

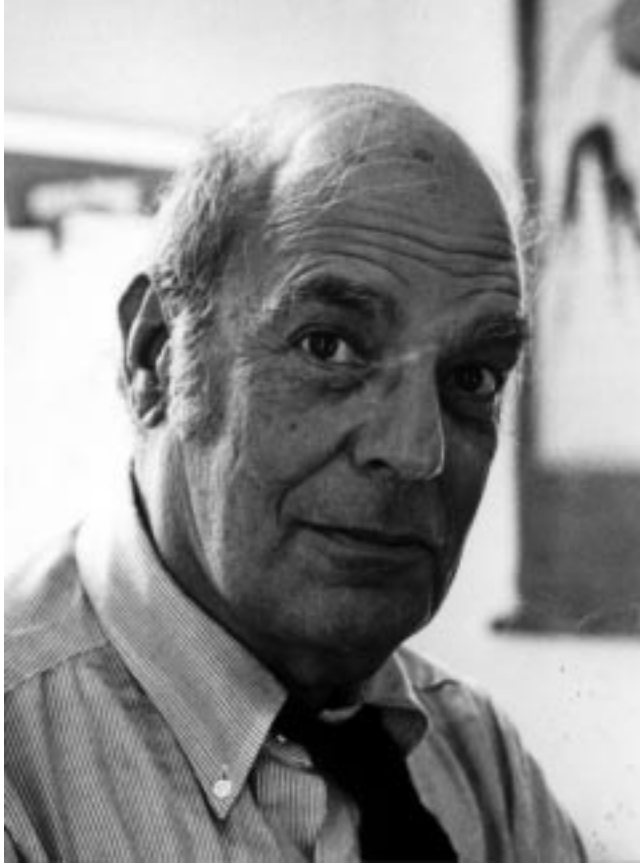
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STANLEY SCHACHTER
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A Biographical Memoir by
RICHARD E. NISBETT

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Stanley Schachter

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April 15, 1922–June 7, 1997

BY RICHARD E. NISBETT

STANLEY SCHACHTER was one of the very few social psychologists ever elected to the National Academy of Sciences (in 1983). His contributions ranged across the study of communication and social influence, group processes, sources of the affiliation motive, intellectual and temperamental correlates of birth order, nature of emotional experience, people's ability to correctly attribute the causes of their behavior to external versus internal factors, causes of obesity and eating behavior disorders, the addictive nature of nicotine, psychological reactions to events that affect stock market prices, and the proper interpretation of "filled" ("uh," "er") pauses in speech. Few, if any, social psychologists ever made contributions over a wider range of topics. Remarkably, the diverse content of the contributions was tied together by a small number of powerful theoretical concepts.

Stanley Schachter was born on April 15, 1922, to Nathan and Anna Schachter in Flushing, then a semi-rural part of Queens, New York. Knowing that he wanted to go away to school, but knowing nothing of the rarefied and preppy atmosphere he was about to enter, he chose Yale, where he initially majored in art history. He stayed on for a master's degree in Yale's psychology department, which he found

far more to his liking than the undergraduate school. The main intellectual influence on Schachter at Yale was Clark Hull, one of the founding fathers of learning theory.

After a stint working on vision in the Aero-Medical Laboratory of the Armed Services during World War II, Schachter found he was eager to work on pressing social problems. This took him to MIT in 1946 to work with the great German social psychologist Kurt Lewin, who had just set up his Research Center for Group Dynamics for the theoretical and applied study of social issues at that school. The other younger faculty members were Dorwin Cartwright, Leon Festinger, Ronald Lippitt, and Marion Radke, all to become distinguished social psychologists. The first two-year cohort of students included many who were to become eminent social psychologists, including Kurt Back, Morton Deutsch, Murray Horwitz, Harold Kelley, Albert Pepitone, John Thibaut, and Ben Willerman. On Lewin's death in 1947, the Research Center for Group Dynamics moved to the University of Michigan, where it became a part of the Institute for Social Research. Schachter received his Ph.D. from Michigan in 1949.

