Impressions of Others

The third usage of the concepts central versus peripheral traits focuses on perceptions of others. Information about central traits influences perceptions of others more than does information about peripheral traits. When people hear that another person possesses a central trait (e.g., *moral*), they are more willing to make a host of inferences about that person than if they hear that the person possesses a more peripheral trait (e.g., *thrifty*).

Two classic experiments demonstrate the impact that central traits have on people's impressions of others. In 1946, Solomon Asch presented some students with a description of a person who was *intelligent, skillful, industrious, warm, determined, practical,* and *cautious.* For other students, the term *warm* was replaced with *cold.* Students later described the first person much more positively—as wiser, happier, and more humorous, for example—than they did the second person. These differences arose, Asch argued, because *warm* and *cold* are central traits that have a powerful impact on the range of conclusions people are willing to reach about others. Supporting this view, replacing *warm* and *cold* with *polite* and *blunt,* respectively, did not carry the same impact, presumably because these were more peripheral traits. Echoing Asch's findings, Harold Kelley in 1950 introduced a guest lecturer to a class to some students as a *warm* person and to others as a *cold* individual. Students receiving the first description were more likely to engage in class discussion and to rate the lecturer as effective and less formal.

One note should be mentioned about trait centrality for the self and trait centrality for judgments about others. Often, the traits considered central in the self-concept are also the traits that show up as more central in impressions of others. If *extraversion* is a trait that is central to a person's self-concept, he or she will judge others more centrally on whether they are extraverted. If *morality* is a central trait for self-esteem, morality is likely to operate as central trait in impressions of others. Theorists suspect that self-central traits are used more centrally in judgments of others because doing so bolsters self-esteem. If one's own attributes suggest so many other characteristics and abilities in other people, then those attributes must be important, and it must be good to possess such important traits.

David Dunning

See also Schemas; Self-Evaluation Maintenance

Further Readings

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CHEATER-DETECTION MECHANISM

Definition

The human brain can be thought of as a computer—an organic one, designed by natural selection to process information in adaptive ways. It is composed of many programs, each of which evolved because it was good at solving a problem of survival or reproduction faced by hunter-gatherer ancestors in the past. The cheater-detection mechanism is one of these evolved programs. The adaptive problem it evolved to solve is detecting cheaters in situations involving social exchange.

Usage

Whenever you exchange favors, buy things (trading money for goods), or help someone who has helped you, you have engaged in social exchange. It is a way people cooperate for mutual benefit: I provide a benefit of some kind to you, and you reciprocate by providing a benefit to me, either now or later. As a result, we are both better off than we would have been if neither of us had helped the other. Evolutionary biologists demonstrated that social exchange cannot evolve in a species unless those who engage in it are able to detect cheaters, that is, individuals who take benefits from others without providing them in return. Inspired by this finding, psychologists discovered a cheater-detection mechanism in the human brain: a program that searches for information that could reveal whether a given individual has cheated in a specific social exchange.

Background

Wherever you find humans, you will find them engaging in social exchange: It is as cross-culturally universal and typical of the human species as are language and tool use. Sometimes it is explicit and formal, as when people agree to trade goods or services. Other times it is implicit and informal, as when a woman living in a hunter-gatherer band shares food she has gathered with someone who has helped her in the past.

That people can make each other better off by exchanging favors, goods, and help is so rational and obvious to humans that they take it for granted. But most species cannot engage in social exchange. Its presence in some species but not others says something about the programs that generate social exchange behavior. Operant conditioning produces behavior contingent on rewards received (like social exchange does). But the programs causing this general form of learning are found in all animal species and so cannot be the cause of social exchange (if they were, many or most species would engage in it). Some of our primate relatives do engage in social exchange, so it must not require the special forms of intelligence that humans possess. Indeed, schizophrenia can impair general reasoning and intellectual abilities without impairing one's ability to detect cheaters in social exchange.

Evidence from many reasoning experiments shows that reasoning about social exchange is much better than reasoning about other topics, and it activates inferences not made about other topics. The patterns found indicate that the human brain contains programs that are *specialized* for reasoning about, and engaging in, social exchange, including a subroutine for detecting cheaters (the cheater-detection mechanism).

Evidence

Consider the following situation: Your mother knows you want to borrow her car, so she says, "If you borrow my car, then you must fill the tank with gas." This is a proposal to engage in social exchange because it is an offer to provide a benefit *conditionally* (conditional on your satisfying her requirement—what she wants in return). Cheating is taking the benefit offered without satisfying the requirement that provision of this benefit was made contingent on. So you would have cheated if you had borrowed the car without filling the tank with gas.

