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The BBVA Foundation recognizes psychologists Susan Fiske and Shelley Taylor, the pioneers of social cognition who revealed the role of cognitive bias in social relations

- Their seminal 1984 book 'Social Cognition' provided a theoretical starting point for the field of the same name and, with its fifth edition now approaching, has become a "modern classic" in the words of the committee, "inspiring and energizing countless researchers for over three decades"
- The laureates propose a model where people process information on their social environment (people, groups, social situations) at two distinct speeds: a slow speed, based on a systematic analysis of all available data, and a faster, more frequent one drawing on "cognitive shortcuts," biases and strategies that simplify complex problems, privileging efficiency over precision
- Both women have worked independently on other major research projects: Taylor is one of the architects of the health psychology field, as well as discovering the role and function of positive illusions; Fiske has contributed key insights on the formation of stereotypes, and how they determine emotional reactions towards members of different groups

The BBVA Foundation Frontiers of Knowledge Award in Social Sciences has gone in this twelfth edition to psychologists Susan Fiske and Shelley Taylor for their "outstanding contributions" in social cognition, a field which examines the "social mind," i.e. the cognitive processes individuals use to understand other people and themselves. The committee reached its decision through a remote assessment process due to the extraordinary measures imposed in response to the Covid-19 pandemic.

Fiske and Taylor are described in the citation as "two of the most influential social psychologists working today" whose "amazing insights" have elucidated the role of cognitive shortcuts in shaping social interactions. These shortcuts in mental processing intervene in the formation of value judgments about other people or social situations.

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The committee also made reference to the work done individually by each laureate. Taylor, a Distinguished Research Professor at the University of California, Los Angeles (United States), is at the forefront of research into "how stress affects health, and how social factors can serve as a buffer in this respect." She was also the first to propose the prevalence of "positive illusions," namely "the rather functional human tendency to see the future as more positive than is perhaps likely," and has carried out innovative work in social neuroscience involving the use of neuroimaging technology.

Fiske, a Professor of Psychology at Princeton University (United States), has researched extensively into the formation of stereotypes, prejudices and discriminatory attitudes, and how they may be alternatively encouraged or discouraged by social relation properties like cooperation, competition and relations of power.

Fiske and Taylor were nominated for the award by José María Peiró, Professor of Social and Organizational Psychology at the University of Valencia, Alicia Salvador, Professor of Psychobiology at the same institution, and José Muñiz-Fernández, Professor of Psychometrics at the University of Oviedo

The awardees met at Harvard in the early 1970s, when Fiske joined Taylor's class. The professor had developed an interest in attribution theory, concerned with how people explain the causes of their own behavior and that of others, and she and her student began working on it together. By the start of the 1980s, their efforts and those of other groups pursuing a similar direction had led to a merging of approaches in what, up to that point, had been the separate, even distant fields of social and cognitive psychology.

This was nothing less than "a daring and risky revolution," say nominators José María Peiró and Alicia Salvador. "Cognitive psychologists were closely focused on information processing, attention, memory, learning, and so forth, and not much interested in social issues." But Fiske and Taylor would successfully "hybridize and cross-fertilize" the two fields. For Peiró, their work stands as a "milestone in our understanding of how people process information, and in demonstrating that by interpreting reality we transform it, acting on it as it acts on us; that we are influenced by context."

In 1984 Fiske and Taylor published *Social Cognition*, a landmark work which, the committee remarks, "put social cognition on the map." After four editions, the most recent in 2012 with the revelatory title *Social Cognition: From Brains to Culture*, "it has become a modern classic, inspiring and energizing countless researchers for over three decades." Fiske confirms that a fifth edition is in the pipeline.

In its pages the authors propose a "groundbreaking model" that posits two speeds of information processing: the first fast and relatively superficial, working on the basis of what are presumed to be groupwide characteristics (stereotypes); the second slower, more careful and drawing on individuated information. In the fast mode, "people often make judgments about social life based on whatever happens XII Edición **Premios Fundación BBVA Fronteras del Conocimiento BBVA Foundation Frontiers of Knowledge Awards** 12th Edition

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to catch their attention at the time," the committee notes, "rather than systematically processing all the available information."

In phone conversation after hearing of the award, Taylor recalled the beginnings of her collaboration with Fiske: "Susan was a final-year undergraduate student at the time. One day there was a knock on my door and it was her asking if she could work with me. We have been collaborating since 1972, a hefty amount of time and all of it satisfying and fruitful."

Their first object of study was the phenomenon of salience: "Whatever information is salient or stands out will come to be thought of as the cause of the other things going on in that situation. Likewise, when a person is salient, even doing something really simple – putting them in front instead of off to the side – means that person will be judged to have a more important role in the conversation, setting the agenda and introducing topics, simply by the fact that they overwhelm your visual field."

