


# Self-Determined

By Karen McCally '02 (PhD)



**T**EN YEARS AGO, THE POPULAR business reporter and author Daniel Pink began researching why an increasing number of people were leaving jobs in large organizations to work for themselves. He encountered—“in a pretty cursory way,” as he explains it—work on human motivation by Rochester experimental psychologists Edward Deci and Richard Ryan.

Two years later, Pink began researching how people might be motivated to do creative work. He returned to the work of Deci and Ryan. What he found, he says, was “an absolute treasure trove of research on human motivation”—much of it generated from initial research led by the two professors in Rochester’s Department of Clinical and Social Psychology. In his 2009 book, *Drive: The Surprising Truth About What Motivates Us*, Pink placed Deci and Ryan front and center.

“Deci and Ryan, in my view, are the sun around which all this other research orbits,” Pink says. “They’re true pioneers. Forty years from now, we’ll look back on them as two of the most important social scientists of our time.”

What motivates us? How do we get motivated? And why do we describe some people as motivated and others not?

In the roughly century and a half that psychologists have studied such questions, most have explained motivation in terms of instincts (the Freudian approach) or in terms of responses to stimuli (the behaviorist approach). For several decades beginning in the 1950s, the behaviorists held



# What motivates you?

## Two Rochester experimental psychologists are challenging some cherished assumptions.

almost uniform sway over the study of motivation, producing voluminous research showing the ways in which the provision of rewards could condition human behavior over time.

But after several years of collaborative research, Deci and Ryan emerged with *Intrinsic Motivation and Self-Determination in Human Behavior* (1985). In their pathbreaking work, they articulated self-determination theory, a comprehensive repudiation of behaviorist orthodoxy regarding human motivation.

In the broadest sense, the theory, as it has developed over the past quarter century, maintains that motivation develops from within us, grounded in our basic human needs to develop our skills and capacities, to act of our own accord, and to connect to others and to our environment—needs Deci and Ryan refer to as “competency, autonomy, and relatedness.” Self-determination theory, known among psychologists as SDT, holds that we are most deeply engaged, and that we do our most creative work, when we feel that we are acting according to our own will on behalf of goals we find meaningful.

Deci’s and Ryan’s most startling finding was that rewards such as prizes and money were not only less effective than behavioral psychologists had long supposed, but under some circumstances could actually *diminish* people’s feelings of engagement and motivation.

“We were out of the mainstream,” Ryan says of the early research. “The idea that rewards would sometimes undermine motivation was anathema to behaviorists. There was a lot of resistance to looking at this set of ideas about motivation.”

As is the case with any challenge to long-held wisdom, resistance—or skepticism—endured. But in 1999,

Deci and Ryan could point to over 100 studies that confirmed and extended their findings. More important, adds Ryan, “Self-determination theory has gone far beyond these early reward studies.” For example, it now addresses how values get internalized, how different life goals affect well-being, and how cultures influence motivation.

As funded research on the theory has expanded, so too have applications of the theory to workplaces, schools, doctors’ offices, and a host of other arenas. Says Deci, “There’s been an exponential increase in interest in the theory, and it’s showing up in all the indicators.”

For example, standard indexes for measuring scientific productivity and impact, such as the online database ISI Web of Knowledge, rank Ryan and Deci among the world’s leading researchers in psychology based on their publication record and the number of citations their work has generated.

And in May, the University of Ghent in Belgium hosted a four-day international conference on self-determination theory that drew 550 researchers who presented 128 papers.

That marked almost twice the attendance at the previous conference on the theory, held in 2007 at the University of Toronto, and six times that of the inaugural conference on the River Campus in 1999.

A major reason for this burgeoning interest is that Deci and Ryan have attracted growing numbers of students (as well as established researchers) to Rochester to train with them. Deci, who is now a professor of psychology as well as the Gowen Professor in the Social Sciences, and Ryan, who is a professor of psychology, psychiatry, and education, have together trained almost 100 doctoral graduates, postdoctoral fellows, and visiting scholars in their Human Motivation Research Labs. For more than two decades, the scholars



## What's a Boss to Do?

Self-determination theory does not offer a license for permissiveness, say Deci and Ryan. Nor is it meant to promote individualism, an idea that assumes the needs of individuals and the community are in conflict. Instead, the theory relies on shared commitments and responsibilities. So how do you, as a boss, a teacher, a parent, or a doctor, encourage autonomy while ensuring that goals are met? Here are some guidelines:

- 1. Share decision making.** It's not practical in all circumstances, but it is in more cases than we often assume. If goals are non-negotiable, allow people to determine how they will get there. The more people participate in the decisions that affect them, the more engaged they will be.
- 2. Explain the reasons for goals and rules.** Unless you're dealing with a small child, explaining why a rule exists, or how a task is important to a larger objective, is almost always useful in promoting engagement.
- 3. Adopt the other's perspective.** Once you understand another's perspective, it's easier to work out—together—how you might help achieve valued aims.
- 4. Foster an alliance.** Hierarchical relationships have their place. But work-related or behavior-related goals are often shared. The manager is not responsible for an employee's mistakes, but she is responsible for the final product. Make your mutual interest clear—as well as your offer of support.

