heart of their findings. “If you get one right and the other wrong, you are not going to be maximally influential,” Ames says. “Persuading and leading effectively often means balancing expression and receptivity, holding forth, and also letting others feel heard.”

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What Really Moves Us?

In a new book, Tory Higgins explains what managers and other leaders stand to gain by looking past simple carrot-and-stick tactics for motivating others.

What’s wrong with viewing motivation as a function of the hedonic principle—that we are motivated to seek pleasure and avoid pain?

For thousands of years we’ve simply accepted this idea that in all cases, “carrots” motivate people to do something to get what they want and “sticks” motivate people to avoid something they don’t want. We all think this way: managers with their employees, parents with their children, teachers and coaches with their students. One of the reasons for writing the book is to say that while this idea is not wrong, it is extremely limiting.

For example?

In one of our senior executive courses, a student, a VP in the aerospace industry, talked about a failed effort to improve the safety and reliability of their products. To produce the improvements, his solution was to introduce a carrot—a bonus. But the carrot failed. Next, he tried the stick—reducing salaries if safety didn’t improve. Safety did improve, but morale dropped.

To understand why sticks worked better than carrots, you have to distinguish between what are two very different systems for dealing with pleasure and pain. In the promotion system you are trying to gain and move forward to something better. Pleasure in this case is a gain, and pain is a non-gain. In the prevention system you are concerned about security and maintaining a satisfactory status quo, rather than a gain, which could be risky and result in a loss. Pleasure in this case is maintenance, feeling secure, and pain is loss.

Improving reliability and safety is a prevention issue. Therefore, you want to put workers in a prevention mindset so that they will be vigilant and careful. That aeronautics firm’s bonus probably put staff in a promotion mindset, prompting them to care more about innovation and creativity than safety and reliability.

Can you induce these states of mind even when someone is predisposed toward one system or the other?

Yes, and it’s a real advantage for a manager, coach, or teacher to understand that. We’ve done research where success means ending up with $10 more and failure means not ending up with $10 more. In one case we frame it as a bonus, starting at zero and awarding $10 for achieving a set criteria of performance. In the other case we frame it as a potential loss, starting at $10 and deducting for mistakes. The first technique induces a promotion state and the second induces a prevention state. That aeronautics VP could have promoted safety and retained good morale by telling the developers that a certain amount of money had been set aside, but that it could be lost over the course of the year if safety goals were not met.

You don’t have to use incentives at all. Prevention also relates to duties and obligations, which have to do with relationships. If product developers meet the people who are going to use their products, it might foster a sense of responsibility toward those people that would prompt the developers to be more vigilant in their work.
That is related to another idea in the book, which is that people want to be effective. Would you talk about that?

Understanding how pleasure and pain relate to promotion and prevention states relates only to one way of being effective—value, or achieving desired results. Not all desired results bring hedonic pleasure; you can experience the pride of achievement, which for most people is accompanied by a lot of sweat, effort, and pain.

What the book says, in addition to that, is that we are very motivated to be effective, in ways that have nothing to do with value, but that have to do with control and truth. Control is the way you feel when you experience yourself having an effect on the world. In its most obvious form we see it in little kids jumping in puddles; you can see in their faces that they’re feeling effective and engaged. You see it in adults whenever we are manipulating things, one thing and then another and another, to make them work until we achieve the final goal.

You should set the conditions to allow employees as much as possible to be the ones who experience having the effect of managing what happens. Micromanaging does not allow employees to manage what happens; it takes away control effectiveness.

Humans are also motivated in a way like no other animal is with respect to the truth. We need to know the difference between what is real and what is imaginary, what is true and false, right and wrong. Our whole legal system, religious systems, and political ideologies are about that. And no other animal has ideological conflicts; they don’t kill each other for who owns the truth, and that has been really underestimated in the scientific literature on motivation and in people’s everyday lives. Knowing what is true versus false is a way of being effective.

How can a manager use this in a workplace context?

Because people care about the truth and establishing what is real, they care about learning. We don’t appreciate enough how strongly that can motivate people. To the extent to which you can set conditions where your employees feel that they are gaining knowledge—that could lead to higher morale and lower turnover. You don’t want to undermine that in any way.

Shared reality is another aspect to truth: humans don’t consider something to be the truth unless it is verified by others. I’m not talking about personal truths but about shared truths. It’s another reason why some performances can be more effective if they are done in teams. It is not only because team members bring diversity and different skills. If your team develops a shared understanding of something, it becomes more real. They will be more committed to it.

And how do the three elements work together?

The essence of motivation, and what has been left out of motivation science, is that value, truth, and control have to work together. It’s the fit that counts—making sure that the value, which is the goal, and the control, which is the means and the strategies, fit together.

The relationship between truth and control is another beautiful marriage: seeking truth alone, there is the possible downside of getting lost in reflection and not doing anything. So the control part says come on, truth, let’s get on with it and do something. The flip side is that control guys will make anything happen, and make all kinds of mistakes. So truth tempers control, saying, let’s just wait a bit and see what makes the most sense.

What’s an example of this in practice?

We often look at fit in terms of the kinds of leadership and management styles that work best with different kinds of employees, but fit in this case relates to locomotion, which corresponds to control, and assessment, which corresponds to truth. A high locomotor is someone who just wants to get on with it. They would rather do anything than nothing at all. A high assessor wants to critically evaluate all possible options to arrive at exactly the right answer. They would rather do nothing than do the wrong thing.

These don’t contradict each other. Research has shown that if you created a team in which everyone was a high locomotor, another team in which everyone was a high assessor, and a third team that was mixed, the mixed team would perform best at tasks for which speed and accuracy were both...
Discrimination against minorities and women—whether in housing, education, or employment—is a complex, long-standing phenomenon with origins that are not clear-cut. For organizational psychologists like Professor Modupe Akinola, understanding the conditions under which discrimination is more likely to occur is an important research priority and one that can help individuals and firms curb the incidence of bias.

Inspired by the work of Yaacov Trope and Nira Liberman, Akinola, with Katherine Milkman of Wharton and Dolly Chugh of NYU, investigated how temporal distance affects the tendency to discriminate. Trope and Liberman have shown that decision makers faced with choices in the immediate future focus on the practical details and feasibility of the choice, quickly assessing how, when, and whether something can be done. In contrast, distant future events trigger an abstract mode of thinking causing people to question why the meeting should occur rather than whether the meeting should occur. Thus, a meeting request from a woman or person of color might evoke stereotypes.

Using academia as their laboratory allowed the researchers to focus on a field in which there are many systematic, institutional efforts to increase the representation of minorities and women and where there is some, if limited, diversity in terms of faculty members.

“If we just look at the representation of women and minorities in academia, it’s pretty clear why some stereotypes about women and minorities might reign,” Akinola says.

The academic setting also gave the researchers a large sample size. The researchers contacted 6,500 professors from 6,300 doctoral programs at the top 260 US universities, noting their race, academic rank, gender, and e-mail address. Each professor received a single e-mail request for a short meeting from a fictitious prospective doctoral student.
student. Some of the requests were for meetings that same day, a Monday, while other requests were for the following Monday. The fictitious prospective students had names that were highly likely to signal a gender and ethnicity, whether Caucasian, Latino, African-American, Indian, or Chinese.

When a student requested a meeting that same day, professors replied to all students at about the same rate and accepted or rejected the requests for same-day meetings at about the same rate, regardless of the perceived race or gender of the student. But when students requested a meeting for the following week, presumed white men were granted meetings with faculty members 26 percent more often than presumed women and minorities. The white male names also received more and faster responses than women and minorities, the researchers found.

Importantly, minority professors who received a request from a student of their own race still displayed the temporal discrimination effect. “Every single minority group studied showed this temporal discrimination trend,” Akinola says. “There are some ethnicities that are viewed as model minorities in some ways, but people of all ethnicities still view or respond to minorities differently than white males.”

In past studies, it’s been unclear in which fields discrimination is more likely to occur. In a related study that analyzed these response rates by field, Akinola and her co-researchers found that in business, education, human services, and health sciences professors were less likely to respond to women and minorities than those in fields such as social sciences and humanities, as were professors in private (compared to public) institutions and in higher paying disciplines.

Taken together, the current studies provide more evidence about who is more likely to discriminate and show that context matters. Any organization that must hire and manage a workforce, Akinola says, needs to understand and be attentive to the subtle influence temporal distance can have on decision making. Especially given that many organizations are trying to increase diversity within their ranks, leaders must consider the role temporal distance might play in, for example, deciding which candidates to interview, making sure to examine their processes to identify aspects that may make it more likely for decision makers to discriminate.

“We are all susceptible to stereotypes entering our calculus,” Akinola says. “Sometimes we forget that something as subtle as when someone is asking to meet with you can make a difference. Now that we know this, we can consider how that might influence our responses.”

