

Source 1

Introduction

In this study, the researcher investigated whether individuals would publicly conform to the unanimous incorrect judgments of a group on a perceptual task whose correct answer was visually obvious. The researcher reasoned that, on a task as easy as judging the length of a line, participants should be able to resist clear group pressure. Any conformity that did occur would therefore have to be explained by social factors rather than by genuine uncertainty about the correct answer.

Participants

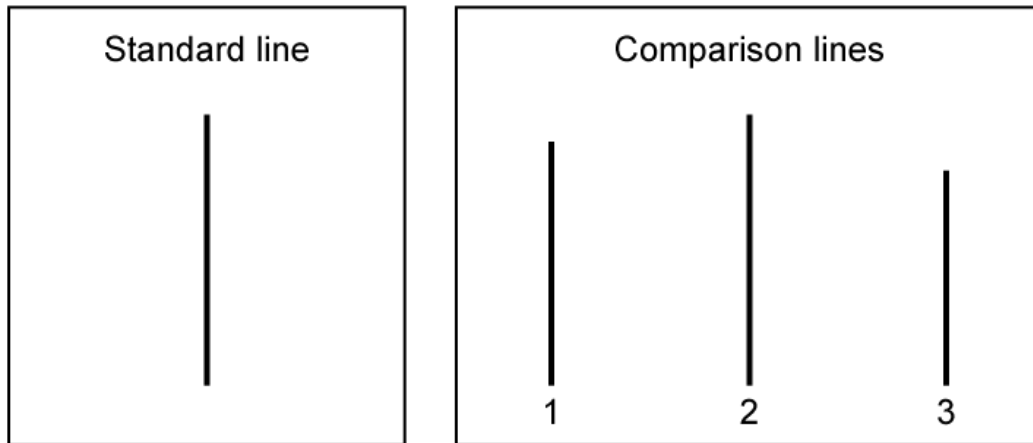
One hundred twenty-three male college students at a university in the United States volunteered to participate in what they were told was a study of visual perception. Participants did not know that the other people in the room were confederates — trained assistants who had been instructed in advance how to respond. Complete demographic data on race or ethnicity were not reported.

Method

Each participant was seated in a small room with a group of six to eight confederates. The group was shown two large white cards. The first card displayed a single standard line; the second card displayed three numbered comparison lines, only one of which matched the standard line in length. Group members were asked to state aloud, in turn, which of the three comparison lines matched the standard line. The genuine participant was always seated so that he answered last or second-to-last, after most or all of the confederates had responded.

On 18 trials per participant, the standard line and comparison lines were shown. On 6 of these trials (neutral trials) the confederates all gave the correct answer. On 12 of these trials (critical trials) the confederates were instructed to give the same incorrect answer unanimously, before the participant gave his answer. The researcher recorded how often participants conformed to the unanimous incorrect group answer on the 12 critical trials. A separate control condition was run in which participants made the line judgments privately, in writing, with no confederates present.

Figure 1: Example of the line-judgement stimulus



Results and Discussion

Approximately 75% of participants conformed to the unanimous incorrect group answer on at least one critical trial. Across all critical trials, participants conformed to the incorrect answer about 37% of the time. About 25% of participants never conformed at all. In the private control condition, errors fell to less than 1% of trials. Post-experimental interviews revealed that some participants conformed because they began to doubt their own perception (informational influence), while others conformed despite being certain they were right, because they did not want to appear different from the group (normative influence). The researcher concluded that group pressure can lead individuals to publicly accept answers they privately know to be incorrect.

Asch, S. E. (1956). Studies of independence and conformity: A minority of one against a unanimous majority. *Psychological Monographs: General and Applied*, 70(9), 1–70.

Source 2

Introduction

The original line-judgment experiment was conducted in the United States in the 1950s. In the decades that followed, similar studies were carried out in many other countries and at different points in time. The researchers in this study reasoned that if conformity were a universal feature of human social behaviour, the rate of conformity should be roughly similar across cultures and across decades. If, however, conformity reflected the particular values of a culture, then conformity rates should differ systematically depending on whether a culture emphasized independence and individual achievement (individualist cultures) or interdependence and group harmony (collectivist cultures). The researchers also expected conformity rates to change across historical time as cultural values shifted.

