PRINT

Charting the markets in the absence of perfect efficiency.

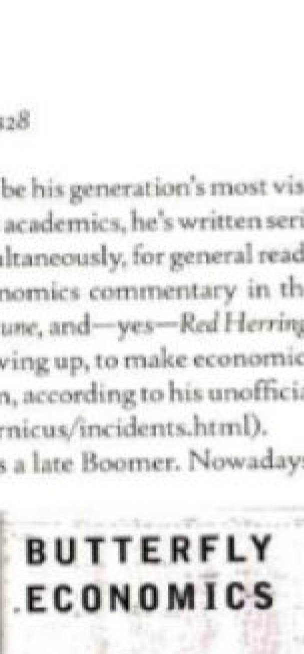
Butterfly Economics: A New General Theory of Social and Economic Behavior
By Paul Ormerod
240 pages, Pantheon Books, $24

Irrational Exuberance
By Robert J. Shiller
312 pages, Princeton University Press, $28

PAUL KRUGMAN must be his generation's most visible economist. For serious academics, he's written serious academic pieces. Simultaneously, for general readers, he's churned out economics commentary in the *New York Times*, *Slate*, *Fortune*, and—yes—*Red Herring*.

So what influenced him, growing up, to make economics his future profession? Science fiction, according to his unofficial Web site (members.home.net/copernicus/incidents.html).

Mr. Krugman, born in 1953, is a late Boomer. Nowadays, a chain bookstore's sci-fi section, its shelves packed with media tie-ins, resembles a decaying research project. But in the '60s a bright kid might find among the junk on drugstore racks some gem that would mark his mind for life. For example, Isaac Asimov's *Foundation* trilogy is Edward Gibbon's *Decline and Fall of the Roman Empire* with starships. To this, Asimov adds Hari Seldon and his followers, who have developed a science called "psychohistory": a full mathematical description of human society. "In my early teens my secret fantasy was to become a psychohistorian," Mr. Krugman admits. "Someday there will exist a unified social science of the kind Asimov imagined, but for the time being economics is as close to psychohistory as you can get."

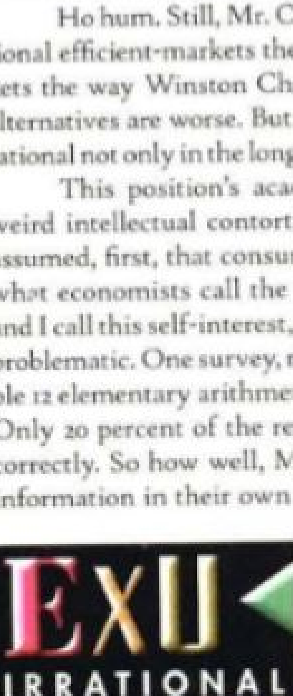


Is it? And could a unified social science that accurately forecasts all of society's workings ever exist?

Let's look at Paul Ormerod's *Butterfly Economics: A New General Theory of Social and Economic Behavior.* Mr. Ormerod claims that conventional economics has pictured human society working like a machine—an old honker from, say, the mainframe era that runs socioeconomic algorithms with clear causes and effects. But economies and societies are complex systems, he insists, containing inherent unpredictabilities. What's needed is a new economics that incorporates the kind of mathematics used by chaos theoreticians. Hence, his title's allusion to the idea that a butterfly beating its wings in Kansas can cause a monsoon in India.

Ho hum. Still, Mr. Ormerod proves the failure of conventional efficient-markets theory. Some folks feel about free markets the way Winston Churchill felt about democracy: all the alternatives are worse. But a few zealots insist that markets are rational not only in the long term, but now and at every moment.

This position's academic supporters have undertaken weird intellectual contortions to support that view. They've assumed, first, that consumers and producers act according to what economists call the rules of maximizing behavior. You and I call this self-interest, so fair enough. Thereafter things get problematic. One survey, reports *Butterfly Economics*, asked people 12 elementary arithmetic questions, like "multiply 6 by 21." Only 20 percent of the respondents answered every question correctly. So how well, Mr. Ormerod asks, do people process information in their own interest? Further, he notes: "Almost one-third of American citizens believe the U.S. government is in regular contact with aliens." Thus, how rational are we?