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As Americans’ serving portions, appetites, and waistlines grow ever larger, marketing’s role in spurring the obesity problem is increasingly questioned because marketing activities have a direct impact on eating habits. According to the Centers for Disease Control and Prevention, more than one-third of adults in the United States are considered obese, and research shows that overexposure to advertisements featuring high-calorie foods encourages overeating and obesity. For many, the problem starts early: the Federal Communications Commission states that the average American child views more than 40,000 TV commercials in one year, and studies have shown that children who watch TV more than four hours a day are more likely to be overweight than those who watch less TV.

But Professor Donald Lehmann and other experts believe that if marketing has contributed to the obesity problem, it can be used to help consumers make healthier choices, too. Many studies have assessed the impact of different communication approaches—for example, inciting fear of potential health consequences, such as strokes and certain types of cancer, or focusing on positive benefits, like having more energy—on participants’ attitudes and intentions toward food and healthy behaviors.

Working with Punam Keller of Dartmouth, Lehmann used meta-analysis to examine 85 consumer research studies that measured the effectiveness of health communications. The researchers looked for patterns across the studies, focusing specifically on the characteristics that were measured, like health goals, framing, how trusted a source is, and whether messages were tailored or standardized to determine which marketing strategies are most effective in reaching consumers.

**THE IDEA**
Create successful anti-obesity campaigns by employing targeted, not broad, messages.

**THE RESEARCH**

If marketing has contributed to the obesity problem, it can be used to help consumers make healthier choices, too.

**THE APPLICATION**

**Marketing Managers, Policy Makers**
You can use this research to help decide how to tailor health communications or marketing to reach specific groups of consumers. When a standard, broad message is needed, the findings suggest which types of messages and formats will reach as large an audience as possible.

The researchers found that mass appeals are not as effective as targeted messages in influencing individuals’ intentions to follow health recommendations. Instead, the gender, age, and race of the target audience are critical in designing effective health messages. Their meta-analysis of the previous studies revealed, for example, that women are more likely to respond to messages that play on their likelihood to overeat in response to and in anticipation of emotions, particularly sadness, and urge them to control their eating habits out of a sense of responsibility to others. By contrast, elderly audiences who are typically more interested in prevention may be more influenced by messages that discourage unhealthy behaviors like maintaining a poor diet and a sedentary lifestyle than by messages that encourage healthy eating and exercise.

Regardless of target audience, the most influential ways to increase intent to follow through on any healthy behavior (such as quitting smoking, for instance) are by providing individual stories, using women to communicate the message, and focusing on detection of health problems. Another effective message format did not involve advice from health experts, such as physicians, but showcased emotional stories detailing how and why regular people reached their weight-loss goals. Also, communication about obesity may be more effective when it focuses on the most severe obesity-related health consequences—for example, heart attacks or diabetes.
Choice and Collaboration

Daniel Ames, who coordinates the School’s Decision Making and Negotiations Cross-Disciplinary Area, discusses the program’s impact and highlights the contributions that Columbia Business School scholars are making in this critical field.

What is the role of the Decision Making and Negotiations Cross-Disciplinary Area—why is it important that the School embark on a cross-disciplinary effort in decision making and negotiations?

It’s just critical that we—individuals, professionals, leaders, policy makers—get decision making and negotiations right in order to be effective. And in a world that is increasingly complicated and fast-paced and globalized that challenge grows greater and greater.

We have some of the world’s best scholars on these topics across our five academic divisions. We saw an opportunity to deliver even more in this area by helping bridge our existing resources. We’ve always talked as colleagues, marketing to economics, management to marketing, and so on. But the Decision Making and Negotiations Cross-Disciplinary Area—what we call the DNA—was really meant to fuel those conversations, to help people have better dialogue with one another, to improve one another’s research, to make us even more effective in our teaching.

The second pillar is helping our faculty members connect with one another. Our ongoing series of faculty workshops allows faculty members from across divisions to present their ongoing research to one another. It’s an opportunity for us to engage not only with the researcher describing his or her new work but also with each other, to connect the dots and improve each other’s thinking. It’s fascinating to hear an economist debating someone from marketing about research done by a sociologist.

The third pillar is teaching and curriculum development, supporting the School’s ability to share expertise with students on decision making and negotiations. For example, this past summer we brought together our negotiations course teaching team—a dozen or so faculty members—and a handful of our executives in residence to hear about their experiences in deal-making and negotiations. Now we can bring that experience back to the classroom.

Can you tell us a little about exciting projects underway and on the horizon?

There are many. One rapidly evolving area in the social sciences is the integration of biological analysis into our models, including psychophysiology and brain imaging. What’s going on with our bodies, our hormones, our stress levels as we work? Modupe Akinola looks at the impact of stress on productivity and creativity. Malia Mason and Elke Weber, among others, use neuroimaging techniques to understand the brain. What happens when we are paying attention to something or not paying attention to something? What does it mean in the brain?
Decision scholarship is also moving into what I’d call a post-bias world. Not that bias has gone away, but we’re getting beyond simply documenting biases that shape decisions—for example, the confirmation bias, when people interpret ambiguous evidence to fit their initial hunches—to looking at how we can create environments for better decision making. Our research is increasingly focusing effort on choice architecture—how to set up conditions to mitigate biases and ultimately make choices that are more productive and effective. Eric Johnson is a leader in this area and has focused on the importance of defaults: the standard or default choice that is offered can have a huge effect on people’s choices. By changing default choices you can lead people to make choices that they may be more satisfied with in retrospect.

Another emerging area making great gains is moral decision making. Some of Katherine Phillips’ ongoing research looks at the impact of diversity in these contexts. What’s the role of diversity in ethical decision making? And you can flip that on its head: What’s the effect of homogenous teams and homogenous organizations on moral decision making?

**How has new technology impacted the field?**

Many of us use online tools that didn’t exist even a few years ago, allowing us to get outside our local labs and reach people across the world. And it’s increasingly cost efficient.

In that same vein, tools are emerging that allow us to record more accurate and far-reaching measurements than we could just a few years ago. Olivier Toubia and Eric Johnson, for instance, use computer technology with adaptive questions—surveys that change depending on how you answer the initial questions. They use the answers to reveal things like time preferences for money and respondents’ willingness to discount future outcomes.

Technology not only affects our work as scientists but it has changed the environment in which people are making decisions everyday. Stephan Meier has shown that text messaging can affect people’s financial behavior, including whether and how much they save—he has explored how savings rates change when people have peers send them text reminders about their savings goals. A few years ago that context didn’t exist. Or consider online rating systems, which allow people to see the reputation of a particular seller or vendor. Ko Kuwabara is looking at how people process this information and how it affects their choices online.

Here again Columbia is well positioned: we’re at a school and in a city that are increasingly seen as entrepreneurial fountains of emerging technology and social media.

**What are other big questions in the field that the DNA program is exploring and that you anticipate it will explore?**

Well, some of the biggest questions in this area are questions that scholars and philosophers have been wrestling with for thousands of years. We remain preoccupied with them because they are profound mysteries with big effects—and are far from easy to understand.

Take cooperation and pro-social behavior: why and when do people come together to cooperate with and help one another rather than compete and attack and undermine one another? That’s a question for our societies, organizations, and personal lives. How do you get people with different agendas, sometimes from different cultures, to pull together?

Another big set of questions concerns how people make financial and economic decisions. How do people spend, how do they invest, and why and how much do they borrow, and what is it to have a preference that gets expressed in our financial behavior? Another area concerns moral decision making—what leads people to make the right decision or fail to make the right decision?

These are enduring questions that have very high stakes for professionals, leaders, policy makers—everyone in their daily lives. Our scholarship can help people rise to the challenges implicit in these questions.

**Why and when do people come together to cooperate with and help one another rather than compete and attack and undermine one another?**

Globalization and cultural diversity is another critical area. Decision making and deal making will inevitably involve more diverse teams and more cultural divides. Michael Morris has looked at how values and norms differ from one culture to the next and how those differences come to life in choices and behavior, helping us to understand where gaps or friction are likely to arise.

More broadly, our faculty is an incredibly diverse group working with a phenomenally diverse student body in one of the most globalized and diverse cities in the world. That places us in a unique position to make research contributions and to teach effectively about how to operate in heterogeneous environments.

**On a more personal note, what led you to this field and what keeps you in it?**

I just find people fascinating, and I’m interested in how decision making and deal making come to life as interpersonal episodes. How does that lead people to get along or work effectively together, or fail to do so? There is a catalog of reasons for why people are ineffective, and I sometimes end up thinking, how can people be so foolish that they fail to read each other correctly, or see something that in retrospect looks so obvious about the environment?

But on the other hand, there are several billion of us who make it through each day, with very high stakes for professionals, leaders, and respondents’ willingness to discount future outcomes.

So I marvel at our capabilities, but I also sometimes am stunned by how foolish we can be. That dilemma, that tension, is what propels my own energy and effort.
Ethically Diverse

Diverse firms are perceived as more ethical—and less deserving of punishment when they do commit transgressions.

Four years into the financial crisis, amidst the many questions about regulation, bailouts, and executive compensation, one question has received less attention than is perhaps warranted: Would a more diverse Wall Street—which remains largely white and male—make for a more ethical Wall Street?

