

CREATIVE DESTRUCTION

the 30-second theory

New products are always killing old ones. Think of Polaroid®: The company had a monopoly on instant photography until the digital camera came along. Suddenly, Polaroid's profits fell because other companies were making cheaper alternatives. Or take DVDs: Now they're on the scene, videotapes are worth pennies. No one makes them anymore, and companies that did have been forced to produce something new in order to stay alive. Joseph Schumpeter called this process creative destruction—when a company creates a new product, improves technology, discovers a better supply source, pioneers a more efficient way to produce, or finds a better method of industrial organization, it can destroy its competition. Unlike traditional economics, which focuses on price competition, this theory focuses on competition from new products or technologies. Creative destruction is driven by entrepreneurs who put new ideas into action. Schumpeter argued that this innovation is the driving force behind long-term economic growth, and called creative destruction “the essential fact about capitalism.” Ruined companies and disappearing industries are all part of the bigger picture, which is painful, but inevitable—even necessary—as new companies emerge and new jobs get created, setting the stage for economies to grow.

3-SECOND CRASH

In with the new, out with the old—it's how our economy grows.

3-MINUTE BOOM

According to creative destruction, companies should fail when someone better comes along—the government shouldn't help Polaroid when digital takes over, nor protect mom-and-pop stores when Wal-Mart comes to town. But what about bailing out the banks and auto companies? When the banks go bust, the whole economy takes a hit, and unemployed auto workers can't afford haircuts or vacations—so salons and travel agencies close, too. Can a company or bank be “too big to fail?”

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3-SECOND BIOGRAPHY

JOSEPH SCHUMPETER
1883–1950

30-SECOND TEXT

Katie Huston

“The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers, goods, the new methods of production or transportation, the new markets, the new forms of industrial organization that capitalist enterprise creates.”

JOSEPH SCHUMPETER

RATIONAL CHOICE

the 30-second theory

People want to be as happy as possible, given the constraints they face. When it comes to making decisions, whether buying a car or taking a vacation, they use all available information and weigh costs and benefits to make a rational choice that will help them attain happiness, known as maximizing utility. In a perfect world, people would have all the information there is about each choice and its outcome, and have the ability and time to weigh each decision against the others—but this is rarely the case. Gary Becker, a key contributor to rational choice, theorized that rationality isn't the same for everyone, but rather it's based on individual preferences and views, and constrained by time, income, cognitive ability, and access to information. This helps economists analyze decision making under uncertainty; they can model "rational" behavior to predict people's future actions, which helps predict larger economic trends. Rational choice is also widely used in politics and sociology. In politics, rational choice has reshaped the study of interest groups, elections, and bureaucracy, and provides a way of understanding actions between nations; in sociology (or more specifically criminology), the theory is used to understand why people commit crimes in order to try to prevent them in the future.

3-SECOND CRASH

People make choices for a reason. Whether choosing a car, a university, or a spouse, they look at all the facts and make a rational judgment.

3-MINUTE BOOM

Becker argued that people use cost/benefit analysis for all choices, including altruism, crime, discrimination, family and household matters, and punishment. Yet committing a murder or becoming an alcoholic doesn't exactly seem rational, and other theories compete with rational choice to explain it. For example, psychological theories argue that people aren't always rational, but use rules of thumb and instinct to make choices. Other theories point out myopia (short-sightedness) and inertia (the tendency not to act).

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JEREMY BENTHAM
1748–1832

GARY BECKER
1930–

30-SECOND TEXT

Katie Huston

"Individuals maximize welfare as they conceive it, whether they be selfish, altruistic, loyal, spiteful, or masochistic."

GARY BECKER

GAME THEORY

the 30-second theory

Strategic decisions are made every day by individuals, firms, and governments. Like any game of strategy, decisions are usually made with little or no prior knowledge of the decisions of other players. So, without this knowledge, how can you choose which strategies to follow? Game theory has been used in economics to model decision making in such a strategic environment. The aim is to understand strategic interactions where outcomes for one "player" depend upon the choices of others. Most commonly, the theory assumes that such choices will occur simultaneously. Each player in the "game" will make his or her decision based upon the expectation of how the others will behave. Should Microsoft announce the release of its latest product if it expects that Apple is about to release something similar? Furthermore, recent attention has been drawn to cases where timing is sequential and based upon repeated games. Repeated interaction means that companies will not simply base their decisions upon immediate payoffs, but upon the expected responses of other players. When, for example, should Coke decide to lower their prices, given that Pepsi can respond and spark a price war in which either both could lose or one could end up with an increased market share?

3-SECOND CRASH

What do business, love, and war have in common? They are all games of strategy.

3-MINUTE BOOM

Game theory advocates most commonly emphasize its predictive qualities. By providing a scientific means for modeling human behavior, it is claimed that the theory is a vital tool for understanding the complexities of economic decision making. Yet can the mathematical model of strategic interactions really capture the complex array of influences acting upon economic decisions? For example, the influence of factors outside the "game" may impact profoundly upon decisions.

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ANATOL RAPOPORT
1911–2007
JOHN NASH
1928–

30-SECOND TEXT

Adam Fishwick

"The general who wins a battle makes many calculations in his temple ere the battle is fought. The general who loses a battle makes but few calculations beforehand. Thus do many calculations lead to victory, and few calculations to defeat: how much more no calculation at all!"

