

### Further Readings

Webster, D. M., & Kruglanski, A. W. (1998). Cognitive and social consequences of the need for cognitive closure. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (pp. 133–173). Hoboken, NJ: Wiley.

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## NEED FOR COGNITION

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### Definition

Need for cognition refers to an individual's tendency to engage in and enjoy activities that require thinking (e.g., brainstorming puzzles). Some individuals have relatively little motivation for cognitively complex tasks. These individuals are described as being low in need for cognition. Other individuals consistently engage in and enjoy cognitively challenging activities and are referred to as being high in need for cognition. An individual may fall at any point in the distribution, however.

### Background and History

The term *need for cognition* was originally introduced by Arthur Cohen and his colleagues in the 1950s and was brought back into popularity by John Cacioppo and Richard Petty in the 1980s. In Cohen's original work, need for cognition was defined as the need to make sense of the world. Therefore, greater need for cognition was associated with preference for structure and clarity in one's surroundings. That approach emphasized intolerance for ambiguity and thus appears closer to contemporary scales that measure need for structure or need for closure than to the current definition of need for cognition. However, Cacioppo and Petty retained the term *need for cognition* in acknowledgment of Cohen and his colleagues' early work.

Cacioppo and Petty conceptualized need for cognition as a stable individual difference (i.e., a personality trait) in the tendency to engage in and enjoy cognitively effortful tasks across a wide variety of domains (e.g., math, verbal, spatial). Need for cognition is assumed to reflect a stable intrinsic motivation that can be developed over time. In the modern way of thinking about need for cognition, the emphasis is on

cognitive processing (i.e., the activity of engaging in mentally challenging tasks) rather than on cognitive outcomes (e.g., a structured knowledge of the world). Importantly, need for cognition taps into differences in motivation rather than ability. This is supported by research showing that need for cognition is only moderately related to measures of ability such as verbal intelligence, ACT scores, and high school and college GPA, and continues to predict relevant outcomes after cognitive ability is controlled. It is a matter of whether one likes to think, not whether one is good at thinking.

### Measurement

Although the Need for Cognition scale was originally developed as a 34-item inventory, the most commonly used version contains 18 items that people rate on 5-point scales as being characteristic of themselves (or not). Some examples of scale items are "I prefer complex to simple tasks," "The notion of thinking abstractly appeals to me," and "I prefer my life to be filled with puzzles that I must solve." The scale has been established to have high internal consistency, suggesting that the individual scale items tap into the same construct. The scale also demonstrates good validity. That is, the scale correlates with other scales that measure individual differences that should be independent of but related to need for cognition. For instance, the scale correlates positively with other scales that measure the tendency to make complex attributions and the tendency to seek relevant information for decision making and problem solving.

### Enjoyment of Cognitive Challenges

Consistent with the definition of need for cognition (NC), research indicates that high NC individuals spontaneously engage in a variety of mentally effortful tasks, whereas low NC individuals will participate in such activities only when there are external incentives to do so. For example, high NC individuals distinguished between strong and weak messages in a persuasive communication. This occurred regardless of whether the message came from a trustworthy or untrustworthy source or took a surprising position or not. Low NC individuals, on the other hand, distinguished between strong and weak arguments only when the arguments came from an untrustworthy source or took a surprising position. This means that low NC

individuals scrutinized the message only when there were other motivations to do so (e.g., to check on an untrustworthy source). Other special circumstances that motivate low NC individuals to think include unexpected arguments, an approaching deadline, and a personally relevant topic.

This research suggests that high NC individuals find mentally complex activities inherently enjoyable, but low NC individuals do not. Much evidence indicates that high NC individuals experience cognitively demanding tasks more positively than low NC individuals do. Several studies demonstrated that compared with low NC individuals, high NC individuals reported more positive affective reactions (e.g., ratings of task enjoyment and pleasantness) and less negative ones (e.g., frustration and tension) to mental challenges such as math problems and complex number search tasks. Furthermore, high NC individuals have a greater tendency to seek information about new products and complex issues. For example, they are more likely to tune in to presidential debates. Such active pursuit of information reflects high NC individuals' intrinsic motivation for mental activity and challenges.

### **Engagement in Cognitively Effortful Tasks**

Given their enjoyment of mental challenges, it is expected that high NC individuals have a chronic tendency to participate in cognitively effortful tasks. For example, high NC individuals are more likely to have an abundance of task-relevant thoughts than low NC individuals do. Furthermore, these thoughts are more likely to determine the attitudes of high rather than low NC individuals. For example, in one study, participants saw an advertisement that contained strong arguments for an answering machine. High NC individuals listed more positive thoughts to the strong arguments presented than did low NC individuals. In addition, attitudes toward the answering machine were correlated with thoughts among high NC individuals but not low NC individuals.

High NC individuals have more thoughts regarding persuasive messages and other stimuli, and they are more likely to think about their thoughts, engaging in metacognition. When high NC individuals are confident in their thoughts, they rely on them more than when they lack confidence in them. For low NC individuals, metacognitive processes are less likely. That

is, they are less likely to think about whether the few thoughts they have are valid.