Schachter's dissertation adviser and most influential mentor was Leon Festinger. With Festinger, Schachter studied communication and social influence and, together with Henry Riecken, they wrote a book entitled *When Prophecy Fails* (1956), describing what happened to a millennial group that had predicted the end of the world on a date certain. The appointed hour came and went, but the group's adherents did not give up their beliefs. On the contrary, they decided their faith had saved the world and began to proselytize for converts! Though this finding might seem a mere curio, it gave rise to much interesting social psychology, including Festinger's celebrated cognitive dissonance theory. It also

played a key role in showing Schachter how powerful social influence could be.

Schachter's first job was at the University of Minnesota, and he remembered both the city of Minneapolis and the university with great fondness. In 1961 Schachter moved to Columbia, the university from which he ultimately retired. Schachter and his wife, Sophia Duckworth, loved the city of New York, as well as their summer residence on Long Island. The couple had a son, Elijah.

The effect that Schachter had on people was very much the same whether they were his fellow eminent scientists or the lowliest of beginning graduate students. He was charismatic, funny, a wonderful gossip (but never in a malicious way), thought provoking, and unpretentious. He encouraged his students to be equally unpretentious, by his example and by his habit, after a student had just produced a particularly sententious observation, of insisting that the student repeat the observation, but this time in language that would be used for the student's grandmother.

Schachter's non-professional interests were as protean as his professional ones. He loved art, literature, the theater, the beach, tennis, backgammon, and offbeat scientific facts from fields as diverse as geography and medicine. Partly for esthetic reasons, he was incapable of conducting boring research—including the sort of potboilers that even the best scientists are likely to conduct to make sure they are productive. His esthetic sense and his capacity to enjoy himself at play prevented Schachter from being the sort of workaholic that many great scientists are. He enjoyed himself enormously outside of work, and probably in part because of that, in his work as well.

Schachter had the great good fortune to work briefly with Kurt Lewin, and then with Lewin's student Leon Festinger. Both men understood that social psychology could

be an experimental science like any other. Schachter's dissertation, published in 1951, became one of the most famous experimental demonstrations of a social process ever conducted up to that point. It showed the massive pressures to conform that are brought to bear on deviates from a group norm and the sorts of punishment that are administered to those who fail to toe the line. The study also showed the "carrot" side of group pressure. Deviants who join the opinion fold may be fully forgiven for the error of their previous ways.

The dissertation was inspired by work on social influence in MIT married student quarters done earlier in graduate school with Festinger and the sociologist Kurt Bach. This work indicated that people were defining the same objective situation in very different ways, depending on their accidental exposure to people having one set of views versus another. This work laid the groundwork for one of the major theoretical themes of Schachter's career, namely the great power of social factors in determining people's understanding of reality. The project incidentally showed the remarkable importance of physical distance and functional distance (e.g., proximity to the same staircase as another individual versus proximity to another staircase) in determining who communicates with whom. This work is by now known to every architect, and presumably influences the way they construct environments.

Schachter brought some aspects of the experimental techniques created by his dissertation to the study of the bases of group affiliation (1959). He was able to show that people sometimes affiliate to find out what emotions to experience in a given situation. When the situation is ambiguous, but potentially threatening, people seem to require knowledge of other people's emotional states to help them decipher their own. Moreover, this turns out to be particularly true

of first-born children, who seem to have needs for conventional, and conventionally admired, behavior. These facts have implications, demonstrated by Schachter and his students, for levels of educational attainment and for professional success in a variety of occupations that are extreme in the extent to which one must be alone or together with others.

One of the most interesting aspects of the affiliation work was that it implied that emotions are sometimes “constructed” cognitively rather than produced directly by a given stimulus situation. One of Schachter’s most influential projects, carried out with Jerome Singer, Bibb Latané, and Ladd Wheeler, was the study of the construal processes underlying emotional experience (1962). They showed that people who are aroused from some unknown source (for example, from an injection containing adrenaline) can be influenced to experience anger, euphoria, or fear, depending on the situation in which they are placed. Schachter argued that the physiological substrate of all strong emotion, or at any rate the peripheral, non-central nervous system substrate, may be the same. It is the construal of situations, often aided by cues from other people, that determines precisely which emotion will be experienced.

