Stereotypes: A Good Thing in the Cognitive Toolkit

The term stereotype likely will evoke negative thoughts and feelings, perhaps even thoughts of prejudice or discrimination. In psychology however, stereotypes serve a different function. They are a group of characteristics believed to be shared by all individuals who belong to a group. A group might consist of a racial or ethic group, an occupation, the neighborhood you live in, you gender or formal membership in a club or organization. When we form opinions or beliefs about individuals based on a stereotype, we tend to ignore their individual qualities and conclude things about them based on the particular stereotype we are using. Furthermore stereotypes can been seen as cognitive mechanisms that we use to save mental resources and assist in information processing (Allport, 1954; Anderson, Klatzky, & Murray, 1990; Fiske & Neuberg, 1990). Gilbert & Hixon (1991) describe stereotypes as cognitive tools that "jump out" of the mental toolkit "when there is a job to be done." Instead of having to make constant cognitive judgments, stereotypes allow us to rely on simple rules of categorization that can save cognitive energy (Hamilton, 1979; Hamilton, Sherman, & Ruvolo, 1990; Hamilton & Trolier, 1986). Stereotypes help us further by simplifying our perception of the world. In a very real sense having stereotypes available for ready usage saves us from the difficulty of having to constantly make decisions in a changing, difficult environment (Lippman, 1922).

A number of research studies have shown that we tend to use stereotypes in situations that are difficult and energy-draining (Bodenhausen, 1990, 1993; Pratto & Baugh, 1991; Stangor & Duan, 1990). The thinking emphasized in this research is that people under pressure to make a decision will rely on stereotypic thinking to facilitate the task and therefore save energy. It is also possible that stereotypic thinking may be used when people are too lazy or unmotivated to cognitively delve into the task in a critical manner. In summing up this research Macrae, Milne, & Bodenhausen, (1994) state "When the processing environment reaches a sufficient level of difficulty, and perceivers' resources are correspondingly depleted, stereotypes are likely to be activated, and applied in judgmental tasks." The research in this chapter describes more about the first kind of usage, stereotypes as energy misers (i.e. the use of stereotypes saves cognitive energy and resources which can be available for other assignments. The research in this chapter helps to explain how stereotypes act to save cognitive resources and therefore can be energy misers.

Procedure

Macrae and his colleagues used a dual-task experimental paradigm in this investigation. In this procedure participants are placed in a situation in which they are required to handle two tasks at the same time. In a study by Wickens (1976) participants were required to observe the movement of an object on a computer monitor, while simultaneously responding to auditory stimuli. In this situation it is possible to manipulate the difficulty of each of the tasks so that researchers can estimate the amount of cognitive energy used on the primary and secondary tasks. Since the researcher can determine and manipulate characteristics of the primary task, the participant's performance on the secondary task can give you an indication of the amount of excess mental processing capacity not used in carrying out the primary assignment. This is useful because if stereotypes serve to enhance and improve the efficiency of cognitive processing on a primary task, it should be observed in how well a participant performs on a secondary task. If stereotyped information enhances cognitive processing on the primary task, the task should be less difficult to accomplish and, therefore, save mental energy for better cognitive performance on the secondary task. The research in this chapter deals specifically with this issue - Do stereotypes produce energy efficiency in our cognitive toolkit?

Method

The participants were twenty-four female college students from Cardiff, Wales who were compensated with (2 for taking part in the study. The participants performed two tasks simultaneously. Task 1 required them to form impressions of four males based on trait descriptors provided. While they were engaged in Task 1 they were also required to listen to auditory information about an unfamiliar topic (Task 2). Participants were randomly assigned to stereotype present or stereotype absent group. The independent variable (IV) was whether or not the participants had

access to a stereotype during Task 1, which presented them with impressions of four males. Participants were told that they would be assessed later on the trait impression they had formed (Task 1) as well as the information acquired in Task 2. The dependent variables were therefore the recall of the trait data (stereotyped and neutral traits) on Task 1and scores on a multiple-choice exam regarding the auditory information provided in Task 2.

Participants were each seated in front of a computer monitor and told they would be asked to form impressions of a male individual whose name appeared on the monitor's screen. In order to form impressions, 10 trait descriptors were displayed one at a time beneath the name. A single trait appeared on the monitor at a time for approximately 3 sec. Five of the ten traits presented were previously determined to be consistent with a specific stereotype. This stereotype was the job description of the male name being presented on the monitor. In the stereotype-present group the specific stereotype was given along with the male person's name, while in the stereotype-absent group the stereotype label was absent. Both groups were asked to perform the same task, with the difference being the presence or absence of the stereotype label. The rationale was that the presence of the stereotype would simplify the task by giving them a focal point to guide their impressions. Table 18.1 provides the name, stereotype label and traits used in Task 1. As you can see in Table 18.1, the stereotypes for doctor, artist, skinhead and estate agent (real estate agent in US) were different from one another. The italicized items beneath each stereotype are trait descriptors congruent with the stereotype. Although this research was done in Wales, the stereotypes are consistent with American stereotypes. In this research the selection of the stereotypes was based on a pilot study to insure the stereotypic traits were accurate and the neutral traits were indeed neutral with respect to all four stereotypes.

