How Economic Theories Can Become Self-Fulfilling

Careful with Assumptions!

How often do managers question the assumptions behind their decisions? What are the assumptions behind widespread organizational practices such as “employee of the month,” pay for performance and budgeting? Prof. Fabrizio Ferraro went in search of the underlying truth and discovered an unquestioned allegiance to an economics worldview. He also stirred up a lively debate in the process, which has implications for business education.

Earlier this year, the Academy of Management Review published a paper I co-authored with two colleagues from Stanford University, Jeffrey Pfeffer and Robert I. Sutton, called “Economics Language and Assumptions: How Theories Can Become Self-Fulfilling.” We looked at how social science theories – particularly economics – can become self-fulfilling by shaping institutional designs and management practices, as well as social norms and expectations about behavior, thereby creating the behavior they predict.

Around the same time, the respected business academic Sumantra Ghoshal – who, until his untimely death last year, was professor of strategic and international management at London Business School – had a paper published posthumously in the Academy of Management Learning and Education. Echoing similar themes of our paper, Ghoshal went a step further: Not only have economics language, assumptions and theories taken over management and organizational sciences, setting into motion processes that tend to ensure they become self-fulfilling, but he judged this trend to be harmful, and he placed the blame for much of this bad practice firmly on the doorstep of business schools.

All of this debate has been picked up and widely reported in international media, including The Economist and Financial Times, from the U.K. to Toronto to India, under sensationalistic headlines. Our paper has also been picked up and cited in more recent work published in the European Management Review, the Journal of Management Inquiry, and many more articles are currently in the review process on the same theme.

So, what was it we said originally that sparked such a lively debate? Read on.

Executive Summary

The assumptions of economic theories have spread as valid descriptions of behavior despite widespread doubts about their empirical validity. The pursuit of self-interest in market-mediated exchanges is a case in point. Do people in a company really only ever act out of self-interest? The truth no longer matters, because everyone accepts it as true, structuring our institutions, changing our language and eventually shaping our behavior to act in accordance with this social “reality.” The assumptions of economics can be self-fulfilling prophecies.

How Theories Become Self-Fulfilling: The Case of Economics

Economics is the most influential of the social sciences. Its power to shape policy in every domain of social and economic activity is unparalleled by any other discipline, including psychology, sociology or political science. By now, nearly every country offers economics classes in the higher education system, and the number of specialized economics reviews worldwide increased five times between 1959 and 1993, from about 500 to over 2,500. Economists are very influential in matters of policymaking: transportation, telecommunications, education, health, welfare, just to name a few; there is hardly any area of policy that has not been heavily influenced by economists.

To partially explain this diffusion, we suggested that economic theories can gain widespread acceptance, independent of their empirical validity, to the extent their assumptions and language become taken for granted and normatively valued, therefore creating the very conditions that make them come “true.”

We showed how the assumptions of traditional neoclassical economics, once diffused outside the circle of professional economists, acquire both a positive (“this is how effective people and firms do behave”) and a normative (“this is how people and firms ought
to behave”) value. In most scholarly writings by economists, these assumptions and language are employed to develop formal theories and models of the economy, and they are neither positive nor normative: they are conceptual tools. They provide a fictional description of economic objects helping economists understand the phenomena and develop hypotheses and theories, which can be later tested on observable processes.

Therefore, the question of whether they are an accurate description of reality is deemed irrelevant by most economists, since the only important criteria to evaluate a theory is whether it yields accurate predictions. But when they enter lay discourse, regardless of the empirical validity of the theory built on them, these concepts assume a normative, ideological value.

As Douglas and Ney observed, homo economicus becomes “like the microcosms of ancient civilizations, in which the body of a human, the body politic, and the celestial bodies are moved by the same universal principles.” In other words, the assumptions of economics and the language they provide to describe human activity congeal in an economics worldview that influences how people think, and more specifically, how they design institutions to control and manage other people.

Operating within this microcosm, managers develop lay theories of economic and social action based on some commonly held assumptions. These prevalent and powerful assumptions include:

1. All social exchanges can be constructed as market exchanges.
2. Individuals are (a) self-interested, with a propensity for free-riding, and (b) motivated primarily by extrinsic rewards and incentives.
3. All, or at least most, organizational and political problems can be analyzed by proceeding from the individual level, because institutions are the aggregations of individual preferences and abilities.
4. Competition is the natural and preferred state of social relations and the condition that most enhances individual and organizational performance.