The assumption built into that question—that with greater diversity comes more ethical behavior—is ripe for investigation. There is no direct evidence that diverse firms are more moral than their homogeneous counterparts, although there is some research suggesting links between diversity, fairness, and equality. And other research suggests that homogeneous groups experience more conformity than diverse groups—that people in a homogeneous group are more likely to try “getting along and going along” as a way to remain part of the group and are less likely to counter questionable behavior. Recognizing a dearth of research about diversity and ethics, Professor Katherine Phillips and Sun Young Kim of Northwestern University conducted two simply designed experiments to look more closely at how diversity is perceived with relevance to ethics.

In one study, the researchers told participants that a 217-person firm had about 40 percent women in its ranks, and that 47 percent of its staff were black, Asian, or Latino. Researchers told a second set of participants about the same firm, but described the firm as having only about 5 percent minorities and women on staff.

Next, researchers told participants that the firm was the subject of some recent media scrutiny suggesting as-yet-unproven but questionable events that negatively impacted investors and cast doubt on the firm’s ethicality. The researchers then asked participants to rate the company on a scale of one to seven for a series of questions. For example: How much do you think this company acted in its own self-interest and were more likely to believe the firm was less at fault than a homogeneous company facing the same rumors of wrong doing. “Participants felt that the firm was in fact more ethical, that it valued ethics more, that it regretted its decisions more, and it should be penalized less for the behavior,” Phillips says.

To see how diversity impacted the perception of how companies combat unethical behavior, the researchers introduced a twist in their second study.

Companies can’t patch up an ethical lapse by slapping on a diversity Band-Aid.”

Participants were far less likely to perceive that the firm was acting in its own self-interest and were more likely to believe the firm was less at fault than a homogeneous company facing the same rumors of wrong doing. “Participants felt that the firm was in fact more ethical, that it valued ethics more, that it regretted its decisions more, and it should be penalized less for the behavior,” Phillips says.

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Once more, they randomly assigned participants to two groups, describing a very diverse firm to one group and a homogeneous firm to the other group. In each group some participants were told that a task force made up of diverse members was charged with fixing the firm’s ethical problems, while some were told that a task force of homogeneous members would be on the case.

“But we found that companies can’t patch up an ethical lapse by slapping on a diversity Band-Aid,” Phillips says. “Homogeneous companies did get a small boost if they used a diverse task force rather than a homogeneous one, but people were far more likely to perceive that a diverse firm with a diverse task force was truly interested in rooting out bad behavior.”

That suggests to Phillips that firms need to give careful consideration to their composition—making sure they have a balanced workforce and communicating that they value diversity is central to instilling confidence in consumers.

What is it about diversity that contributes to the perception of ethicality? One possibility is that diversity creates a halo effect. “People may see a firm that they perceive has gone out of its way to hire a diverse workforce and assume that they must be concerned with fairness and equality, and therefore it must be a moral company,” Phillips says. “You can say, ‘Oh, diversity is important; our ethics are important.’ But a company can’t control people’s perceptions if people see that the company is really homogeneous.”

There are compelling practical arguments for diversification. “When companies are too homogeneous they create environments where people are more concerned about conforming than solving problems. Consequently, people may be more likely to fall prey to unethical behaviors,” Phillips notes. “Think about what happens if the House of Representatives swings too far left or right—we start to see actions and behavior left unchecked with no counterbalance. Businesses also need the checks and balances that diversity provides.”

In a working world made smaller, managers increasingly oversee employees across the globe—and the cultural divide. But while crossing cultures can create new opportunities, it brings challenges, too.

Take India, which seeks to transition from an economy based on manufacturing and offshored services to one based on innovation and design.

Silicon Valley–style innovation requires that young scientists and engineers who know the latest technological developments assert their ideas. The egalitarian culture of the United States, and specifically Northern California, help make this work. As India strives to develop the Silicon Valley of Asia, an increasingly recognized challenge is its cultural tradition of respecting hierarchy and the ways this plays out in employees’ behavior toward managers. “You sometimes hear ‘yes’ to a question before you’ve even explained it,” says Professor Michael Morris, who maintains a research laboratory in Bangalore. “It’s great that people are so agreeable and eager to help, but, as a manager, I need my young programmers to propose how they think it should be done.”

To navigate a cultural dynamic like this one, managers need to understand the psychology underlying it. Cultural patterns of behavior can arise from internal beliefs—that is, Indians may defer out of a belief that authorities actually do know best. Or, patterns can arise from perceived social norms—Indians may defer because they believe that their fellow Indians expect this behavior. Consider how many of our daily behaviors (putting on a tie for work, driving on the right side of the street, reading the morning paper) may be adopted to mesh with the expectations of others.

Morris, along with post-doctoral scholar Krishna Savani and N.V.R. Naidu of the M.S. Ramaiah Institute of Technology in Karnataka, India, designed a series of experiments to determine whether the purported Indian
deference syndrome exists and whether it reflects that employees internalize their managers’ agendas or that they follow a norm of acting in line with the authority figure's wishes even though they may not internally agree.

Participants—both American and Indian university students—were asked to choose from a slate of short evening classes offered as a job benefit. Some of the classes were technical and useful to their employers—quality control, software design, and spreadsheet modeling. Others were more fun, social topics—bartending or networking—that might be useful personally but not for their current jobs. Participants faced a series of binary choices between technical and fun classes (offered at the same time). They were told that their boss would never find out which classes they chose. Half of the participants were simply asked to choose, while the other half were asked to write down what their boss would want before choosing. The researchers found that while thinking about their bosses did not affect American participants’ choices, it shifted Indian participants’ choices from 52 percent technical classes to 64 percent.

In addition to making choices, participants also evaluated how much they liked each course. Interestingly, these evaluations were not affected by the “boss prime” manipulation in the way that overt choices were, suggesting that its effect comes more from triggering norms than activating internal beliefs. In subsequent experiments, Morris and his colleagues found that Indians’ distinctive deference response in choices occurs even when they were just implicitly reminded of bosses through a word puzzle rather than explicitly asked to think about their boss. Deference, for Indians, seems an unconscious reflexive response to authorities, much the way one might reflexively smile at a child or slow down when walking with an elderly person.

Morris and his colleagues conducted further experiments in which participants faced different decision tasks. Consistent with the norm account, they found that boss-priming affected Indians in a task that asked which courses they should choose but not in a task that asked which courses they want to choose. In a final experiment, Morris and colleagues measured emotions such as pride and guilt that followed boss-primed Indians’ choices. “Indian participants who chose a course with their boss in mind did not feel pride in their choice, which they would have felt if they were following through on an internalized goal,” Morris explains. “But we did see guilt among those who made the opposite choices, which is to be expected if the participant feels they are breaking a norm.”

Morris says instead of trying to convince Indian employees of the importance of dissent and innovation, targeting their personal beliefs and values, innovation leaders would do better to target their perceptions of the social norm in their community. Innovation leaders could change a perceived norm by enlisting a few young employees to behave non-deferentially at public meetings after insisting their managers not sanction them for insubordination. Morris points to Vineet Nayar, CEO of the Indian company HCL Technologies. To encourage his young employees to share their software development ideas, Nayar posts critical evaluations of senior executives on the company intranet and encourages executives to join him in inept Bollywood dances during company offsite meetings—anything that makes the managers seem less intimidating in the eyes of younger employees.

“You have to change norms by modeling different behaviors and adapting your style, and Nayar accomplishes that by creating scenarios where one executive is critical of another or by setting up symbols within the company’s culture to show that everyone fails—it’s not a place where managers should be treated with deference,” Morris says.

For western managers, Morris adds that the most important aspect to changing employees’ deferential behavior is to recognize that it stems from following cultural norms. “When we see cultural differences, we shouldn’t impute that people have fundamentally different values and goals,” Morris says. “It may just be the rules in that society, like the traffic laws, are different. Norm-driven behaviors are easier to change than behavior that comes from internal values and goals. If you understand the psychology underlying a pattern of behavior, you know which levers will work for managing it.”

As India strives to develop the Silicon Valley of Asia, an increasingly recognized challenge is its cultural tradition of respecting hierarchy and the ways this plays out in employees’ behavior toward managers.
One major finding of behavioral economics and psychology in the last 30 years is that people discount the future—specifically, their financial future—differently than standard economic theory predicts they should. Their choices are not shaped so much by rational self-interest as by emotions and psychological biases—biases that often lead people to make decisions that conflict with their self-interest.

For example, behavioral economists and psychologists have consistently shown that most people are prone to choose a smaller amount of money today rather than wait a week or two for a little more, even when the larger amount later represents a substantial increase when measured as an annual interest rate.

Nowhere have the consequences of this present bias been more profound than the crisis precipitated by the bursting of the housing bubble. Professor Eric Johnson and his co-researchers, John Payne of Duke University and Columbia Business School doctoral candidate Stephen Atlas, used old and new economic models to understand the mortgage choices that American homeowners made while the housing bubble inflated. They were particularly interested in learning whether homeowners in underwater mortgages—houses for which the market value is less than the remaining mortgage debt—were taking the option of strategic default, walking away from their mortgage and their house to allow ownership to revert to the bank.