While the participants were engaged in Task 1, an audiotape describing the economy and geography of Indonesia was played. Participants were told they would be tested on the information contained in the tape. They also knew that they would be assessed on the traits presented by video monitor. The participants were in a situation that required them to pay attention to two completely different streams of information presented simultaneously. The audiotape (i.e. Task 2) and the video presentation of traits (i.e. Task 1) were synchronized so that both presentations occurred simultaneously and took exactly 2 min.

Dependent Variables

The ability of participants to recall traits characteristic of the male person was the dependent measure of Task 1. The participants were given a sheet of paper with each male person's name at the top and they were asked to list as many of each person's traits as possible. The dependent variable for Task 2 was a multiple-choice exam to measure the participant's knowledge about topics presented in the audiotape on Indonesian. For example, participants were asked about the official religion of Indonesia and where the capital of Jakarta was located. After both dependent measures were obtained the participants debriefed and compensated.

Table 18.1 The Impression Management Task: Names, Stereotypes, and Traits

Name	Nigel	Julian	John	Graham
Stereotype	Doctor	Artist	Skinhead	Estate Agent
	Caring	*Creative*	*Rebellious*	*Pushy*
	Honest	*Temperamental*	*Aggressive*	*Talkative*
	Reliable	*Unconventional*	*Dishonest*	*Arrogant*
	Upstanding	*Sensitive*	*Untrustworthy*	*Confident*
	Responsible	*Individualistic*	*Dangerous*	*Unscrupulous*
	Unlucky	Fearless	Lucky	Musical
	Forgetful	Active	Observant	Pessimistic
	Passive	Cordial	Modest	Humorless
	Clumsy	Progressive	Optimistic	Alert
	Enthusiastic	Generous	Curious	Spirited

Table 18.2 Participants' Mean Scores on Tasks 1 and 2

Task 1	Stereotype Present	Stereotype Absent
Recalling stereotype consistent traits	4.42	2.08
Recalling neutral traits	1.83	.33
Task 2		
Correct multiple-choice responses	8.75	6.66

Findings

The experimenters expected that participants who had a stereotype label available would recall more traits than the group of participants who had no access to the stereotypic label. The data are shown in Table 18.2.

As can be seen in Table 18.2, the participants who had the stereotype available were able to recall more than twice as many traits than the participants without access to the stereotypic label. For Task 2, the multiple-choice data is also presented in Table 18.2. Remember that if stereotypes are useful to the participant in making the cognitive processing of information more efficient, then participants who had access to the stereotypic label would have more cognitive resources to handle the audio monitoring task about Indonesia. It would be expected therefore that the group of participants who had access to the stereotype would learn more about Indonesia and obtain higher multiple-choice test scores. The data in Table 18.2 provide confirmation of this hypothesis with the stereotype label group answering significantly more multiple-choice test items ($p<.04$).

The findings of this experiment provided confirmation that stereotypes can facilitate cognitive processing by conserving and economizing cognitive resources. Additional studies by the same researchers (Macrae, Milne & Bodenhausen, 1994) indicate that the process of using stereotypes operates in an unintentional manner without the perceiver's awareness. Because the use of stereotypes operates in an automatic manner it lends support for the viewpoint that stereotypic thinking contributes to cognitive efficiency. In a way our cognitive toolkit is setup, by default, to use stereotypes because they are efficient. We are cognitive misers and the verdict is clear - like King Midas, we are misers attempting to preserve cognitive resources. The presence of stereotypes does not mean that the person gives up all conscious, voluntary and reasoned control of cognition. A person may choose to give up the advantages and savings associated with stereotypes to engage in an active, more complicated mode to cognitive processes in certain circumstances. There is no doubt that stereotypic thinking can lead to negative, prejudicial and discriminatory beliefs, especially because of the automatic, default nature of its operation. However one should recognize that the stereotypes are a major part of the cognitive toolkit and have benefits for cognitive functioning. Nevertheless, as we all are aware, the operation of stereotypic thinking can foster prejudices and lead to discrimination. To learn more about the implications of this "negative" aspect of stereotypic thinking, the work of Patricia Devine (1989) is an excellent source. Devine's research also points to solutions to reduce prejudice. The very automatic manner in which stereotypes operate imposes problems for the immediate elimination of prejudiced responses. Devine (1995) states "people are not always aware of when the stereotype affects their judgments. It (the stereotype) is so easily activated that one has to be extremely vigilant in detecting instances when judgments of others may be clouded by the stereotype." Devine's research supports the findings in this chapter that stereotypes get activated by default. Given this scenario, Devine states that it will take considerable attention, energy and vigilance to initiate our personal beliefs and values and to inhibit prejudicial stereotypic thinking