Also, for a market to be fully efficient, individuals must have *all* relevant information. Here efficient-markets theory really departs from reality: assuming people know their preferences in order to be good maximizers, it never explains how, when a new technology—or any novelty—appears, they discover their preferences regarding this new thing.

In effect, the theorists have faced the fact that their model only holds good when an uncertain future does not exist. Their efforts to get around this impasse have been along the lines of the Nobel Prize–winning economist Kenneth Arrow's goofy supposition that all individuals prepare a complete list of possible futures, then compute identical answers about what prices will prevail in those futures. In a world in which people can't do arithmetic and think their government talks to aliens, Mr. Ormerod shows, conventional efficient-markets theory looks about as believable as Marxist economics. It's as far from a unified social science—from psychohistory—as you can get.

That's why, though some tenured academics may adhere to the theory, nobody dealing with market reality can afford to. Economists like Brian Arthur, Robert Shiller, and Paul Krugman have been probing how people influence each other. Indeed,

SHELF LIFE

Nobr®w: *The Culture of Marketing—The Marketing of Culture*, by John Seabrook (Knopf, $23)

John Seabrook has made a name for himself as one of the *New Yorker's* most astute writers, and his book, a collection of his *New Yorker* pieces, is a wide-ranging survey of America's new cultural logic. He calls it Nobrow, which signifies the obliteration of distinctions between high, middle, and low culture, which has made notions like "good taste" irrelevant.

Mr. Seabrook looks at the dilemmas faced by the *New Yorker* as it struggled to survive in the face of dwindling demand for its highbrow fare in the early '90s. Owner Si Newhouse brought in celebrity editor Tina Brown, who charted a new course for the magazine in which it would cover mass culture more extensively. The *New Yorker* lent an air of respectability to the celebrities it wrote about and, in return, the magazine gained access to the world of hype and buzz. The result, Mr. Seabrook argues, is a magazine that is at once everywhere and nowhere on the cultural road map of taste as high and low culture have mixed irrevocably.

Surveying topics like hip-hop, *Star Wars*, MTV, and David Geffen, Mr. Seabrook does an admirable job of exploring how thoroughly marketing has ensconced itself in the production and dissemination of pop culture. In movies, for example, not only have hype and box-office performance become major evaluation criteria, but the hype surrounding a film becomes part of the spectacle that people pay $8 to see.

Today, consumer products are bought not for their quality but for their cultural and subcultural connotations: "In Nobrow, judgments about which brand of jeans to wear are more like judgments of identity than quality." "Taste" falls by the wayside as the cultural hierarchy disintegrates.

In fashion, art, movies, music, and food, Mr. Seabrook contends, we can no longer correlate class with consumption. At one time, going to the opera and sipping fine wine was the realm of the upper classes, and going to tractor pulls and eating fast food was the realm of the lower ones. Now the entire system has collapsed into a heap of over-hyped megabrands and niche marketing, which use personal identity instead of class to target consumers. The fact that identity is constructed through consumption, not the other way around, is the triumph of marketing.

Mr. Seabrook does not desire a return to the old cultural pecking order, but neither does he accept the current state of affairs. His foray into contemporary culture is fascinating and insightful, but the end result is unfettered exasperation.

—*Peter Rojas*

Mr. Arthur's theory of QWERTY—which explains how a technology like our keyboards' layout wasn't superseded once it had enough market share—now underlies any tech company's strategy. So Mr. Ormerod has targeted a straw man. As for what he proposes to justify the word "new" in his subtitle—well, granted, it's new beside efficient-markets theorists' ignorance of the fact that people make choices with incomplete information and are influenced by other people.