The researchers first used an online tool to measure mortgage holders’ time preferences—that is, how much or little people value the future compared to the present. They used a method that Johnson developed with Professor Olivier Toubia and their colleagues Theodoros Evgeniou of INSEAD and Philippe Delquie of George Washington University that works much like the adaptive-format SATs, calibrating subsequent questions based on answers to the current question to reduce the total number of questions asked of participants without sacrificing accuracy. The survey asked participants what kind of mortgage they had, whether they were underwater, and, if so, by how much and whether or not they intended to default. With help from Professor Chris Mayer and the Paul Milstein Center for Real Estate, the researchers were able to use zip-code level mortgage data from Zillow and Black Box to verify the average underwater value of homes reported by participants.

The first result did not surprise the researchers: people who are impatient and have present bias—valuing the present more than they value the future—tended to pick low- or no-down payment mortgages with lower interest rates and lower payments come first, increasing over time. The lending environment also enabled them to borrow more to buy larger houses. In other words, present-biased homeowners postponed pain.
The second result was more surprising. The researchers expected the present-biased underwater mortgage holders to report a greater likelihood of strategic default because the financial consequences of default are less painful in the present than remaining in an underwater mortgage. “But the very same people who were present-biased told us they were less likely to walk away from their mortgages,” Johnson says. “After we thought about it a while, it started to make sense. What are the benefits of walking away from a mortgage? In the long term, lower housing costs are likely because you’ll probably rent a cheaper house or apartment. But what happens up front is painful: pulling your kids out of school, the possible embarrassment of moving, the cost of packing up, moving, leaving. So even when they are underwater, impatient people in troubled mortgages were less likely to walk away to get themselves out of the mortgage.” And other factors were less important than the researchers expected. For example, many commentators have speculated that some homeowners’ belief that it is immoral to walk away would predict intent to do so—but the researchers found no relationship in their study.

These results may help many a perplexed economist understand why—despite that at least 20 percent of American homeowners hold underwater mortgages—surprisingly few have opted for strategic default. “We tend to expect that people who aren’t financially sophisticated get themselves into trouble quickly and look for ways to get themselves out very quickly,” Johnson says. “But that is not what our data is saying, and, in fact, that doesn’t seem to be what’s happening.”

A house abandoned in the current market can lose value. Banks stand to lose less money when they renegotiate and make settlements that allow people to remain in their houses rather than foreclose—something many present-biased homeowners could experience if they don’t choose strategic default. “There is an interesting balance,” Johnson says. “Banks don’t want to devalue the loan. At the same time, they don’t want to have people walking away and leaving the houses empty.”

Recognizing this, banks and consultants are experimenting with offering monetary incentives to keep people in their homes. One firm pays people thousands of dollars to stay in their homes—but not until the mortgage is paid off. “That’s likely to be ineffective for people who don’t value their future as much as they value their present,” Johnson notes. “The more appropriate thing would be to give smaller rewards or benefits every time they make a mortgage payment, and there are firms taking this approach. Our analysis says that it’s the short-term benefits that will keep people in their homes, not the long-term benefits.”
Many of the standard theories about governance focus on financial economics and the rule of law—regulatory systems in a legal framework. Can you explain the different angle you are coming from in this book?

A lot of decisions about how things get done and who gets to control what in firms happen in informal clubs rather than as a result of the rule of law. Take the question of who protects the minority investor. The usual answer in the United States is that the law protects minority investors. But consider Sweden, which has a large public sector and also has very advanced capital markets relative to its population. Well, Sweden doesn’t have many of the legal provisions you find elsewhere to protect minority investors—yet it has huge investor positions in its companies and its stock markets are thriving. Sweden’s minority investors do just fine. This is explained by the strong ties and clubbiness among Sweden’s investors and directors, who collectively ensure that minority investors get a fair shake. They sometimes live in the same part of Stockholm and many went to the same private schools and sit on one another’s boards. There is kind of a social regulation in Sweden that keeps an eye on abusive governance practices.

Countries vary. Norway has very weak director ties but strong ownership ties. In France, rugby is the power sport and it was once not unusual for major decisions to be considered over the course of a match. That seems silly on its face but it’s a reminder that in many parts of the world governance runs on what is sometimes called soft laws, where there are social mechanisms by which governance is exercised.

We show in the book how these clubs emerge; we show that they are fairly stable—they don’t break up. If we can understand how these small worlds and clubs emerge, that can tell us something about how to grow good governance structures and how to nudge poor governance structures toward better practices.

What triggered the research projects that are included in the book?

Governance is extremely challenging for boards and top executives to do well, and it is also challenging to research because it varies dramatically across countries and across legal forms. Consider just the differences between public firms and partnerships and the complex combinations of both that we see in private equity or investment banks that have gone public. When preparing students for international careers, it is obvious that power and influence arise from the social and political positions of families, education, the “party” as in China, or the military as in Israel. Governance is not just what happens on boards but who has access to resources and opportunities in a society.

We wanted to find a way to simplify this complexity by looking at simple rules that create the ties that exist among and across firms, owners, the state, and other actors. We use the science of networks to explore governance by creating simulations of governance networks. We say to the contributing researchers, if you think you understand a particular country’s governance patterns—why are or aren’t there many women on boards, for example, or whether only a few families sit on many boards, or whether board membership is very diverse or dispersed—then show you can make it happen in a simulation.

In a new book, Bruce Kogut discusses how network science reveals the small worlds and clubs of corporate governance.

Bruce Kogut is the Sanford C. Bernstein & Co. Professor of Leadership and Ethics in the Management Division and director of the Sanford C. Bernstein & Co. Center for Leadership and Ethics at Columbia Business School.
Another important thing to take into account is the idea that there are institutional micro-differences among countries is a less judgmental perspective, and it’s important to make sure we actually understand the long term dynamics in countries that have reputations for poor governance rather than judge them too quickly.

The research projects here focus on the 1990s through 2000. Why?
We measured the “small-world” structures of each country based on two cross sections, one at the start of the ‘90s, and the other at around 2000 for all countries, and we also looked at the effects in the subsequent decade, meaning after 2000. The 1990s was a period of structural breaks: globalization emerged as a defining economic force, as did ideas about how to govern economies, such as privatization. As these ideas spread they caused fundamental shifts in the structure of national economies and the global economy.

In the last decade, Germany is one of the most interesting cases. The German government was deeply concerned about high wages, the rise of outsourcing, and the threat of cheap labor that came as Eastern Europe opened up. Suddenly Germany thought it better shake up business a bit—and it did, going full throttle toward a stock market and capital markets–driven system. The social democrats led these reforms and the unions supported them.

For example, under a socialist federal government, Germany allowed firms to restructure and to sell off businesses by private placements without paying capital gains taxes. Everything began changing very rapidly and the traditional clubs built around the banks began to erode. And then, all of a sudden, German business realized they didn’t like the increasing pressure from capital markets and they stopped and even reversed some reforms, such as those pertaining to hostile takeovers. Though banks no longer play quite the role in owning pieces of German industry, the persistence of small-world clubs are still evident in Germany.

In the social sciences, with luck, you wait two years before an article gets published. Increasingly, social scientists are working two years before an article gets published. In the social sciences, with luck, you wait two years before an article gets published. In the social sciences, with luck, you wait two years before an article gets published. In the social sciences, with luck, you wait two years before an article gets published. In the social sciences, with luck, you wait two years before an article gets published.

With a simulation we can analyze other explanations for business groups and how they are structured. For example, the simple social rules that influence which sons and daughters inherit and how many kids become business people will affect the evolution of the family business and governance in a particular country. Given that, we project what the size of the family business will be over two, three, and four generations and how it will be owned. We try to explain these rules as coming out of family genealogies and offer evidence that it is primarily these family and cultural rules that generate the pyramidal structures we see, as opposed to these business owners sitting around trying to figure out how to rip off the government or minority investors.

This book is significant because of the way it analyzes the many forms that governance takes around the world, but also because of how you carried out the research. Why is your methodology so important?
In the social sciences, with luck, you wait two years before an article gets published. Increasingly, social scientists are working with researchers from the natural sciences, which has a much shorter publication timeline. How do we make this work?
One way we try to speed up the timeline for producing research is by creating a community of people to work together on the project. All the contributors had to provide data, so we’ve compiled a large data set and software tools to analyze it that will be made available on an open-source basis. The hope is that the project will have a life after the book and that researchers won’t have to spend time getting access to other people’s data—which is rarely quick or straightforward—as opposed to exploring the great questions of our time. Let’s get on with it.

What are some interesting places to watch in terms of governance?
India is interesting because there is a lot of foreign capital coming into the country through private equity, venture capital, big banks, and even sovereign funds. But Indian business groups, which tend to be family based, are very often controlled by promoters—whom we call founders. So there is the irony of strong family structures but with increasingly international players in the financial system. But what is really interesting are the directors. In India, the degree of connectivity among Indian boards is quite high—degrees being an indication of how many boards each director sits on and therefore how many other boards one board is connected to. In India many more people sit on six or seven or eight boards compared to other countries, so information travels very quickly, with a very high level of connectivity and reciprocity.