Participants

The researchers conducted a meta-analysis of 133 separate experiments from 17 different countries that had used the original line-judgment task or a close variant. Together, these studies included over 4,600 participants. Countries were classified using a published cross-cultural index in which higher scores indicated stronger individualist values (such as the United States, the United Kingdom, the Netherlands, and France) and lower scores indicated stronger collectivist values (such as Japan, Hong Kong, Fiji, Brazil, and Zimbabwe).

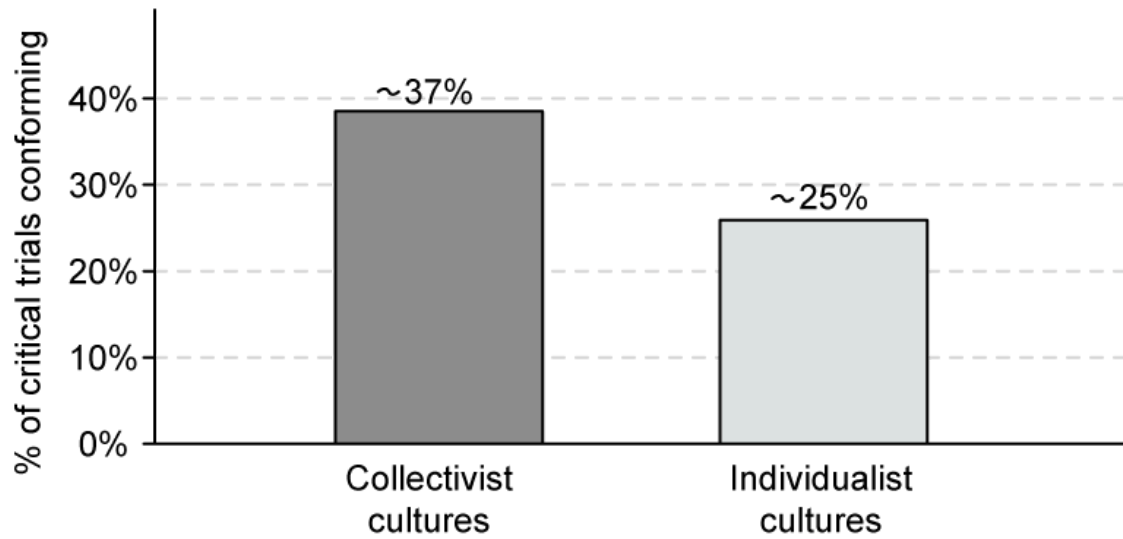
Method

For each of the 133 studies, the researchers coded the size of the unanimous majority, the proportion of trials on which participants conformed to the incorrect answer, the year the study was conducted, and the cultural classification of the country in which it was run. Using statistical techniques, the researchers calculated an overall effect size for conformity in each study and then estimated how much of the variation in conformity rates between studies could be explained by (1) the cultural individualism score of the country and (2) the year in which the study was conducted.

Results and Discussion

Conformity rates varied substantially across countries. Studies conducted in highly collectivist countries showed the highest rates of conformity (an average of about 37% of critical trials), while studies conducted in highly individualist countries showed lower rates (an average of about 25% of critical trials). The cultural individualism score accounted for a moderate-to-large proportion of the differences between studies. In addition, conformity rates in the United States showed a clear downward trend over time: studies conducted in the 1950s and 1960s showed higher conformity than studies conducted in the 1980s and 1990s. The researchers concluded that the original finding is not a universal feature of human psychology, but is shaped by cultural values and historical context.

Figure 2: Mean conformity rate by cultural classification



Bond, R., & Smith, P. B. (1996). Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. *Psychological Bulletin*, 119(1), 111–137.

Source 3

Introduction

The original line-judgment studies left an important question unresolved: why do people change their answers when faced with a unanimous group? One possibility is that people consciously decide to go along with the group while still privately seeing the stimulus correctly — in this case, conformity should be associated with brain regions involved in conscious decision-making and executive control. A second possibility is that group pressure can actually change what people perceive — in this case, conformity should be associated with brain regions involved in spatial perception. The researchers in this study used functional magnetic resonance imaging (fMRI) to test which of these two accounts better explains why people conform on a difficult perceptual task.

Participants

Thirty-two adult volunteers (14 women and 18 men, average age = 27) in the United States completed the study. Participants were told that they would complete a difficult perceptual task with four other group members in another room. In reality, the “group members” were computer-generated, and the answers attributed to them were controlled by the researchers. None of the participants had previously taken part in studies of conformity.