Understanding this offer requires conditional reasoning—the ability to draw appropriate inferences about a conditional rule of the form "If P then Q." Psychologists interested in logical reasoning found that when people are asked to look for violations of conditional rules that do not involve social exchange, performance is poor. But performance is excellent when the conditional rule involves social exchange and looking for violations corresponds to looking for cheaters. Subsequent tests show that this is not because social exchange activates logical reasoning abilities; instead, it activates inferences that are adaptive when applied to social exchange but not when applied to conditional rules involving other topics.

The cheater-detection mechanism looks for cheat*ers,* not cheat*ing*; that is, it looks for people who have *intentionally* taken the *benefit* specified in a social exchange rule without satisfying the requirement. It is not good at detecting violations caused by innocent mistakes, even if they result in someone being cheated. Nor can it detect violations of rules lacking a benefit: Conditional rules specifying what a person is required to do, without offering to provide a *benefit* in exchange for satisfying this requirement, are not social exchanges and do not elicit good violation detection.

Good performance in detecting cheaters does not depend on experience with an advanced market economy: Hunter-horticulturalists in the Amazonian rainforest are as good at detecting cheaters as are college students in the United States, Europe, and Asia. Familiarity is irrelevant: Performance is excellent for novel, culturally unfamiliar social exchange rules but poor for familiar rules not involving social exchange. By age 3, children understand what counts as cheating in social exchange but not what counts as violating conditional rules describing the world. That is, the cheater-detection mechanism develops early and across cultures.

Brain damage can impair cheater detection without damaging one's ability to detect violations of logically identical social rules that do not involve social exchange. Neuroimaging results show that reasoning about cheaters in social exchange produces different patterns of brain activation than reasoning about other social rules. This is further evidence that cheater detection is caused by a specialized mechanism in the human mind/brain.

Importance

This research shows that evolutionary biology can help one discover new mechanisms of the mind and supports the idea that minds are composed of many specialized programs.

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Leda Cosmides
John Tooby

See also Deception (Lying); Evolutionary Psychology; Social Exchange Theory

Further Readings

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CHOKING UNDER PRESSURE

We have all heard the term *choking under pressure* before. In the sports arena we talk about the *bricks* in basketball when the game-winning free throw is missed. In academic domains, we refer to *cracking* in important test taking situations. But what exactly do these terms mean and why do less-than-optimal performances occur—especially when incentives for optimal performance are maximal?

Definition

The desire to perform as well as possible in situations with a high degree of personally felt importance is thought to create *performance pressure.* However, despite the fact that performance pressure often results from aspirations to function at one's best, pressure-packed situations are where suboptimal skill execution may be most visible. The term *choking under pressure* has been used to describe this phenomenon. Choking is defined as performing more poorly than expected, given one's skill level, and is thought to occur in many different tasks.

Analysis

Some of the first attempts to account for unwanted skill decrements can be traced back to investigations of the arousal–performance relationship. According to models of this relationship (often termed *drive theories* or the *Yerkes–Dodson curve*), an individual's performance level is determined by his or her current level of arousal or *drive.* Too little arousal, and the basketball player will not have the tools necessary to make the shot. Too much arousal, and the shot will be missed as well. Although drive theories have been useful in accounting for some types of performance failures, they fall short in a number of ways. First, drive theories are mainly descriptive. That is, drive theories link arousal and performance, but they do not explain how arousal exerts its impact. Second, within drive theory models, there are often debates concerning how the notion of *arousal* should be conceptualized (e.g., as a physiological construct, emotional construct, or both). Third, there are situations in which certain types of drive theories have trouble accounting for observed behavior. For example, one derivation of drive theory (i.e., social facilitation) predicts that one's dominant response will be exhibited in high-arousal or high-drive situations. However, this does not always seem to hold when the pressure is on.

Building on drive theory accounts of performance failure, more recent work has attempted to understand how pressure changes how one thinks about and attends to the processes involved in skill performance. These accounts are often termed *attentional theories*. Two main attentional theories have been proposed to explain choking under pressure.

First, *distraction theories* propose that pressure creates a distracting environment that compromises working memory (i.e., the short-term memory system that maintains, in an active state, a limited amount of information relevant to the task at hand). If the ability of working memory to maintain task focus is disrupted, performance may suffer. In essence, distraction-based accounts of skill failure suggest that performance pressure shifts attention from the primary task one is trying to perform (e.g., math problem solving) to irrelevant cues (e.g., worries about the situation and its consequences). Under pressure then, there is not enough of working memory's limited resources to successfully support both primary task performance and to entertain worries about the pressure situation and its consequences. As a result, skill failure ensues.

Although there is evidence that pressure can compromise working memory resources, causing failure in tasks that rely heavily on this short-term memory system, not all tasks rely heavily on working memory (and thus not all tasks should be harmed when working memory is consumed). For example, well-learned sensorimotor skills, which have been the subject of the majority of choking research in sport (e.g., simple golf putting, baseball batting, soccer dribbling), are thought to become proceduralized with practice such that they do not require constant attention and control—that is, such skills are not thought to depend heavily