The pursuit of self-interest in market-mediated exchanges implies competition among social actors as each pursues his or her interests, often in opposition to the interests of others. The presumption in much economic theory is that, under certain conditions such as competitive markets, the pursuit of self-interest produces socially optimal results. Numerous managers have “borrowed” this assumption, establishing systems that pit people and organizational sub-units against one another, on the theory that the resulting increase in motivation and the unleashing of competitive forces of natural selection will produce the best both in people and in organizations.

**Self-Fulfilling Prophecies: Three Mechanisms**

How do these assumptions end up influencing the way we act? In our paper, we identified three mechanisms through which theories can become self-fulfilling prophecies: institutional design, social norms and language. We illustrated each of these three with examples from economics, and suggested ways to study this process.

**Institutional Design:** Theories can become self-fulfilling when organizational and management practices – organizational structures, reward systems, measurement practices, selection processes – reflect the explicit or implicit theories of their designers. Indeed, a theory can become true if managers, acting on the assumptions of the theory, introduce organizational arrangements that create the conditions favoring the emergence of those behaviors that the theory considers as assumptions. For instance, if managers expect their employees to free-ride, they might design strict control systems that create a culture of distrust between the firm and the employees, which in turn would make employees less likely to feel obligated to the company beyond the legal requirements of their job.

**Social Norms:** Theories can also become self-fulfilling when, regardless of their initial ability to predict and explain behavior, they become accepted truths and norms that govern behavior. People act and speak as though the theory were true. The self-interest motive, for instance, is such a powerful norm that people often account for altruistic acts using instrumental language to “justify” their behavior. Researchers have shown in experiments that subjects consistently overestimated the power of self-interest to affect the attitudes and behavior of others, even when the subjects’ own behavior and attitudes were not primarily affected by self-interest.

A growing body of evidence suggests that self-interested behavior is learned behavior, and this behavior might be reinforced by studying economics and business. A series of experiments has found that economics graduate students, more than any other
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group of subjects, are far more likely to free-ride, to keep back more resources for themselves, to defect more often, to be more corruptible, to donate less to charity and to recommend someone for a job who charged a higher price when they received a bigger cut for doing so. The most recent evidence suggests that this effect is partially due to self-selection: individuals who are more likely to free-ride choose to study economics and business. In any case, this association between economics and unethical behavior is troubling.

Language: Finally, theories can become self-fulfilling because they provide a language for comprehending the world. Language affects what people see, how they see it and the social categories they use to interpret their reality. Language evokes certain associations, certain motives and certain norms. Acting on the basis of that language in ways consistent with those norms and assumptions, we do things that, in turn, will produce behavior on the part of others consistent with our linguistic frame. Language produces a social reality that reinforces and validates the terminology we use.

To make this argument more concrete and see its implication for economic language and social behavior, consider research conducted using both American college students and Israeli pilots. The same game played was called, in one instance, the Wall Street Game and, in the other, the Community Game. When the game was called the Community Game, mutual cooperation was the rule and defection was the exception; whereas the opposite was the case in the Wall Street Game. The self-fulfilling nature of language is clear: subjects primed to defect or compete are more likely to do so and, therefore, will be more likely to induce a comparable response in their counterpart, validating their initial impressions of the competitive nature of the situation and the untrustworthiness of their counterpart. The converse is also true: subjects primed to cooperate will elicit more cooperative responses from their counterparts.

Mind Your Assumptions!

Perhaps the most important implication of our paper was to highlight how theories become dominant when their language is widely and mindlessly used and their assumptions become accepted and normatively valued, regardless of their empirical validity. When theories produce self-fulfilling beliefs, societies, organizations and leaders can become trapped in unproductive or harmful cycles of behavior that are almost impossible to change. Inconsistent evidence is unlikely to emerge because people don’t try, or even contemplate, acting in any manner that clashes with accepted truths.

For instance, in spite of the belief in the beneficial effects of individual pay for performance incentives, the existing empirical evidence suggests that more pay dispersion can often reduce job satisfaction, disrupt social relations in the workplace, decrease performance both in academia and in professional baseball teams, decrease quality and increase turnover. The paradox of relying so much on pay to obtain desired behaviors in organizations – even when research shows that pay is seldom rated as that important by organizational members – is explained at least in part by the emphasis on incentives in the language and assumptions of economics that permeates organizations and the social world more generally.