Method

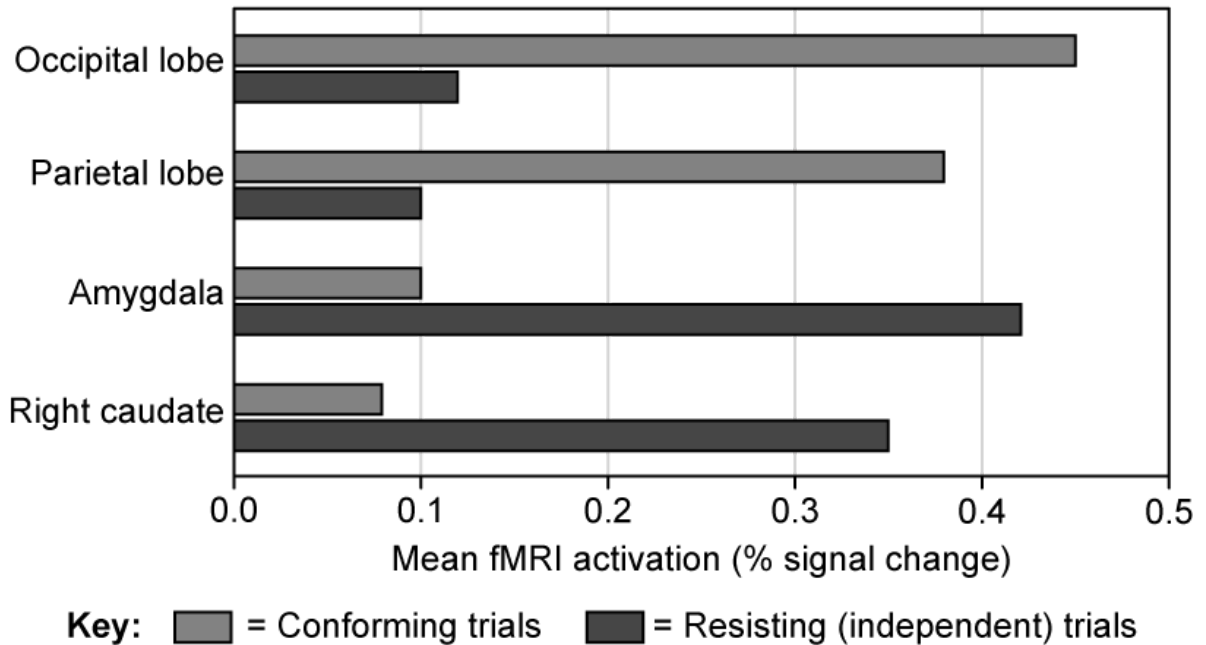
While inside an fMRI scanner, participants were shown pairs of three-dimensional objects and asked to decide whether the two objects were the same shape rotated in space, or whether they were mirror images that could not be made to match by rotation. This is a classic mental rotation task that places strong demands on visual and spatial perception. Before each response, participants were shown the answers supposedly given by the four other group members. On some trials the group gave the correct answer; on other trials the group unanimously gave an incorrect answer. The researchers compared brain activity on trials where the participant gave the same wrong answer as the group (conforming trials) with brain activity on trials where the participant disagreed with the group (independent trials).

Results and Discussion

Behaviourally, participants conformed to the unanimous incorrect group answer on about 41% of critical trials. When participants conformed, the fMRI scanner showed increased activity in brain regions in the occipital and parietal lobes — regions known to be involved in spatial perception and mental rotation. There was no corresponding increase in activity in regions of the prefrontal cortex normally associated with conscious decision-making or strategic control. When participants resisted the group and gave the correct answer despite the unanimous incorrect group, activity increased in the amygdala and right caudate nucleus, regions associated with emotional arousal and the cost of social deviation. The researchers concluded that conformity in this task did not appear to be a calculated decision to go along with others; instead, social

pressure may, in some cases, alter the way the brain processes the visual stimulus itself. They also concluded that resisting the group carries a measurable emotional cost, which may help explain why most people do not always resist.

Figure 3: Mean fMRI activation by brain region and trial type



Berns, G. S., Chappelow, J., Zink, C. F., Pagnoni, G., Martin-Skurski, M. E., & Richards, J. (2005). Neurobiological correlates of social conformity and independence during mental rotation. *Biological Psychiatry*, 58(3), 245–253.