Granted, also: Mr. Ormerod's theory is quite general. It's based on an entomology experiment conducted in the '80s. Two identical piles of food were placed equidistantly from an ant nest; whenever an ant removed a grain from one pile, the experimenters replaced it. The number of ants visiting each site, it transpired, fluctuated randomly. Economist Alan Kirman helped analyze the ants' behavior, and his fundamental point applies equally to markets. Any ant, he said, has one of three possibilities: to stay with its previous course; to be persuaded by others to switch; or to select an alternative on its own. From this beginning, economists have statistically modeled the word-of-mouth effect that makes movies succeed or fail and the factors that tip normal crime rates into epidemics. *Butterfly Economics* reaches one verdict to gratify the free-market faithful: consistently accurate short-term predictability is impossible; therefore, much economic policy is based on delusion, and governments should intervene minimally. Mr. Ormerod concludes: "The challenge of providing a tolerable description of a complex world with interacting agents is certainly hard."

Yes, and predicting the future is difficult, especially before it happens. But merely describing the market's workings as chaotic is inadequate.

Yes, and predicting the future is difficult, especially before it happens. *Butterfly Economics* should have been subtitled *Some Preliminary Notes toward a New General Theory That Somebody Might Write Someday.* Trying for the kind of popularized contemporary economics that Mr. Krugman achieves, Mr. Ormerod isn't bad. But merely describing many of the market's workings as chaotic is inadequate. Since the market is composed of human transactions, we can learn much more than that.

For example, the biological-epidemic models with which sociologists predict the course of word-of-mouth transmission of ideas, as Robert Shiller's *Irrational Exuberance* shows, apply to financial markets. In the '80s, Mr. Shiller charted a century's worth of data and proved that stock-price volatility is far greater than efficient-markets orthodoxy can explain. After the 1987 stock-market crash, he distributed questionnaires to ask investors why they'd sold. They reported that no new data had modified their opinions about companies' intrinsic worth; they'd fixated on the crash. When Mr. Shiller attended a Federal Reserve Board meeting in 1996, he had been thinking about feedback systems and herd behavior in financial markets for two decades. Two days later, Federal Reserve chairman Alan Greenspan caught Mr. Shiller's bug and talked about "irrational exuberance."

Mr. Shiller's book reminds us that after market crashes like 1929's—which was still going on in 1939—the amplification processes that boost stock prices unrealistically can then drive them down unrealistically *and keep them there*. I recommend *Irrational Exuberance*. Mr. Shiller presents a *lot* of material on what he calls "new era economic thinking" through history. If his common-sense mix of rigorous economics and psychological research into why investors act as they do doesn't make you reflect, you're brain-dead.

And yet, as the standard financial warning declares, "past history is no guarantee of future performance." The mathematical theory of epidemics, Mr. Shiller says, works less accurately for modeling social processes: any socioeconomic science's predictive capability looks limited. Moreover, something else weighs profoundly against assumptions that, in the longer term, the market will be as it is today.

When Asimov wrote his *Foundation* stories in the late '40s, an economics-like science to which human history was an open book wouldn't have seemed impossible. One economist, John Maynard Keynes, had formulated the theory behind the New Deal's spending programs and had been instrumental in the creation of the World Bank and the post-war international monetary system. While the battles between Keynes's supporters and enemies needn't concern us, the issues raised in his 1930 essay "Economic Possibilities for Our Granchildren" do. Considering capitalism as a process of accumulating wealth and technological innovation, Keynes calculated that a point would be reached sooner than anyone expected—in 100 years in developed countries—at which fundamental economic needs would be met. "The course of affairs will simply be that there will be ever larger and larger classes and groups of people from whom problems of economic necessity have been practically removed," he claimed.

In fact, by 1996 1 of every 36 U.S. workers was a millionaire, according to the Texas Banking Association, with millionaires totaling 3.5 million out of about 126 million workers. By 1998's end, according to the VIP Forum in Washington, D.C., 6.7 million households possessed a net worth of $1 million or more, up from 5.3 million in 1997. Today, while Alan Greenspan raises interest rates, economists like Mr. Shiller warn against "new era economic thinking." They're correct, judging by historically based assessments. Yet we should wonder whether someday their rational warnings and policies may collide with a new reality.

Mark Williams *has lost money betting that the market is rational. Write to markred@pacbell.net.*