What is the future of governance?
People today tend to think the world is so global, but if you look at telephone traffic it’s overwhelmingly local. It’s still a regional world and this is true for governance too. We haven’t developed social structures that can support good governance at the global level. And it’s the future of global governance that is vulnerable.

We’re entering an age where we’re going to see an increase in major ethical scandals because as the world does become more global, the national clubs actually break down in importance. National clubs can have bad features but they can also play positive roles, and we need clubs to communicate, coordinate, and govern now at the global level. This is a period of transition that requires more governance and, yes, clubs globally.
A company’s good reputation is thought to shield it in times of trouble—that’s one of the reasons many firms undertake corporate social responsibility (CSR) programs. By investing in a local community or implementing eco-friendly practices, the firm builds up a reservoir of goodwill.

“CSR activities are viewed as insurance policies,” says Professor Stephan Meier. “If a firm faces a product recall or a labor dispute, a good reputation can shield it from the fallout.” At the same time, when crises occur at companies with positive public images—such as when Toyota faced concerns about sticky accelerator pedals in 2010—it risks being viewed as hypocritical. “When that happens,” Meier says, “all of the good will the company built can actually backfire.” The media attention paid to a crisis has a huge impact on how the crisis—and the firm—is perceived by investors, shareholders, and customers.

Meier worked with Columbia Business School doctoral candidate Jiao Luo and Felix Oberholzer-Gee of Harvard to determine how a company’s CSR affects media coverage of a negative event. They used data from the National Response Center (NRC), a federal office under the United States Coast Guard, that focused on oil spills from 2001 to 2007 among the 20 largest US oil companies. Oil companies, such as BP and Exxon, are good examples of the effects of CSR on media coverage because they frequently face environmental slip-ups and vary considerably in their CSR efforts and reputations. Perhaps the best example of an oil firm pursuing CSR is BP. The company launched its “Beyond Petroleum” campaign in 2000 to position itself as environmentally friendly. The campaign highlighted the company’s investment in renewable energy, such as its 1999 purchase of solar energy company Solarex. By contrast, Exxon is not generally perceived as environmentally responsible by the public and has not tried to position itself as green.

The researchers searched for news coverage of the spills found in the NRC database using the LexisNexis media database. They also considered the influence of public relations by controlling for how often each oil company was in the news for non-spill–related stories.

Their investigation yielded intriguing results: being too dirty or too clean can get a
New research shows how open-source software and commercial firms can work for one another.

Firms often go to great lengths to protect the intellectual property that is the source of their competitive advantage and profit margin, creating massive security systems and requiring staff to sign non-compete agreements that prevent them from working for the competition for a set number of years after they leave the firm.

Yet the rise of open-source software has bucked the conventional wisdom about protecting intellectual property. Open-source products—including but not limited to software—are typically produced on a pro bono basis or by expert volunteers and made freely available to the public.

One popular open-source alternative to the Windows operating system for PCs is Linux. Despite the radical transparency of open-source software, and Linux in particular, the software development firm Red Hat has built a healthy business based on the operating system. Red Hat does so in part by effectively piggybacking on Linux by providing supplemental services that customers still value but that are not provided by the open-source developers, including documentation, technical support, service contracts, and complementary software that helps manage Linux software.

At first glance, the ability to profit from open-source products seems difficult at best. Open-source software licenses typically require that any time a commercial venture makes changes to the software, those changes also be made available free of charge to the public, along with open access to the code itself. If the firm’s intellectual property thus becomes public, any competitor can easily free ride on its enhancements—so how is a firm to gain any competitive advantage?

"Why is Red Hat willing to put so many resources into improving a product that is made freely available to anyone else?" asks Professor Brett Gordon, whose research interests include competitive pricing and product innovation. Gordon worked with Vineet Kumar of Harvard and Kannan Srinivasan of Carnegie Mellon to understand how firms like Red Hat are able to compete in this unique market, and how a broader market based on open-source products can work. To do so, the researchers created a model reflecting the
behavior of firms and their competition with one another and how open-source software is created.

The latter is no simple matter. Software developers’ motivations to contribute to open-source platforms vary greatly. Some do it for altruistic reasons, some simply enjoy contributing or for the challenge, some do it to enhance their reputations—and some do it to signal their skill to potential employers. Developers are linked to the pieces of open-source software code that they write, giving employers a completely transparent way to verify their contribution to the product. “That’s a huge advantage to a developer because it is otherwise very difficult or impossible to show prospective employers exactly what work you’ve done,” Gordon says. “Software firms simply don’t open their code up to inspection by competitors. But if you work on open-source software you can carry your CV with you wherever you go.”

Firms can then put these skilled developers to work on either the public features of the open-source product—the software’s functionality—or private commercial enhancement such as service contracts, documentation, support services, and easy-install programs—which enhance the software’s usability. But where should a firm primarily concentrate its resources—on the features or on usability? Both, according to the researchers’ model. When firms make better products in the public dimension—that is, when they contribute to the open-source software—they make their private products more valuable and vice versa. This means that firms should not focus on one or the other but should split their resources to invest substantially in each.

“Firms can free ride on the contribution of other firms, but unless they themselves contribute to public components of the software, they aren’t likely to reap much benefit from it,” Gordon notes. This is borne out by Red Hat’s place in the open-source software market—historically it has provided more contributions to Linux than any of its commercial competitors, placing it in the strongest position to profit from the software.

In addition to helping show why Red Hat and firms like it can succeed in the open-source space, the model predicts how much open-source software is created as a result of commercial firms’ entry into open-source collaborations. One common open-source licensing agreement, the GNU Public License, deems that firms must share their contributions publicly. Another, known as the Berkeley Software Distribution license, allows firms to keep some of their enhancements private. Under the former license, firms tend to contribute to open-source software primarily to make their own products better—this mirrors the experience of Red Hat. But the model predicts a different outcome under the Berkeley license: more open-source software gets created for public consumption when firms are able to privately appropriate anything they do on top of the open-source software itself. This happens when the market is large enough and when firms are able to effectively screen good developers from bad.

Why does more open-source software get created under the Berkeley license? Because firms are able to charge a higher price for the private components of the product, other firms can’t copy the product or build on it, and price competition among firms is reduced. The frontrunner firm earns a higher return on its contributions and can attract better developers for higher salaries. Developers are attracted to the highest-paying jobs so they contribute even more to open-source software to better signal their skill to potential employers.

“You can think of open-source development as not unlike a charitable contribution—more seems better.”
Planetary Economics

BY GEOFFREY HEAL

Global economic growth and sustainability can—and should—go hand in hand, argues Geoffrey Heal, who here offers, in the keynote address prepared for the Rio+20 sustainability summit, four crucial steps to building long-term fiscal and environmental prosperity.

Last summer, representatives from the private sector, governments, and NGOs all over the world met at the Rio+20 sustainability summit in Brazil to look at progress since 1992’s Earth Summit and to set new goals for building a sustainable future.

Much of our planet is still astoundingly beautiful and is able to sustain us with the food, water, oxygen, and climate that we need to thrive. But we cannot take this for granted: the litany of threats is well-known—climate change, overfishing, deforestation, and pollution of the air and oceans are all irrevocably changing the world around us for the worse and in ways that will impose huge economic costs.

We have a tendency to throw up our hands in despair at these problems—they seem so all-encompassing and threatening, and so difficult to address. In fact this is wrong. All these problems are manifestations of a few easily remedied shortcomings in our economic system:

Pay full costs, including external costs. Most important is our failure to insist that we pay the full costs of our activities. We generally do pay private costs, which include the cost of labor, buildings, and capital. But we rarely pay and are often oblivious to external costs. Greenhouse gases from burning fossil fuels and fertilizers running off into the oceans and destroying marine life are two of the most global and devastating external costs of quotidian activities like heating and cooling our residences and growing our food. They are real economic costs, just as much as the associated labor and capital costs, and should be in our budgets, in our profit and loss statements. Economists refer to this as internalizing external costs, and it’s one of a small number of prerequisites for solving our environmental problems. The polluter pays principle—the idea that whoever produces pollution should pay for it—speaks to these issues.

Tightly define property rights. Another gap in our economic armory is our failure to define property rights for important environmental goods. Nowhere is this more important than with fisheries. Everyone’s property is no one’s property, the old adage says, and it’s right: fish stocks need to be managed, and to be managed they have to be someone’s responsibility—someone has to act like an owner. When solutions such as catch shares or transferable quotas have been adopted the effects have been dramatic. In some cases these practices have delivered a tenfold increase in fish stocks with a commensurate explosion of yields—more food for us, more income for fishing communities, and a healthier marine environment.

Recognize the economic value of nature. Natural resources are immensely valuable to us. Sometimes this is obvious, as with oil or gas or gold or diamonds. But there are other resources that are in fact more important to us in the long run that the marketplace doesn’t currently value and economists and accountants don’t value either. Snowpacks, watersheds, and aquifers are all an integral part of the system that supplies us with water for drinking and growing our food, so they are hugely valuable assets worth hundreds of billions of dollars. Yet they don’t appear on any balance sheet and are rarely thought of as valuable in public decision making, so we tend to destroy them. We have a nasty habit of destroying whatever doesn’t have a dollar sign in front of it. We need to recognize the value of natural assets beyond those that are easily monetized.