An even more important outgrowth of the research on emotions was a generalization of the point about the construal of causes. Attribution of causality for one’s own emotions and behaviors is a far more subjective matter than had previously been assumed. It is possible to arouse people by some purely physiological means and have them attribute the arousal exclusively to some external source, such as a social situation that can be interpreted as threatening. Contrariwise, it is possible to prevent people from having the emotion they would normally experience in response to an arousing situation by having them mistakenly attribute the

arousal to a drug (actually a placebo) that they have been given. In essence, all of the arousal is attributed to the drug, and less emotion is experienced than if participants had not been told that they had been given a drug that would cause arousal. Thus causal attributions for one's own behavior are far more subjective, and the malleability of emotions is far greater, than had previously been supposed.

The work on the attribution of emotions was one of the centerpieces of research on causal attribution, which dominated the field of social psychology in the 1970s. The work was also of substantial practical importance, in part because it showed that the placebo effect counted on by physicians could sometimes backfire. For example, to tell insomniacs, whose worries prevent them from sleeping, that they have been given a drug (actually a placebo) that should help them to sleep, could have the paradoxical effect of convincing patients that they are particularly upset on the nights they take the drug. Assuming they are as aroused as usual, they can only surmise that, since the drug is proving ineffective, they must be particularly distressed. Greater insomnia should result—a finding actually obtained by researchers working from the Schachter-Singer theoretical position.

The work on emotional states gave rise to two provocative lines of research. With Bibb Latané and Stuart Valins (1964), Schachter studied primary sociopaths (individuals who show low affect and are often criminals caught doing things that any normal person would be too frightened to do). Sociopaths had been found by David Lykken to learn anxiety-mediated avoidance behavior more slowly than normals. Contrary to what one might expect, however, sociopaths had higher levels of chronic arousal than normal individuals. Despite this, Schachter and Latané found that when they injected sociopaths either with saline solution or adrenaline, subjects in the latter group learned how

to avoid shock more readily than subjects in the former group.

In other inventive work conducted with, among others, Larry Gross, Richard Nisbett, Patricia Pliner, Judith Rodin, and Lee Ross, Schachter (1968) reasoned that, since physiological arousal symptoms are so plastic and can be attached to so many emotional states, perhaps they can even be interpreted as organismic states not normally regarded as emotions. Perhaps, he guessed, they can even be interpreted as hunger signals. If a person were burdened with a habit of interpreting arousal in that way, that person, given a life of even ordinary stress, might become obese. Schachter found no evidence of such a tendency on the part of the obese, but what he did find was even more interesting.

The obese turned out to be relatively unmotivated to eat by food deprivation, but highly motivated to eat by external cues, such as the taste and availability of food. Schachter guessed that the hyper-responsivity to external cues, in a world where such cues abound, would leave the individual prey to the temptations of overeating. This interpretation subsequently gave way to the view, advocated by students of Schachter who continued to work on the problem, that the cart had been placed before the horse in the theorizing. The obese in our society are typically food-deprived because they are attempting to keep their weight down, hence minor manipulations of short-term deprivation are far less important to them than to normal-weight individuals who are regulating their intake in part on the basis of short-term changes in caloric need. But precisely because the obese are so hungry, they can be led to eat large amounts by external cues—in effect, to get off the wagon when good-tasting food lies close at hand.

Continuing his interest in the relation between biological and cognitive states, Schachter (1978), along with stu-

dents who included Lucy Friedman, Neil Grunberg, Peter Herman, and Lynn Kozlowski, studied the addictive properties of nicotine. It should be recalled that as late as the 1970s, it was still controversial whether nicotine was addictive. In a double-blind experiment, Schachter found that people asked to smoke low- or high-nicotine cigarettes on alternate weeks reported smoking more on low-nicotine weeks, thus indicating that they were titrating to a degree their exposure to the drug. More importantly, because nicotine is an alkaloid, and its rate of excretion is determined by the pH, or degree of acidity, of the urine, it is easy to manipulate urinary pH with bicarbonate of soda or fruit juices. Schachter found that stress increased the acidity of the urine. When Schachter decreased the acidity of smokers' urine, he found that this reduced their smoking under stressful conditions.

