The Psychologist Who Convinced Economists that to Err Is Human

Daniel Kahneman, who passed away in March at the age of 90, received the Nobel Prize in Economics despite having never taken an economics course. Nevertheless, his scholarship reshaped and upended the discipline's fundamental assumptions, laying the groundwork for the emergence of behavioral economics.

CAMBRIDGE – The recent passing of psychologist and Nobel laureate Daniel Kahneman is an apt moment to reflect on his invaluable contribution to the field of behavioral economics. While Alexander Pope's famous assertion that "to err is human" dates back to 1711, it was the pioneering work of Kahneman and his late co-author and friend Amos Tversky in the 1970s and early 1980s that finally persuaded economists to recognize that people often make mistakes.

When I received a fellowship at Stanford University's Center for Advanced Study in the Behavioral Sciences (CASBS) four years ago, it was this fundamental breakthrough that motivated

me to choose the office – or "study" (to use CASBS terminology) – that Kahneman occupied during his year at the Center in 1977-78. It seemed like the ideal setting to explore Kahneman's three major economic contributions, which challenged economic theory's apocryphal "rational actor" by introducing an element of psychological realism into the discipline.

Kahneman's first major contribution was his and Tversky's groundbreaking 1974 study on judgment and uncertainty, which introduced the idea that "biases" and "heuristics," or rules of thumb, influence our decision-making. Instead of thoroughly analyzing each decision, they found, people tend to rely on mental shortcuts. For example, we may rely on stereotypes (known as the "representativeness heuristic"), be overly influenced by recent experiences (the "availability heuristic"), or use the first piece of information we receive as a reference point (the "anchor effect").

Second, Kahneman and Tversky's work on "prospect theory," which they published in 1979, critiqued expected utility theory as a model of decision-making under risk. Drawing on the "certainty effect," Kahneman and Tversky argued that humans are psychologically more affected by losses than gains. The perceived loss from misplacing a $20 note, for example, would outweigh the perceived gain from finding a $20 note on the sidewalk, leading to "loss aversion."

This insight is also at the core of the "framing effect." The theory, developed while Kahneman was a fellow at CASBS and Tversky was a visiting professor at Stanford, posits that the way information is presented – whether as a loss or a gain – significantly influences the decision-making process, even when what is framed as a loss or gain has the same value.

Lastly, there is Kahneman's popular masterpiece, the bestselling *Thinking, Fast and Slow*. Published in 2011 and offering a lifetime's worth of insights, the book introduced

the general public to two stylized modes of human decision-making: the “quick,” instinctive, emotional mode that Kahneman called System 1, and the “slower,” deliberative, or logical mode, which he called System 2. Humans, he showed, are prone to abandoning logic in favor of emotional impulses.

Kahneman received the Nobel Prize in Economics in 2002, despite, as he jokingly remarked, having never taken a single economics course. Nevertheless, his scholarship laid the groundwork for an entirely new field of economic research — and it had all begun in Study 6.

In particular, Kahneman’s work had a profound impact on University of Chicago economist Richard Thaler, who went on to become a Nobel laureate himself. As an assistant professor, Thaler managed to “finagle” a visiting appointment at the National Bureau of Economic Research, whose offices were located down the hill from CASBS, enabling him to connect with Kahneman and Tversky.

In 1998, Thaler co-authored a seminal paper with Cass Sunstein and Christine Jolls, introducing the concept of “bounds” on reason, willpower, and self-interest, and highlighting human limitations that rational-actor models had overlooked. By the time he received the Nobel Prize in 2017, Thaler had systematically documented “anomalies” in human behavior that conventional economics struggled to explain and conducted highly influential research (with Sunstein) on “choice architectures,” popularizing the idea that subtle design changes (“nudges”) can influence human behavior.

But as I gazed at the sweeping views of Palo Alto and the San Francisco Peninsula from the office window at CASBS, the birthplace of behavioral economics, I could not help but wonder whether Kahneman, despite his famously gentle nature, had perhaps been too critical of human decision-making. Are all deviations from “pure” economic logic necessarily “irrational”? Is our inability to align with the idealized

model of economic analysis, coupled with our inevitable – albeit predictable – irrationality, really an inherent weakness? And is our tendency to rely on emotions rather than reason a fatal flaw, and if so, could our susceptibility to instinct ultimately lead to our downfall?

I wish I could ask Kahneman these questions. During my time there in 2020-21, Kahneman, affectionately known as “Danny” to all, was not just what CASBS called a “ghost” of the “study” – a former occupant who had been a major influence on my work – but also, happily, a vibrant, living legend who had enthusiastically invited me to discuss these very issues in person. Looking back, I regret my “planning fallacy” in not taking him up on his offer to deepen our conversation sooner – a sentiment shared by both my System 1 and System 2 modes. If “to err is human,” Danny taught me a poignant final lesson in human error.