SUN TZU

PUBLIC CHOICE

the 30-second theory

Public choice theorists apply the logic of rational choice theory to the political sphere. They think political actors and economic actors behave in the same way—they both seek to maximize their personal interest. Political theorists often treat the state as a complete entity, whereas public choice theorists consider all action in the political sphere to be the result of the behavior of self-interested individuals. For public choice theorists, policies are a direct result of the decisions made by bureaucrats and politicians seeking to be reelected or to get a better salary, for example. If politics follows the same rules that apply to economic markets, you would expect it to be similarly efficient. However, competition, which ensures efficiency in the economic market, is less present in the political arena. For example, the politicians and bureaucrats in charge of agricultural affairs have a monopoly on agricultural policy decisions—they have complete control over how their budget is spent. As a result, rather than policy decisions being made in the general interest, they tend to reflect the particular interests of political actors. Hence, public choice theorists often conclude that less intervention in the economy is better. Besides looking at bureaucracy, public choice scholars also study the paradoxes of voting systems and the role of political parties and lobbies.

3-SECOND CRASH

Politicians are people too. They may talk about the public good, but they have their own personal agendas.

3-MINUTE BOOM

Public choice is often criticized for being too narrow. However, public choice theorists argue that even altruistic or humanitarian motives can be explained as egoistic. The pursuit of public interest is thus possible, but only if it matches private interests! Public choice theorists also believe they analyze political action with neutral scientific tools, but such theorists are often associated with their own political agenda, which favors small government.

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JAMES BUCHANAN
1919–
GORDON TULLOCK
1922–
GEORGE STIGLER
1911–1991

30-SECOND TEXT

Aurélie Maréchal

“... if you want to improve politics, improve the rules, improve the structure. Don't expect politicians to behave differently. They behave according to their interests.”

JAMES BUCHANAN

EXPECTED UTILITY THEORY

the 30-second theory

3-SECOND CRASH

How do people make decisions in the face of uncertainty? By weighing the probabilities of possible outcomes and how happy each of those outcomes would make them.

3-MINUTE BOOM

The theory sounds simple and great. But how realistic is it to assume that people invest solely based on a rational assessment of probabilities and potential outcomes. After all, Alan Greenspan, head of the Federal Reserve Board from 1988 to 2006, called the 1990s a period of "irrational exuberance" because the way investors gambled on financial markets seemed to be cut off from reality and the prospect of potential gains. The subprime bubble was another instance of this.

How would you choose in which stock to invest your dollars, given that you can't be certain of what's going to happen in the future? Would you choose the biotech start-up that might deliver a breakthrough drug 10 years from now but will be worthless otherwise? Or would you choose the staid electric utility that has provided moderate returns for decades? As well as considering the likelihood of the biotech company doing well, you also should consider how scared you are of losing your money if things don't work out (economists call this risk aversion). If losing money would make you very unhappy (reduce your utility in economics-speak), then you are better off investing in the electric utility. And if you don't care about gains on the stock market, you might as well skip both investments and buy a season ticket for the NBA or a new car. According to economists von Neumann and Morgenstern, all this can be summed up in a mathematical formula that reflects the way in which people make decisions under uncertainty. Their theory improves on previous "expected value" theories. "Expected value" theories only took into account the first two criteria—possible return and probability of that happening. But that is not enough—you also need to account for how happy gains make people and how unhappy losses make them.

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JOHN VON NEUMANN

1903–1957

OSKAR MORGENSTERN

1902–1977

30-SECOND TEXT

Christakis Georgiou

"Nothing is more difficult, and therefore more precious, than being able to decide."

NAPOLEON BONAPARTE

PROSPECT THEORY

the 30-second theory

3-SECOND CRASH

How do people make decisions in the face of uncertainty? By comparing possible outcomes to where they stand today (or, at least, where they think they stand).

3-MINUTE BOOM

This theory seems to be a useful extension to the assumptions of expected utility theory. But once you've accepted framing plays a role in decision making, you need to explain what determines framing—that is the processes that make people value one thing more than another. That seems to have more to do with sociology or even psychology than economics. That's not a problem, although it suggests that answers to real world problems come from interdisciplinary approaches.

Most of modern mainstream economic thinking is based on models operating according to rational choice assumptions—as in the case of expected utility theory examined earlier. But in the early 1980s Daniel Kahneman and Amos Tversky developed another theory—the prospect theory. This explained that the way people frame decisions can have a huge effect on how they make choices. In other words, choices don't depend solely on potential outcomes and probabilities, as rational choice assumes, but also on how the choices are presented. Cancer patients, for example, may prefer a treatment that offers a 9 in 10 chance of living to one that offers a 1 in 10 chance of dying, even though, objectively, they are identical. Framing is a subjective process by which people attribute value to one choice or the other. The key difference with expected utility is that not everyone has the same way of framing choices. So, even if two people are equally afraid of making the wrong choice, they might choose different things because they frame each choice differently. Prospect theory brings together economics and psychology—both Kahneman and Tversky were academic specialists in psychology—and it is part of a school of economic thought called “behaviorial economics.”

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3-SECOND BIOGRAPHIES

DANIEL KAHNEMAN
1934–

AMOS TVERSKY
1937–1996

30-SECOND TEXT

Christakis Georgiou

“People assign much higher probability to the truth of their opinions than is warranted. It's one of the reasons people trade so much in the market, generally with bad results.”

DANIEL KAHNEMAN