Move beyond GDP as a measure of economic performance. If we pollute and then spend money cleaning up, GDP rises. If we need to build sea walls to protect from rising sea levels, GDP rises. But if we deplete irreplaceable natural assets such as forests, there is no charge against GDP—as there would be under generally accepted accounting principles if a corporation depleted its capital assets. Clearly GDP sends the wrong signals.

These four steps, all of which are easily implemented, will remedy gaps in our economic system and remedy what economics texts call market failures. They would improve the efficiency of our economic system, solve most of our environmental problems, revolutionize the relationship between humanity and the natural world, and give the planet a new lease on life.
One of two approaches is typically used when estimating the value of any company’s equity: fundamental valuation or relative valuation. Academic research and teaching tend to emphasize fundamental valuation models, which involve predicting future cash flows or future earnings and calculating their present value. However, relative valuation models, which typically involve price multiples—ratios used to compare a company to a group of similar companies—are much more common in practice. A new study by Professor Doron Nissim compares the accuracy of different relative valuation methods in terms of their ability to explain the stock prices of insurance companies.

Outside the financial sector, the balance sheet and book value of equity are not viewed as a crucial basis—or as a particularly accurate basis—for valuation. But in the financial sector, valuation often starts from the balance sheet and focuses on the book value of equity. Nissim’s study shows that book value ratios perform relatively well when valuing insurance companies, and that over the last decade book-value ratios have performed significantly better than earnings ratios. These findings explain the focus of insurance companies, such as Warren Buffett’s Berkshire Hathaway, on book value and book value growth as the primary determinants of value and value creation, respectively.

While insurance companies are financial institutions, some unique features influence their valuation. Insurance companies tend to hold far more securities as a percentage of their balance sheet than do other financial firms—70 versus 20 percent for banks, on average—and when insurance firms sell these securities, the treatment on the financial statements can influence valuation. Special capital regulation requirements that dictate how much capital and reserves insurance firms must keep on hand likewise can have significant effects on the balance sheet and the firm’s valuation.

Because of these and other unique features of the insurance industry, analysts often exclude Accumulated Other Comprehensive Income (AOCI) from book value (a practice unique to the insurance industry). AOCI measures unrecognized economic gains and losses that result primarily from changes in interest rates, credit spreads, or other factors that affect the value of the investment portfolio. Excluding these items is usually seen as a way to reduce the volatility of book value and accounting distortions. However, Nissim’s research shows that excluding AOCI tends to worsen, rather than improve, the accuracy of valuation. Changes in the value of the investment portfolio are only partially offset by changes in the value of insurance reserves (i.e., recognized obligations for expected claim payments) and therefore affect equity value and should be incorporated in the valuation. For example, an important factor contributing to the large declines in the stock prices of life insurance companies during the financial crisis was the increase in credit spreads. Credit-risky investments dropped in value, with little or no offsetting drop in the value of the insurance reserves. Most insurance companies excluded these losses from their earnings statements and the losses were reflected in AOCI. Because these losses were priced by investors, excluding AOCI from book value reduced the accuracy of book value–based price-ratio valuations.

New research shows which relative valuation models are best applied to insurance companies.
Another surprising finding of Nissim’s study shows that excluding realized investment gains and losses from earnings does not improve valuation accuracy. An exception occurred during the recent financial crisis, most likely caused by an increase in gains trading or the selective realization of gains. Unlike other sources of insurers’ revenue—including premiums, investment income, and various fees—realized gains and losses are both discretionary and highly volatile. Accordingly, analysts and insurance companies often emphasize metrics such as operating income, which exclude realized gains and losses. However, to the extent that these items are used by insurance companies to smooth (or show steady rather than variable) reported income over time, they may actually increase the accuracy of reported earnings as a proxy for permanent income and so improve the precision of earnings-based price-ratio valuations. This appears to be the case in so-called normal times. In contrast, during the financial crisis some insurers selectively sold investments to artificially increase reported income.

Consistent with common industry practice, the study finds that considering return on equity when using the price-to-book ratio to value insurers significantly improves valuation accuracy. This result may help explain variation in price-to-book ratios over time and across companies. For example, the current valuation of Berkshire Hathaway, at a book-value ratio of 1.1, is significantly lower than the historical average of 1.6. The financial press has discussed alternative explanations for this apparent anomaly, ranging from market inefficiency to concerns regarding the company’s succession plan, price pressure from expected sales of donated shares, and other factors. “Perhaps it is an anomaly,” says Nissim. “Alternatively, it could be that investors project a decline in return on equity.”

Nissim’s findings underscore the need for investors to exercise caution in using price metrics in valuing insurance companies. “What is reflected in earnings and book value can change in ways that may change the price-earnings or price-to-book ratios,” he says. “Using Berkshire Hathaway as an example, if you expect profitability to be low compared to the past, the price-to-book ratio doesn’t have to be the size it was in the past. Investors should keep in mind that the price-to-book and price-to-earnings ratios are about future expectations.”
Fair-value accounting, in which the assets and liabilities of firms are reflected in financial reports at a price that would be received to sell an asset or paid to transfer a liability in an orderly transaction—often very close to their market value—has been increasingly popular over the last two decades, particularly in the banking industry. As the use of fair-value accounting has increased, so has criticism of the approach—criticism that has grown acute in the context of the financial crisis as credit markets constricted and liquid assets dried up.

Fair-value accounting bases the reported value of any given asset (or liability) on the current market value of that and similar assets. This means that values move, to a large degree, with the market. At the other end of the accounting spectrum is historical-cost-based accounting, in which asset valuation is based on the asset’s historical transaction prices. Disregarding other benefits and detractors of each approach, historical cost is simply not subject to the same sensitivity of day-to-day market variations as fair-value prices are.

When markets become illiquid, fair value can set off a chain reaction: banks are forced to sell their assets at prices far below their fundamental values (the present value of expected future cash flows), and other banks with similar assets can be forced to mark those assets at a lower price. As prices for the asset class drop, the falling prices have the potential to trigger regulatory constraints—and otherwise interact with internal control mechanisms—such as value-at-risk (VAR)—or managerial incentives, such as how pay levels for executives are set. All the while, prices continue to fall in a vicious downward spiral.

With the rise of fair-value accounting, particularly in the years leading up to the financial crisis, it is natural to ask whether fair value is associated with systemic or system-wide risk in the banking industry. Professor Urooj Khan considers this question in a new paper, and looks for evidence of whether that association contributed to the financial crisis.

Using financial reporting data from bank holding companies, which publicly traded banks are required to file with the Federal Reserve, and security prices from the Center for Research Security Prices (CRSP), Khan looked at how the use of fair value in financial reporting has evolved from 1998 to 2008. The 20-year period coincides with the Basel I Accord, an internationally established set of common capital requirements for banks—allowing Khan to compare the accounting practices of banks operating in the same regulatory environment.

Khan first measures the amount of assets and liabilities reported at fair value, scaled by total assets in the banking industry, to determine the extent to which fair value is used in financial reporting. He then looks at whether bank contagion—spread of market shocks, especially on the downside and observed through co-movements in stock prices—is more common when fair value is in greater use and finds that it is.

“But this only happens on the downside. I find that when markets are liquid, assets don’t seem to sell below their fundamental value and contagion does not spread, as it does in illiquid markets.” In other words, it’s not that fair value causes contagion regardless of whether markets are liquid or illiquid but that fair value is more sensitive in bad times than in good times.

Prior research has found that using fair value might be a more timely and relevant approach for investors, but when markets are illiquid, the additional cost associated with fair value is increased contagion in the banking sector. That suggests a rationale for

Regulators, banks, and investors . . . should be prepared to consider that at some points in time fair-value accounting may not convey the most important information.”
The Price of Inattention

A new study provides evidence that some investors read old news as new—and get taken advantage of by savvier arbitrageurs.

Many instances of mispricing in financial markets have been attributed to investor inattention. For instance, in 1997 the pharmaceutical firm EntreMed released a study in the journal Nature reporting that it had developed a potential cure for cancer. EntreMed’s stock price remained stable, but when the New York Times reported on the Nature study six months later, the stock price soared.

“Information about a firm that is released publicly should almost immediately be reflected in its stock price,” says Professor Lars Lochstoer, whose work focuses on the interaction between asset prices and the real economy. “Standard efficient markets theory says that investors should have taken advantage of the earlier release of the potentially groundbreaking cure.”

But as EntreMed’s experience suggests, some investors may not be very good at distinguishing between true news and old news—or they may simply have limited processing capacity that doesn’t allow them to recognize all the relevant news about their investments in a timely way.

Lochstoer acknowledges that investors have to cull through a large amount of information to stay on top of markets. “It’s one thing if information about individual firms sometimes is not being read into market prices promptly and correctly. But can this also be happening at the aggregate market level? Macroeconomic news give information that is important for aggregate stock and bond valuations. As such, it is least likely to be subject to investor inattention.”