All this discussion, therefore, is not a purely academic debate on a matter of philosophical interest, but has practical consequences for all practicing managers and policy makers. How often do managers question the assumptions behind their decisions? Are they aware of their origin? And did they think about their consequences?

What are the assumptions behind widespread organizational practices such as “employee of the month,” pay for performance and budgeting? The ideology and language of competition gets played out in numerous organizational practices. Many forms of employee recognition, such as “employee of the month/year” programs, are inherently zero sum, with one person winning, only as others lose. Similarly, many salary administration systems apportion some fixed percentage of the salary budget across a given number of individuals, perhaps within a work unit or a department, again transforming raises into a zero sum competition. Companies often put divisions or other sub-units into competition for annual performance bonuses, as well as for investment capital.

The Role of Business Schools

Our paper in the Academy of Management Review elicited immediate comment from Max H. Bazerman of Harvard Business School. While agreeing with much of our article, he disputed our notion that economic theory has been self-fulfilling. But his comment was only tangentially related to what our article was really about. For him, the more important consideration was that “during the last 25 years, economic theory has been proven systematically wrong.” He challenged the other social sciences
What Do We Teach at IESE?

IESE doesn’t have its own school of thinking. It doesn’t advocate “different” financing, strategy or marketing theories. Our professors study at the same universities as others, they read the same books and they publish in the same specialist journals, enjoying all the freedoms that come with professorships at universities in the countries of the democratic world. As a result, they also run the risk of making the very mistakes that Professor Ferraro mentions in his article.

Nevertheless, IESE’s mission constantly reminds us that the view of the economy, the company and management by which our efforts are guided should be based on certain anthropological, social and ethical realities that are compatible with the dignity of the human being. In practice, this means that we try to appreciate the wide range of human motivations, the importance of behaving socially and the need for cooperation in this institution that we call the company. We try to see it not only as an asset aimed at creating the maximum shareholder value or as a combination of contractual agreements, but also and above all, as a community of people.

The widely varying origins, educational experiences and cultures reflected by the school’s faculty and students make it easy to question the limited hypotheses that form the basis for the theories used in our teaching. The case method forces us to broaden our outlook, giving us access to a wealth of real situations that take us beyond the confines of any theory that might be applied. The senior management approach, which also forms one of the distinguishing characteristics of IESE’s teaching, invites us to see organizations in all their complexity, rather than limiting ourselves to the narrow areas of economics, sociology or psychology. Above all, we try in our programs to make an impact on our students, so that they acquire not only knowledge but also, and more importantly, skills, attitudes and values that will make them better managers, better people and better citizens. And this would not be possible without those anthropological, social and ethical bases that are not found in any of the theories currently being expounded.

Professor Ferraro’s critique suggests that we must change our understanding of the management sciences currently being taught in economics and management schools. This is a very long process, and one that IESE is already working on, together with professors from other universities, in the form of several research projects. This is because the generation of carefully developed new, innovative and original ideas that are relevant to actual businesses is also part of the school’s mission. And is there anything more relevant and useful than a good theory that can offer assistance to managers and guide them in their work?

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to develop a “more powerful” research agenda. We countered that there are plenty of actionable ideas in other social sciences, but since they are not couched in the dominant discourse of self-interest, competition and market, they are routinely ignored by managers, despite the backing of good empirical evidence.

It was Ghoshal’s headline-grabbing article that took the debate to a whole new level, prompting many column inches to be written about the culpability of business schools in inculcating “harmful” economic theories into generations of MBA graduates.

My co-author at Stanford, Jeffrey Pfeffer, wrote in support of Ghoshal, and pointed to various studies showing how student values and behavior changed during their two years in the MBA program. Over time, students became more concerned with shareholder value, while customers and employees became less important. A study of citations for violating occupational safety and health regulations found that the link between firm size and corporate illegal activity becomes stronger as the percentage of top management team members possessing an MBA degree rises.

Regrettably, the evidence we have is far from conclusive. To further explore the question of how business schools shape the management elite of the future, we have started a research project aimed at understanding how the worldview of MBA students in a large number of schools around the world changes over the course of their studies.

Business schools are only one of the many actors promoting the economics worldview, and probably their impact is far less dangerous than, for instance, the mindless use of economic language we routinely observe in the non-specialized press, or in politics.

On the other hand, if business schools aim to prepare the leaders of tomorrow, we had better take a hard look at what we teach and think about the often unintended consequences of our words on the world that our students will create.