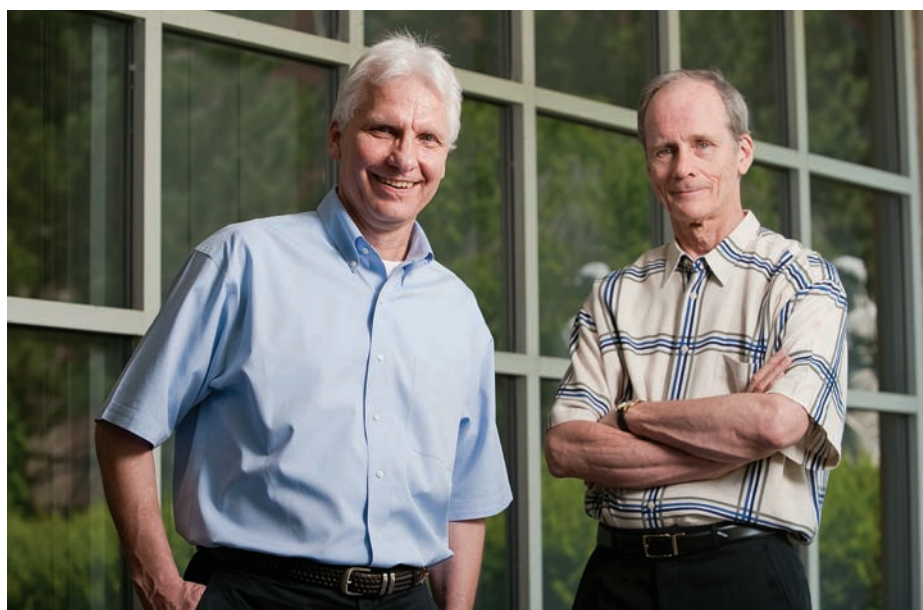
*Adapted from "Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being" (American Psychologist, 2000) and "The 'What' and 'Why' of Goal Pursuits: Human Needs and the Self-Determination of Behavior" (Psychological Inquiry, 2000) by Ryan and Deci.*

have continued to develop SDT and find new applications for it.

And they've taken it around the globe. In addition to drawing researchers from North America, this spring's conference attracted scholars from nearly every country in Europe, as well as China, Russia, Israel, Australia, New Zealand, Jordan, Iran, South Africa, Peru, and Colombia.

Bart Soenens, a professor in Ghent's department of developmental, personality, and social psychology, and an organizer of the 2010 conference, expects the interest in self-determination theory to continue to grow.

"The theory has the potential to become more than just a theory, and to develop into a major tradition in psychology," he says.



Deci and Ryan began collaborating shortly after their first meeting on the River Campus in 1977. Deci, who held a Wharton School MBA as well as a psychology doctorate from Carnegie Mellon, was teaching experimental psychology, and Ryan, whose background was in philosophy, was in Rochester's clinical graduate program. Although their work was rooted in distinctive methods and approaches, they shared an interest in motivation.

"As we compared research and theoretical ideas, something jelled," says Ryan. As a clinician, Ryan was intrigued by the potential of experimental research to test and hone clinical hypotheses in ways that might prove persuasive to behaviorist skeptics, who almost uniformly adopted the experimental method. Deci, whose initial findings on motivation had put him at odds with many experimental psychologists,

was pleased to find a philosophically minded clinician eager to embark on controlled experiments. "We came at motivation from a humanistic perspective," he says, "and at that time, there were virtually no experimental psychologists who took that approach."

Their initial research addressed the implications of an experiment Deci had conducted in 1971. The Soma cube study (see sidebar, page 21), now a landmark in motivational psychology, made use of the popular three-dimensional puzzle by the same name. It provided a clear example of a case in which the offer of a monetary reward, based on performance, seemed to dampen the desire of participants in the experimen-

tal group to continue working on the inherently engaging task. For the paid group, the focus had shifted from the activity to the compensation.

"When people say that money motivates, what they really mean is that money controls," Deci wrote several years later, explaining the significance of his Soma cube experiment.

In the early 1980s, Ryan began working with Deci to clarify their findings, demonstrating for example, a distinction between the effects of rewards offered as incentives (which often dampened motivation) and those offered as ex post facto recognition

**HUMAN TOUCH:** "We came at motivation from a humanistic perspective," says Deci (right) of his and Ryan's work. "At that time, there were virtually no experimental psychologists who took that approach."

of exemplary work (which often enhanced motivation). In the years since, Deci, Ryan, and scores of other researchers have produced hundreds of studies that they say show variations on that theme. For example, studies showing grade-schoolers who weren't told they'd be tested performing better on assessments than the students who were informed. Or studies showing that kids permitted a range of choices were better at regulating their emotions and behavior over time than kids raised in authoritarian environments. And studies of adults showing a correlation between job autonomy and the ability to respond creatively to challenges.