Fiske and Taylor defined several types of social thinker, including what they termed the "cognitive miser," who exhibits a kind of bias favoring information that confirms their own beliefs, thus cutting down the mental effort involved in processing. Although this mechanism encourages a partial interpretation of reality, it has the virtue of enabling us to manage in fragments of a second the vast quantity of data present in any social interaction.

Their model, the committee adds, "also details the conditions under which more elaborative cognitive processes are used as a basis for decision."

The cognitive miser simultaneously draws on and reinforces existing stereotypes. As Peiró and Salvador explain, "we need to understand when this can be useful and when it may be harmful." The ideal solution, they continue, "would be a combination of rapid thinking with a slower, individuated approach, more rigorous, painstaking and self-critical where need be, that pays heed to people's idiosyncrasies." Their fellow nominator José Muñiz-Fernández describes Fiske and Taylor as "opening up the field of social cognition, and extending its influence to sociology, economics, politics and health. Their key contribution has been to overturn the classical view that we arrive at judgments in a rational, analytic manner, showing that instead we use shortcuts, deploying automatic mechanisms that are imperfect but useful."

Innate but modifiable biases

As Fiske explains, "the social world is intrinsically complicated and our minds are limited, so we take shortcuts. You couldn't walk down the street if you were individuating everyone you pass. You have to make quick decisions – this person is dangerous, this one is not. And the shortcuts we take mostly work well enough, because, after all, we survive. But some are malignant, including racial or social class categories or other unfair stereotypes."

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Taylor reflects on whether such prejudices can be remedied: "I think that a lot of social cognition is innate in the sense that, for example, in any social situation we orient to people's faces, since people are the most important source of information in most situations. All of that is probably innate, it's hard to imagine how we would have survived as a species if it weren't. But beyond that, most of how we think about people, particularly specific people, comes from our experiences, so the dimensions we use for thinking about them are modifiable over the whole lifespan."

Fiske concurs: "It's human nature to be uncomfortable around people who are different from you. You have grown up in a familiar environment, and with people who are different you cannot predict what they're going to do. But our data show that if nothing terrible happens and there is no demagogue leader exploiting distrust, people in different groups get used to each other. If people live together, you find that, with time, the stereotypes fade away."

The psychology of health

Taylor is also acknowledged as among the founders of the health psychology field, especially for her contributions on how stress affects health, and how social factors are able to buffer this effect. "When I began working in this field there was barely any interest in the relation between mind and body, or between psychology and health," she recalls. Since then, however, the example of her work "has attracted more and more researchers into what is now a major sub-field in psychology."

It was a friend's breast cancer that set Taylor thinking about what principles of social psychology might help people in their adjustment to the disease. Initially skeptical, she found as her research progressed that the mitigation of stress through positive self-perceptions and social support has a closer relationship to physical wellbeing than was considered at the time, and is in fact a contributing factor to the quality of life of those suffering chronic conditions.

As well as fuelling the growth of this burgeoning field, these findings opened up new research directions in Taylor's own career, linked, once again, to the role of social interactions and cognitive bias. What she was able to show was that social support, and above all the perception that such support is available, can mitigate the effects of stress in conditions like metabolic syndrome, hypertension or diabetes. "Social support is essential," Peiró and Salvador remark, "because people would not be viable without society."

Her work in health psychology also led her to the discovery of "positive illusions," whereby people tend to perceive things in an optimistic light, believing they are better than they are, and ascribing themselves more control or mastery over outcomes. Taylor showed that this bias contributes to the improvement of health.

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She explains it thus: "When Susan and I were working on how people thought about themselves and other people, it became apparent that they thought better of themselves than reality could sustain, and also better about their future. And I started getting very interested in why these positive biases were sustained, what was valuable about them. I think the answer is that it serves people well from both an emotional and cognitive standpoint to think about themselves as doers, well regarded by others, with many talents... They may be illusions, but they are very functional and adaptive."

Power reinforces stereotypes

The committee also singled out Fiske's research into how social relations color the formation of stereotypes and prejudices. The awardee starts from the premise that people are quick at categorizing others based on obvious traits such as race, gender or age. Going beyond that, Fiske says, "requires motivation," and that motivation comes, for example, from social relationships like cooperation, competition and power.

Specifically, Fiske believes that when faced with a person who has power over us, we arm ourselves with information in a methodical, individuated manner, resorting less to stereotypes. Conversely, when it is we who hold power, we are much less concerned about knowing our subordinates in detail, making it easier to assign them a group label or stereotype.

"I've spent most of my career studying how to overcome harmful stereotypes," says Fiske. "We have found, for instance, that if you put people on teams, when they are independent and need each other, they take more trouble to form individual impressions and get beyond racial, class or other kinds of discriminatory biases. If you get people of different categories within an organization and tell them their bonus depends on them working together, it's amazing how fast people get over their prejudices."

