

Capitolo 1

Case Study 1

The principles of science

There are two criteria that are universal to all definitions of science. The first is correctability, meaning we acknowledge that what we believe is true now can be changed by future discoveries. Science is marked by constantly changing beliefs, ideas, and concepts. The second criterion is that science entails a commitment to finding out how the world works by studying the natural world of today. In scientific studies there are a few basic components:

- A problem, question or phenomenon one would like to explore is defined. These problems, questions or phenomena that scientists want to explore are usually driven by observations from the natural world. These problems are further defined by the search of relevant literature that can help set up expectations about the causes of the problem.
- Hypotheses (expectations) are developed to explain the problem. The hypotheses should have clear predictions about what will happen in given a set of circumstances. All hypotheses must be testable.
- Then, experiments are devised to test the hypotheses. The experiment will be conducted, and the results analyzed and interpreted in light of the hypothesis.
- Finally, experiments are modified if necessary, and repeated to ensure the results are reliable.

Though one can demonstrate an effect a thousand times, it is still possible for one valid piece of evidence that contradicts those findings to strike it down. It is impossible to prove something is true. Science is ever evolving as new ideas and technologies allow us to create and test hypotheses in new and exciting ways.

Case Study 2

The cold never bothered me anyway: How thinking of a loved one can reduce sensitivity to pain

Have you ever been through a stressful situation and found that turning to friends and romantic partners makes you feel better? A 2009 study by Master, et al. [DOI:10.1111/j.1467-9280.2009.02444.x] took this idea one step further and examined female participants' responses to painful stimuli when their romantic partner was present versus when they were simply looking at a picture of their partner.

Female participants were selected to take part in this study if they had been dating their partner for at least 6 months. Upon arrival at the lab, female participants were exposed to a number of painful stimuli (specifically, a cold object was pressed against the female participants' arms for 6 seconds at a time). During some of these exposures, the women were holding their partner's hand; during other exposures they were holding a stranger's hand (a male experimenter); and during other exposures they were simply looking at a picture of their partner.

The results showed that, in contrast to when they held a stranger's hand, when the female participants held their partner's hand they rated the cold stimulus as being less painful. Even more surprisingly, the female participants also rated the cold stimulus as being less painful when they only looked at a picture of their partner (when their partners had left the room). In fact, the pain ratings were slightly lower in the condition in which the females looked at a picture of their partner in contrast to when their partner was in the room holding their hand.

The researchers suggest that looking at a picture of one's partner may prime, or bring to mind, previous experiences one has had with a partner, including the feeling of being loved and supported. These feelings then help one to better cope with a painful situation.

This study provides a great example of how we are influenced by others when they are present, and even when they are not. The study also provides a nice example of how accessible information can influence our perception of our environment.

So, the next time you're in pain, look at a picture of someone you love and hopefully you will feel better soon!

Reference

- Master, S. L., Eisenberger, N. I., Taylor, S. E., Naliboff, B. D., Shirinyan, D., & Lieberman, M. D. (2009) [DOI:10.1111/j.1467-9280.2009.02444.x]. A picture's worth: Partner photographs reduce experimentally induced pain. *Psychological Science*, 20(11), 1316–1318.

Case Study 3

The history of social psychology

Interpersonal relationships and processes were not popular topics in psychology a century ago. An influential force for social psychology was the concept of "survival of the fittest," introduced by Spencer (1864) when extending Darwin's (1859) notions on natural selection; the principal process through which new species emerge or evolve. Social Darwinism, a term used to describe a style or trend in social theory which holds that Darwin's theory of evolution of biological traits in a

population by natural selection can also be applied to human social institutions, became quite influential in the thoughts of many early psychologists, including William James.

In the early twentieth century, sociologists Ross, Ward, and Sumner introduced social psychology within sociology (e.g., Ross, 1908; Ward, 1903; Sumner 1906). And in 1898, Norman Triplett [DOI: 10.2307/1412188] carried out what is usually described as the first experimental study of social psychology (see current chapter). But it was not until the mid-1920s that social psychology would take a firm hold in the field of psychology. The publication of Allport's *Social Psychology* (1924), a book that universities used widely in social psychology classes, was important.

In the 1930s, social psychology more and more became a separate discipline; social psychology used experimental techniques in contrast to the more naturalistic observational techniques used in sociology.

Social psychology defined itself further by adopting specific topics. For example, the emphasis on the individual in society rather than on the structure of society itself (see current chapter), but also attitudes, group processes, self-perception, and social cognition.

References

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