Of course, critics point to evidence to the contrary. Indeed, it's not hard to find grade-schoolers who ace more tests when promised candy. Or teenagers who obey curfews when threatened with the loss of driving privileges. Or adults who continue to work at jobs they hate because the pay is lucrative.

In a 1990 book on goal-setting, psychologists Edwin Locke and Gary Latham, two persistent critics of self-determination theory, disputed the theory on conceptual grounds while noting that if rewards proved detrimental to motivation, "it is doubtful that [self-determination theory] has much application to real life."

In fact, Deci and Ryan maintain that rewards can be effective and appropriate for simple and rote tasks. But in the context of the complex tasks that make up most of our lives in the professions, the trades, as athletes, artists, or as parents, the motivation that rewards generate is shallow and short-term. More importantly, adds Ryan, people who focus on rewards "miss out on the inner resources of intrinsic motivation and volition that are the wellsprings of true engagement and creativity."

All of which points to the daunting challenges the theory poses: Just how do you create the conditions in which intrinsic motivation can flourish? And more specifically, how do you guide that motivation toward specific outcomes—at work, at school, or even at the fitness center? Says Deci, "control is easy." Creating an atmosphere in which people feel free to act autonomously and creatively toward shared goals, he says, "is much, much harder."

But an increasing number of researchers are making the effort, and so far, with promising results. At Rochester, for example, Geoffrey Williams '93 (PhD), a

professor of medicine, psychiatry, and psychology at the Medical Center and director of its Healthy Living Center, draws on self-determination theory to support people who want to live healthier lives. Among the center's biggest successes is its tobacco intervention program. "Smokers are highly ambivalent about quitting," says Williams, who is a medical doctor as well as a psychologist. "It means leaving something that makes them feel good." The starting point is "to really find out if the person wants to quit or not." Once you do, he says, the key is teaching what is called "autonomous self-regulation"—in this case, "learning to manage your emotions without the nicotine."


At the University of Missouri–St. Louis, Marvin Berkowitz, who teaches courses on character education, is using self-determination theory to teach kids to take responsibility for their work, actions, and school community. Through the "Caring School Community" model, Berkowitz says, "we have nearly 100 schools in this region not only talking this language, but engaging in deep school reform. SDT is making a big difference in the St. Louis region."

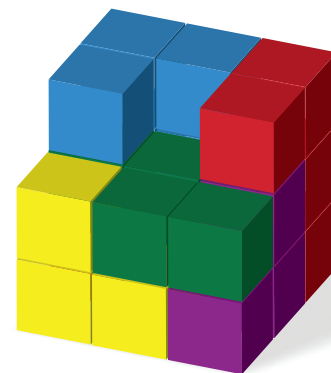
And in Singapore, at Nanyang Technological University, Ryan has helped established the Motivation in Education Research Lab, where scholars are applying the theory to the development of practical guides for teachers in a nation not typically noted for its encouragement of personal autonomy.

Together, Deci and Ryan have consulted with private companies, schools, counseling centers, health care agencies, and other institutions around the world seeking to implement the findings of self-determination theory.

As its applications spread across disciplines, both Ryan and Deci stress that the theory will need to be continually refined. "There are very few macro theories in psychology," Deci says, "and refinement is in integrating all these dimensions."

Says Ryan, "We've seen our work grow from just the two of us to be the kind of phenomenon it is now, which I think is kind of surprising to both of us. When we walked into that convention, more than 500 people were in the room. And they were all doing research on just this theory."

Adds Soenens, "SDT is still under development. New and exciting research lines are still emerging." 



## Motivation<sup>3</sup>

Like the Rubik's cube of the early 1980s, the Soma cube puzzle game, released by Parker Brothers in 1969, was wildly popular. Consisting of seven pieces that could be assembled into a cube as well as a variety of other three-dimensional shapes, it was known to captivate adults and children. While still a graduate student, Edward Deci used the mesmerizing cube in a study that's now a landmark in motivational psychology.

In brief, Deci divided college students into two groups and placed each group in a room with a Soma cube and an assortment of magazines. He instructed the participants to work on the puzzle, but he offered to pay the members of one group for each design they correctly assembled. After a period of time, Deci told the students that puzzle-solving time was up, adding that he would leave for about 10 minutes to record data and would return with a questionnaire.

But rather than record data, he observed the groups from outside the rooms. He saw a noticeable difference: To a significant degree, paid participants were more likely to put down the puzzles and pick up the magazines. Participants who weren't paid, on the other hand, were more likely to continue to work on the puzzles.

It was an instance, as Deci later explained, of "no pay, no play"—and an inspiration for decades of research on human motivation.

—Karen McCally