In addition to all the other claims that can be made about the importance of Schachter's career, it can be argued on the basis of his work on the attribution of emotions, sociopathy, obesity, and smoking that he was the founder of modern health psychology. This field applies the findings of social, personality, and cognitive psychology to problems of physical and mental health. Much of the early work in the field made explicit reference to Schachter's research.

In later work, perhaps because human subjects review boards were making it difficult for psychologists to conduct research in which they deceived their subjects or placed them in uncomfortable situations, Schachter became interested in aggregate-level phenomena. He found, for example, that department store sales were off the day after a widely publicized crime, presumably because people were temporarily hesitant to go out. He was able to apply these findings to such practical matters as the behavior of the stock market. For example, the number of stories about violence

in the newspapers or the recent occurrence of an airline catastrophe had predictable, though usually small and ephemeral, effects on the market.

Aside from the important content contributions made in each of these research areas, Schachter bequeathed an orientation toward the conduct of research that revolutionized the study of “soft” topics in psychology—those questions of social and personality and clinical psychology that seem intrinsically to be so difficult to study that only suggestive progress can be made. Schachter’s approach consisted in part of devising control conditions that were so similar in all respects to the experimental condition—save the theoretically crucial one—that alternative explanations were difficult to sustain. Most prior research in the soft areas of psychology used a methodology that simply showed that individuals of type X do behavior A more than individuals of type Y. Schachter showed that it was often possible to show, whereas X do more A than Y in Situation 1, there is no difference between X and Y in Situation 2, where, according to his theory, there should be no difference. It is hard today to recognize just how much cleverness was required to invent such manipulations, so routine have they become. An equally important aspect of Schachter’s orientation to research was to combine elegant experimentation with yeasty real-world tests of theory. In general, the sorts of objections that apply to laboratory experiments do not apply to real-world studies, and vice versa. The combination of the two types of research made Schachter’s work uniquely convincing. (Though it must be admitted that his work was sometimes more convincing than it might have been simply because of the charm of his prose style! Example: “I don’t think I have ever seen a hypothalamus, though I’m pretty sure I’ve eaten one in a French restaurant.”)

Almost equally striking was Schachter’s contribution to

the nature of theorizing in social and personality psychology. Prior to his entrance on the scene, much theorizing was highly complex and was derived from large, overarching frameworks such as psychoanalytic theory and learning theory. In contrast, Schachter's theorizing was ad hoc, in the sense that the theory was designed to generalize from the facts at hand about a particular phenomenon rather than to find some way to bend a pre-existing theory to fit the particulars. His theories were of the sort that the sociologist Robert Merton has called approvingly "theories of the middle range." By comparison to most researchers, Schachter's theorizing was always to a very simple account, one that often seemed odd and implausible at first encounter but eventually began to seem commonsensical. His theorizing was perhaps sometimes oversimplified, and his hedgehog stance nearly always annoyed the foxes of the field, but it has proved far easier to build upon and when necessary to correct Schachter's simple and commonsensical theories than to work with their more "sophisticated" competitors.

Among Schachter's most important contributions to psychology was his training of graduate students. It is doubtful that any social psychologist ever trained so many distinguished people. Through a combination of charm and a sense of adventure, he made the conduct of psychological research exciting. He elicited as much from his students as there was to be drawn from them. His students, in turn, have been successful in operating in a similar way with their own students. A remarkable fraction of the most highly regarded social psychologists in the country are the intellectual children, grandchildren, and now even great-grandchildren of this multiply talented investigator with his protean interests.

NOTES

This memoir is based in part on many discussions with Schachter's students over the years. The author is indebted to Julian Hochberg and Lee Ross for comments on an earlier version of this memoir.

There is a fascinating and useful autobiography by Schachter in *A History of Psychology in Autobiography*, ed. G. Lindzey. Stanford: Stanford University Press, 1989. Other useful material about Schachter can be found in a festschrift edited by N. E. Grunberg, R. E. Nisbett, J. Rodin, and J. E. Singer: *A Distinctive Approach to Psychological Research: The Influence of Stanley Schachter*. Hillsdale, N.J.: Lawrence Erlbaum Associates, 1987.

Schachter's papers are archived at the Bentley Historical Library of the University of Michigan.

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