To investigate the question, Lochstoer, working with Thomas Gilbert of the University of Washington, Shimon Kogan of the University of Texas at Austin, and Ataman Ozyildirim of the Conference Board, looked to the Leading Economic Indicator. The Leading Economic Indicator, or LEI, is a summary statistic that compiles data from key macroeconomic activities in the United States, including new orders from manufacturers, building permits for new residential housing, stock prices, and an index of consumer expectations. The Conference Board, which publishes the LEI, makes public precisely how it calculates the number—so any reasonably savvy investor can calculate the LEI as soon as the final constituent statistic is released, which happens a full day prior to each reporting period. Published on a predictable schedule, the LEI is perfect for studying the inattentive investor phenomenon, as the stale information it reflects should not affect prices.

Lochstoer and his co-researchers tracked the S&P 500 index futures prices from when the final constituent statistic was public information (24 hours before the LEI release) until the closing price the day following the LEI release for each monthly release from 1997 to 2010. When the LEI release reflected mostly good economic conditions, the index level on average increased 26 basis points.

7% Front-running allows arbitrageurs to make as much as a 7 percent annual return off the inattention of their less sophisticated counterparts.
Any reasonably savvy investor can calculate the Leading Economic Indicator as soon as the final constituent statistic is released.

(or 0.26 percent) from after the last constituent release until right before the LEI release. In the 5 minutes immediately after the LEI release, the index level rose on average another 5 basis points (0.05 percent), but then quickly decreased about 35 basis points (0.35 percent)—returning to roughly its level at the beginning of the event window. If the LEI number reflected generally negative economic conditions, the pattern was the opposite, with stock prices initially declining. This pattern indicates that inattentive investors confused the LEI release with true news, unaware that the information in the LEI was already reflected in the stock price at the time of the LEI release.

"Savvy investors at hedge funds and other arbitrageurs understand that a certain percentage of investors are going to misread the LEI release as new information and can front-run their less savvy counterparts," Lochstoer says. Front-running happens when these savvier investors look at the final number that comprises the LEI, calculate the LEI, and then buy or sell in the right direction, knowing that the inattentive investor will buy if the LEI is generally good when it is released the next day or sell if the LEI is generally bad. Until the rest of the market catches on, front-running, then, allows arbitrageurs to make a tidy profit—as much as a 7 percent annual return—off the inattention of their less sophisticated counterparts, all with very little market risk.

Lochstoer and his co-researchers found similar patterns in the Treasury bond market, as well as for individual stocks. Further, the authors show that the price-pattern is more pronounced for stocks that are harder to arbitrage.

But these results are more than just a warning that investors should consider the freshness of information. Lochstoer suggests that news organizations have a responsibility to consider how they release summary statistics like the LEI. "The information should be presented very clearly so that investors know that this is a summary of old news and that the information has probably already been impounded into prices."
THE IDEA
Boost revenues—and profits—from sporting event ticket sales by offering options for seats at playoff games.

A Win-Win Option for Playoffs

THE RESEARCH
When playoff season approaches, sports fans who love the game itself can buy playoff tickets assured that they’ll get what they paid for—a great match. Fans who only want tickets if their favorite team makes it to the final have a more difficult decision to make: if they wait to see if their team makes the cut, they risk missing out on playoff tickets—which are often sold months in advance or snatched up very quickly. If fans buy early, they may be stuck with a ticket for a playoff game that they are not interested in attending. What’s a loyal fan to do?

One answer may be to buy options. If a college football team is a Rose Bowl contender, for example, fans can buy an option that guarantees the chance to buy a ticket if their team makes the bowl, effectively reserving a seat for a price. If the team doesn’t make it, fans have only paid for the option rather than the full cost of a seat at the game. Professor Robert Phillips, Columbia Business School doctoral candidates Santiago Balseiro and Caner Göçmen, and Guillermo Gallego of Columbia University analyze ways of offering options to maximize revenue in sports tournaments where the final two teams are unknown. They show how tournament organizers can increase their profits. The researchers show that this method can increase revenues up to 20 percent at no additional cost to the organizers.

The researchers show that options are particularly effective when potential demand is greater than the capacity of the stadium—as is often the case in important final games such as the Superbowl or the World Cup final. They also show that options are most effective when most fans are highly loyal to their own team. In playoffs in which group or bracket winners are pitted against each other in a final—such as the World Series or the Superbowl, the ability to sell multiple options for the same seat is a powerful potential source of revenue.

Under an options scheme, event organizers offer both advance tickets—most likely snatched up by fans of the game itself who do not care which teams are playing in the final—and options for all playoff contender teams, effectively segmenting customers among fans of the game and fans of particular teams. Since only two teams go to the final, most of the options will not be exercised, avoiding the danger of overbooking—and fans rest assured that if their team is a final contender, they’ve got a seat at the game.

THE APPLICATION
Event organizers, Promoters
You can use this research to set ticket prices and availability for advance tickets and ticket options for tournament-style sporting events. By carefully optimizing prices using a technique called dynamic programming in conjunction with offering options, organizers can

In conjunction with offering options, dynamic programming can increase revenues up to 20 percent at no additional cost to the organizers.

Robert L. Phillips is professor of professional practice in the Decision, Risk, and Operations Division at Columbia Business School and director of the Center for Pricing and Revenue Management, a partnership between Columbia Business School and the Fu Foundation School of Engineering and Applied Science at Columbia University.

READ THE RESEARCH
The term public-private partnership, or PPP, is widely used to cover a range of real estate development and redevelopment projects, to the point where almost any large-scale project has come to be called public-private. What is truly a public-private partnership and what is not?

PPP is an approach to delivering goods and services—whether it be social services or hard services like sewers or roads—that seeks to combine the private sector’s economic efficiency, capacity to execute, and capacity for management innovation with the public sector’s territorial scope and service mandate, including efforts at economic development.

PPP is not a municipality offering tax abatements for redevelopment projects—that’s a public subsidy of a private initiative. The promise of PPP is that it offers advantages in collaboration—it is a resourceful approach in a fiscally constrained environment, and it realigns risk so that neither sector takes on all the risk. Many PPP ventures present an alternative to the traditional public sector procurement process, which sometimes involves the public sector agency competing for the RFP. In short, PPP is a whole set of ideas aimed at increasing resource productivity and the efficiency of goods and services, be they hard infrastructure products or softer ones, and where both sectors take risk jointly in a project.

There are some types of projects that lend themselves more easily to PPP. Toll parkways are relatively easy to do as PPPs because road boundaries are easily identifiable and service delivery and fees within those boundaries are easily measurable. Water and sewer systems are less than ideal because they tend to be viewed as essential goods, which brings up policy questions of quality and income capacity.

You’ve touched on some promises of PPP, like efficiency and shared risk. What are the perils?

These are complex contractual agreements centering on risk-sharing that are difficult to design and negotiate, which means that the public players need to have institutional skills and technical knowledge, as well as the political savvy to effectively negotiate with private contractors if they are to secure the best outcomes for the public at large. And quite often there is a skill imbalance between the public and private sectors. The private sector is likely to be more skilled at negotiating the technical and institutional terrain than the public sector because private players are in the business of doing these types of projects on a repetitive basis whereas for the public sector they are typically one-off initiatives.

There are three complex economic problems: One is the potential attenuation of value when private firms have to meet stringent regulatory or policy objectives—such as constraints on rate setting or moratoriums on job losses, job guarantees, or where there is detailed regulatory oversight. If a PPP venture requires extraordinary public
benefits that create lower private investment value, there are potential efficiency losses. Two, you often get low levels of competition from a small field of bidders. The public sector requires bidders to have certain technical expertise as well as resource capacity for these projects. Layer onto that the policy objectives of the public sector, such as accountability and information disclosure, and that may make some private sector partners withdraw from considering the bid competition. If that occurs, the public sector may face a quasi-monopoly situation—and another potential loss of efficiency.

Three, bidders will add a risk premium to their bid to account for contractual guarantees they have to offer to the public sector and for expected penalties if there are delays in delivery.

Take an initiative where the public sector has privatized the construction, operation, and maintenance of prisons. The contractor is not going to get paid in 30 days—it may get paid in 90 days, but it could take four or five months depending on the bureaucratic structure of the entity. So any contractor has to build in the time value of money to account for how long it takes to get paid.

Doesn’t the public sector face risks in these projects as well?

Of course, there are a number of risks for the public sector, and those tend to be political risks. Try explaining a complex risk-sharing project to a city council or state legislature. New Jersey and Pennsylvania both tried and failed to privatize their turnpikes. Now those may have failed for other reasons, but they are also complex transactions with long-term implications that could not easily be undone if things did not work out as anticipated. So, yes, there are big stakes for the public in many of these PPP initiatives. In addition, in the United States, PPP ventures aren’t common enough to be easily understood, and each brings unique complexities into play.

The public sector may end up choosing the wrong contractor, who then goes bankrupt or fails, and that gives a big black eye to the whole public sector and the PPP approach. Cities or states might be overly generous in offering economic incentives and then get called for leaving too much on the table. Conversely, the public sector could frame a project as a PPP but then end up taking most of the risk, through financing, with obvious political consequences.