In sum, high NC individuals' thoughts and attitudes are influenced by their effortful assessment of the merits of the information they receive and the perceived validity of their thoughts. Low NC individuals, on the other hand, are more affected by simple cues that are contained in communications. In one study, participants viewed an ad for a typewriter. The ad was endorsed by either two unattractive women or two attractive women. Although high NC individuals gave equally positive ratings to the typewriter regardless of endorser attractiveness, low NC individuals' ratings were more positive when the typewriter was endorsed by attractive than unattractive women. Because the attitudes of high NC individuals are more likely to be based on effortful thought, they tend to be held more strongly. Indeed, research has demonstrated that the attitudes of high NC individuals, compared with low NC individuals, are more persistent, more resistant to attacks, and more predictive of behavior.

Besides attitude-related consequences, another implication of high NC individuals' tendency to process information is that they have better memory for information to which they have been exposed. For instance, when students received arguments about the implementation of senior comprehensive exams, those high in NC recalled a greater proportion of the arguments than did those low in NC. In addition, high NC individuals have more knowledge on a variety of issues. In the domain of politics, high NC individuals listed more information about presidential candidates and more consequences of electing various candidates to office. In other research, high NC individuals listed more types of birds and performed better on a trivia test than low NC individuals did.

### **Biased Processing**

Sometimes, variables can bias one's processing. Because high NC individuals tend to focus on generating their own thoughts to information rather than relying on simple cues, their processing of information is more susceptible to various biases. One source of bias is mood. In one study, positive mood made attitudes more favorable in both high and low NC individuals. The difference is that whereas mood had a direct impact on attitudes in low NC individuals (i.e., mood served as a simple cue), it influenced attitudes in high

NC individuals in a more thoughtful way (i.e., by affecting their perception of the message arguments).

Although high NC individuals may sometimes be biased in their processing, they are also more likely to correct their judgments if biases are detected because they are more likely to engage in the cognitive effort required for such correction. When the biasing factor is subtle and not very salient, it tends to bias the thoughts of high NC individuals (as just described), but when the biasing factor is more blatant, high NC individuals tend to correct for the bias. When they overcorrect for the bias, this can actually lead to a reverse bias.

Need for cognition is an often-researched variable in social psychology because of its implications for people's attitudes, judgments, and decision making. This is because whether an individual is high or low in NC influences how the individual processes information and reacts to variables such as a source's trustworthiness, the individual's own mood, and so on.

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*See also* Elaboration Likelihood Model; Individual Differences; Intrinsic Motivation; Traits

### Further Readings

Cacioppo, J. T., Petty, R. E., Feinstein, J. A., & Jarvis, W. B. G. (1996). Dispositional differences in cognitive motivation: The life and times of individuals varying in need for cognition. *Psychological Bulletin*, *119*, 197–253.

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## NEED FOR POWER

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### Definition

Need for power is defined as the desire to control or influence others. It is not necessarily associated with actually having power, but instead with the *desire* to have power. In 1933, Henry Murray defined a long list of what he considered to be basic human needs. These needs were seen as directing behavior, and people were assumed to vary by how important each need was to them as an individual. One of these needs was the need for power. Some of the early empirical work on need for power was done by David McClelland and

David Winter, who refined the definition and developed methods of testing for people's level of need for power. Need for power (also called power motivation) was seen as one of the three fundamental social motives, along with need for achievement and need for affiliation.

### Associated Behaviors

Needs for power can be expressed in behavior in many ways. One of these is the use of physical or psychological aggression to force others to comply with what one wants from them. One can also express the need for power through gaining a reputation as an important person. Other behaviors associated with high power motivation include trying to affect the emotions of others. This could be done by telling jokes, or by a musical or dramatic performance. Finally, need for power can be expressed through providing (often unsolicited) advice or help. The association of helping behavior with other expressions of power motivation is not intuitively obvious, but the diverse set of behaviors listed here have been tied together empirically. They are all forms of exerting power over others. This power is sometimes exercised for one's own direct benefit, but can also be done with the apparent goal of doing something good for another person.

Some behaviors that have been found to characterize those high in need for power include having a high level of physical fights or verbal arguments with others. Enjoyment of debating might be a characteristic of someone high in need for power. Those who express their power motivation in this way may be very uncomfortable when others see them as powerless or weak. For this reason, they may be seen as hostile or chronically angry. This type of expression of need for power is often seen in negative terms.

Another type of behavior associated with need for power that is more socially acceptable is taking leadership in group situations. Those high in need for power enjoy running an organization, making decisions, or being in charge of a group. They run for elected office. They define what they are doing as motivated by "service" or "duty," but this labeling of their behavior may be a result of the fact that American society frowns on people openly saying they like to have power.

Gaining a reputation is another expression of power motivation. People may display their need for power