Attraction and Rejection (Part 16)

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4.4 Rejection in the laboratory

Laboratory research has found that even short-term rejection from strangers can have powerful (if temporary) effects on an individual. In several social psychology experiments, people chosen at random to receive messages of social exclusion become more aggressive, more willing to cheat, less willing to help others, and more likely to pursue short-term over long-term goals. Rejection appears to lead very rapidly to self-defeating and antisocial behavior (Twenge, J. M., Catanese, K. R., & Baumeister, R. F., 2002).

A common experimental technique is the "ball toss" paradigm, which was developed by Kip Williams and his colleagues at Purdue University (Williams, K. D., & Sommer, K. L., 1997). This procedure involves a group of three people tossing a ball back and forth. Unbeknownst to the actual participant, two members of the group are working for the experimenter and following a pre-arranged script. In a typical experiment, half of the subjects will be excluded from the activity after a few tosses and never get the ball again. Only a few minutes of this treatment are sufficient to produce negative emotions in the target, including anger and sadness. This effect occurs regardless of self-esteem and other personality differences.

A computerized version of the task known as "cyberball" has also been developed and leads to similar results. Surprisingly, people feel rejected even when they know they are only playing against the computer. A recent set of experiments using cyberball demonstrated that rejection impairs will power or self-regulation. Specifically, people who are rejected are more likely to eat cookies and less likely to drink an unpleasant tasting beverage that they are told is good for them. These experiments also showed that the negative effects of rejection last longer in individuals who are high in social anxiety (Oaten, M., Williams, K. D., Jones, A., & Zadro, L., 2008).

Gender differences have been found in these experiments. In one study, women showed greater nonverbal engagement whereas men disengaged faster and showed face-saving techniques, such as pretending to be uninterested. The researchers concluded that women seek to regain a sense of belonging whereas men are more interested in regaining self-esteem (Williams, K. D. & Zadro, L., 2001).

Researchers have also investigated how the brain responds to social rejection. One study found that the dorsal anterior cingulate cortex is active when people are experiencing both physical pain and "social pain," in response to social rejection (Eisenberger, N. I., Lieberman, M., & Williams, K. D., 2003). A subsequent experiment, also using fMRI neuroimaging, found that three regions become active when people are exposed to images depicting rejection themes (e.g. paintings by Edward Hopper). These areas are the posterior cingulate, the parahippocampal gyrus, and the dorsal anterior cingulate cortex. Furthermore, individuals who are high in rejection sensitivity (see below) show less activity in the left prefrontal cortex and the right dorsal superior frontal gyrus, which may indicate less ability to regulate emotional responses to rejection (Kross, E., Egner, T., Ochsner, K., Hirsh, J., & Downey, G.,2007).

A recent experiment at the University of California at Berkeley found that individuals with a combination of low self-esteem and low attentional control are more likely to exhibit eye-blink startle responses while viewing rejection themed images (Gyurak, A., & Ayduk, O. 2007). These findings indicate that people who feel bad about themselves are especially vulnerable to rejection, but that people can also control and regulate their emotional reactions.

A study at Miami University indicated that individuals who recently experienced social rejection were better than both accepted and control participants in their ability to discriminate between real and fake smiles. Though both accepted and control participants were better than chance (they did not differ from each other), rejected participants were much better at this task, nearing 80% accuracy (Bernstein, M. J., Young, S. G., Brown, C. M., Sacco, D. F., & Claypool, H. M., 2008). This study is noteworthy in that it is one of the few cases of a positive or adaptive consequence of social rejection.

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