The issue for both sides is to learn how to co-manage these risks. PPP is not just selling an asset for the public sector while the private sector gets everything it wants.

How can the need for stronger skills on the part of the public sector be addressed?

With capacity building, which starts in grad school, teaching about these kinds of projects and challenges in a very practical way. We’ll be teaching a new course at Columbia called Social Impact Real Estate. We’ll cover projects in that course that will be, by definition, PPP. There are also industry and trade group trainings and continuing education seminars.

One of the real issues is that if a government is only doing one PPP project, they really don’t have the ability to build capacity—they have to hire expertise in the form of consultants. Then you have to know how to spec contracts for consultants.

Why is now the time to be looking closer at PPP?

The United States is ahead on some aspects of development, like city building, where it has strong models and protocols developed over the past several decades. But we are way behind Europe and Asia and emerging-market countries when it comes to infrastructure PPPs.

We’re trying. We face the same fiscal constraints. There are PE firms in this field trying to do PPP infrastructure deals, raising money, and Wall Street has raised fund money for these types of ventures. The problem is at the political level, not the investor level.

The issue for both sides is to learn how to co-manage these risks. PPP is not just selling an asset for the public sector while the private sector gets everything it wants.

What are the top-line best practices that partners in PPP should embrace?

We need to deal with better procedures for accountability and transparency: What kind of information does a private company have to disclose and when? We need better processes for stakeholders who are affected by PPP projects. We need performance audits and procedures that protect the public interest and don’t merely privatize the public sector. Those are ideals, and this is an evolving field.

What are some examples of outstanding PPPs and what makes them great?

Battery Park City in New York City is one of the most outstanding examples of public-private development. Its planning process and agreements for public sector and private sector responsibilities are still models for large-scale city building. Indiana sold a 75-year lease concession on the Indiana toll road for $3.8 billion, but it’s viewed as a success because they took the monies and reallocated them to transportation in the counties that had sections of the toll road. It was a neat policy loop of harvesting value and reinventing it locally.

From a policy perspective, it is a good practice to keep that nexus between the public-private benefit. If the public sector is getting funding from the private sector for selling a concession, where does the money go? Where should it go? If it goes back into transportation and enhances delivery for stakeholders, that’s good practice. It’s not good practice if you use the funds, for example, to plug a hole in the operating deficit of a state or municipality.

What are the big future questions around PPP?

PPPs have not been around very long, and we still know very little about how they really work, whether the promises of performance actually materialize. And there is never enough public money or willingness to do all we need to do to rebuild the physical infrastructure of our economy, the bridges, mass transit, sewer systems, or roads that undergird productivity. So how do PPPs work in practice? What’s the empirical evidence of the performance, delivery, design innovation, and balance between private profitability and public policy objectives? That’s the type of research we need to pursue in this area.
Predicting Start-Up Success

For aspiring entrepreneurs, previous employer size can forecast performance and commitment.

Some people dream of leaving the 9-to-5 to strike out on their own. But while the benefits of being one’s own boss look attractive, not all entrepreneurs will be successful. So how can someone with entrepreneurial ambitions best reach her goals?

To get an idea of how an aspiring entrepreneur will do, you have to look at where they’ve been, says Professor Damon Phillips. The career experiences of entrepreneurs—before they become business owners—directly affect their success. “If an MBA student wants to be an entrepreneur, they often ask, ‘What type of firm should I work for, and why?’” Phillips says.

While many factors determine whether someone will become a successful entrepreneur, previous research has indicated that the size of an individual’s previous employer is particularly influential—and the smaller, the better. “Skill and vision are the two most important considerations for potential entrepreneurs,” Phillips explains. “In a small company, you have to integrate across different functions and skills. Money can be tight, so there’s often an innovative, entrepreneurial mindset among employees. You don’t get that general skill set and broad vision in a larger company, where most employees have very specific jobs to do.”

But to date, scholars have been focused on pinpointing which individuals will become entrepreneurs, not on predicting how successful someone will be after they make the jump to self-employment. “It won’t do any good to become an entrepreneur if you’re going to crash and burn,” Phillips says. “So the next logical question is, ‘How successful will you be?’”

Phillips, working with Jesper Sørensen of Stanford University, examined this question with labor market data from Denmark’s tax system. The detailed data tells researchers where the country’s entrepreneurs previously worked, for how long, and at what salaries.

The researchers defined entrepreneurial success in two ways: financial performance, measured by each entrepreneur’s income from their company, and commitment, or how likely an entrepreneur was to stick with their venture. Even when the researchers controlled for many factors such as whether parents were also entrepreneurs, they found that smaller companies not only bred more entrepreneurs but also created more successful business owners— with some caveats. For financial performance, the larger the previous employer, the lower the entrepreneurial income. However, if the entrepreneur was a sole proprietor and had only himself on the payroll, the previous employer size had no effect.

The researchers also found that independent of financial success, entrepreneurs were less likely to stick with their venture if their previous employer was larger—for instance, a firm with more than 100 employees as opposed to five. But again, the effect was weaker if the entrepreneur worked solo, with no employees, compared to those with employees.

“That suggests the management and leadership skills entrepreneurs might develop at a previous employer matter much more when they become employers,” Phillips says. “If the entrepreneur’s company is a one-person venture, though, those skills are less relevant.”

Phillips points out that in a few industries larger companies might breed more successful entrepreneurs than smaller firms if the reputation and social connections associated with size are high and the need for management skills is relatively low. “I may prosper off the reputation and the connections to start-up resources of my large previous employer in spite of my lower skills,” Phillips says, but adds that research and reasoning suggests that an optimal previous employment experience might be with an employer that is both small and prestigious—such as a well-known boutique firm.

Investors in small or new companies may tap into these findings in different ways when evaluating potential CEOs. “If someone only has Fortune 500 experience, many investors I have talked to have learned that’s not as valuable in the early years,” Phillips says. “After the company is rolling, you want someone with management skills, which makes the person from the established company more attractive.”

Phillips says anyone interested in becoming an entrepreneur later in her career should weigh these findings and considerations carefully when choosing an employer. “It’s a trade-off.”
Select Ideas

A roundup of ideas you might have missed in recent electronic issues, and others you may see featured in future issues.

Small, Modular Infrastructure
Garrett van Ryzin with Klaus Lackner of Columbia University’s School of Engineering and Applied Science and doctoral candidates Eric Dahlgren and Caner Göçmen

Idea: Automation and other technological advantages may have reached a point where the efficiencies of the many and small outweigh those of the few and large. This project develops a framework to analyze which industries are best-positioned to replace large-scale infrastructure with cost-effective, flexible, risk-dispersing small modular infrastructure.

Applications: This can help large-scale industrial enterprises assess whether their business is well-positioned to transition to smaller-scale modular infrastructure and address related strategic questions about cost, technological viability, and overall feasibility.

To read more about this research, featured in the October 2012 electronic issue, visit www.gsb.columbia.edu/ideasatwork/thinksmall.

Auctions for Online Display Advertising Exchanges: Approximation and Design
Omar Besbes, Gabriel Weintraub, and doctoral candidate Santiago Balseiro

Idea: This project uses game theory to analyze online ad exchange auctions, where advertisers compete to buy targeted ad space from large online publishers, who sell the space based, in part, on individual viewer data.

Applications: Online publishers can use this research to optimize how they price and sell display space through ad exchanges and how to strategically disclose viewer information in these auctions.

On the Design of Contingent Capital with a Market Trigger
Suresh Sundaresan with Zehnyu Wang of Indiana University

Idea: This project considers Basel III capital standards that require banks to hold loss-absorbing capital, diminishing the need for public bailouts of large financial institutions. It examines the pros and cons of contingent capital, a debt security that converts to equity when banks have low capitalization, and assesses at what point the debt should convert.

Applications: Banks and regulators can use this research to inform the design of prudential capital structures, in particular, how distressed banks can leverage contingent capital as a means of recapitalization.

Effectiveness of Public Policies on the Reduction of Smoking
Brett Gordon

Idea: This project combines data on smoking bans in the United States over the last decade with national household data to determine whether local smoking bans reduce household purchases of cigarettes in the months following the ban.

Applications: This research can help public health officials assess the efficacy of different types of smoking bans and design effective public policies for reducing smoking.

Mobilizing Investment through Social Networks: Evidence from a Lab Experiment in the Field
Emily Breza with Arun Chandrasekhar of Microsoft Research and Stanford University, and Horacio Larreguy of MIT

Idea: Working with participants from rural Indian villages, the researchers use variations on a standard trust game to show how social proximity and norms in the social network influence decisions about sharing financial resources.

Applications: This is part of a larger project aimed at understanding the dynamics of local social networks. Insights from this work will be used to inform the design of financial products for the poor that factor in social norms and behavior and help them better use their resources.

To read more about this research, featured in the December 2012 electronic issue, visit www.gsb.columbia.edu/ideasatwork/sharing.
A good teacher’s influence can affect student test scores—and long-term success in life.

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