Asked about the application of her research to the lockdown imposed by the coronavirus pandemic, Taylor states that positive illusions can be a way to adapt and mitigate the stress caused by social distancing, and highlights the value of maintaining social support by electronic means. Fiske seconds this view, adding that as social beings we need to feel connected, if only through technology.

Laureate bio notes

Susan Fiske (Chicago, 1952) received a PhD in Social Psychology from the University of Harvard (1978). She began her research and teaching career at Carnegie Mellon University (1978-1985), before taking up more senior appointments at the University of Massachusetts at Amherst (1986-2000). In 2000 she moved to Princeton University, where she is now Eugene Higgins Professor of Psychology, and an affiliated member of the Scully Center for the Neuroscience of Mind and Behavior. Since 2012, she has also served as Professor of Public Affairs at Princeton's Woodrow Wilson School of Public and International Affairs.

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Author of over 380 publications, she currently edits the Annual Review of Psychology and the Handbook of Social Psychology, and is a former editor of Policy Insights from Behavioral and Brain Sciences and associate editor of, among others, Psychological Review and Journal of Experimental Social Psychology. She has served as president of a number of learned societies including the Federation of Associations in Behavioral and Brain Sciences and the American Psychological Society.

Shelley Taylor (Mount Kisco, New York, 1946) earned a BA in Psychology at Connecticut College (1968) and a PhD in the same subject from Yale University (1972). After a series of research and professorial appointments at the University of Harvard, in 1979 she joined the faculty at the University of California, Los Angeles, where she is currently a Distinguished Research Professor. She has over 500 publications to her name, including the books *Health Psychology, Positive Illusions: Creative Self-deception and the Healthy Mind, The Tending Instinct: How Nurturing is Essential to Who We Are and How We Live and Social Cognition: From Brains to Culture (with Susan Fiske). A former president of the Society for Personality and Social Psychology and the Western Psychological Association, she has held editorial positions with the <i>Journal of Personality and Social Psychology* and *Social, Cognitive, and Affective Neuroscience,* among other publications.

Humanities and Social Sciences committee and evaluation support panel

The committee in this category was chaired by **Jon Krosnick**, the Frederic O. Glover Professor in Humanities and Social Sciences at Stanford University (United States), with **Dolores Albarracin**, Professor of Psychology, Business and Medicine at the University of Illinois at Urbana-Champaign (United States) acting as secretary. Remaining members were **Bruno Cautrès**, a research fellow of the Centre National de la Recherche Scientifique (CNRS), attached to CEVIPOF, the Centre de Recherches Politiques of Sciences Po in Paris (France); **Cees Midden**, Professor Emeritus of Human-Technology Interaction at Eindhoven University of Technology (Netherlands); **Brian Parkinson**, Professor of Social Psychology in the Medical Sciences Division at the University of Oxford (United Kingdom); and **Simone Schnall**, a Reader in Experimental Social Psychology in the Department of Psychology at the University of Cambridge (United Kingdom).

The evaluation support panel of the Spanish National Research Council (CSIC) was coordinated by M. Victoria Moreno, the Council's Deputy Vice President for Scientific and Technical Areas, and formed by: Marta Fraile Maldonado, tenured researcher at the Institute of Public Goods and Policies (IPP); Elea Giménez Toledo, tenured researcher at the Institute of History (IH); Ignacio Montero Ruiz, Deputy Coordinator of the Society Global Area and scientific researcher at the Institute of History (IH); Julio Pérez Díaz, tenured researcher at the Institute of Economics, Geography and Demography (IEGD); and Sebastian Rinken, tenured researcher at the Institute of Advanced Social Studies (IESA).

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The BBVA Foundation centers its activity on the promotion of world-class scientific research and cultural creation, and the encouragement of talent. The BBVA Foundation Frontiers of Knowledge Awards, established in 2008, recognize and reward contributions of singular impact in diverse fields of science, technology, social sciences and the humanities that have demonstrably expanded the frontiers of the known world, opening up new paradigms and knowledge fields. Their eight categories are reflective of the knowledge map of the 21st century, encompassing basic research in Physics, Chemistry and Mathematics, Biology and Biomedicine, Information and Communication Technologies, Humanities and Social Sciences, Economics, Finance and Management, Ecology and Conservation Biology, Climate Change, and, within the arts, the supremely creative realm of music.

The BBVA Foundation is aided in the evaluation process by the Spanish National Research Council (CSIC), the country's premier public research organization. The Foundation and CSIC jointly appoint the evaluation support panels charged with undertaking an initial assessment of the candidates proposed by numerous institutions across the world and drawing up a reasoned shortlist for the consideration of the award committees. CSIC is also responsible for designating the chair of each committee, formed by eminent authorities in the subject area.

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