

Science Education Collection

# A Minority of One: Conformity to Group Norms

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## Overview

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It is obvious that we are influenced by those around us, but in the early to mid 1900's, psychologists began to study how potent social influence can be on our thoughts and behaviors. Motivated in part by attempts to explain the behaviors of Nazi soldiers in World War II, one topic of considerable interest at the time in psychology was conformity, the phenomenon in which people match their attitudes, behaviors, or beliefs to group norms.

While behaviorist psychology explained conformity in terms of simple reinforcement learning (e.g., it is rewarding to follow the group), Gestalt psychologists argued that conformity is the result of perception being determined just as much by our social world as the physical world. Starting in 1951, Solomon Asch conducted a series of experiments to test the Gestalt idea that group norms can influence our perception of the world, even when the group norm is incorrect in a judgment of something that can be measured objectively. The experiments involved participants making a judgment about which of three comparison lines matched the length of a standard line. The experiments consisted of a group of people who were confederates with the exception of the one participant, and on certain judgments the confederates purposely claimed that the wrong comparison line matched the standard. This allowed the experimenter to measure whether the participant would conform to the objectively incorrect majority judgment. Solomon's experiments not only demonstrated the power of group norms on behavior, but it also laid the groundwork for decades of social psychological research studying social influence.

Inspired by Asch, this video demonstrates how to design a task to test the power of conformity on judgments.<sup>1</sup>

## Principles

To assess the power of conformity, the average number of errors in judgment made by a control group versus an experimental group is compared. In the control group, there are a group of participants brought in who simply make judgments about the comparison lines in the absence of any confederates. The number of participants who make an error is then averaged for all trials. In the experimental group, there is a group of confederates who are trained to purposely answer incorrect on 12 critical trials. The number of participants who make an error is then averaged for all the critical trials. The means of the control group and the experimental group are then compared using a t-test to determine whether the experimental group made significantly more errors in judgment as a result of the incorrect majority judgment.

## Procedure

### 1. Participant Recruitment

1. Conduct a power analysis and recruit a sufficient number of participants and obtain informed consent from the participants.
  1. The original study included 123 participants in the experimental group and 37 in the control condition.
2. Recruit seven confederates (trained actors), who will serve as the "majority" opinion during each session (which will include a single participant).
  1. Instruct the confederates to simply follow a script in which they purposely make an incorrect judgment on 12 critical trials out of 18 total trials.
  2. Have them make the correct judgment on trials 1, 2, 5, 10, 11, and 14.
  3. Notify them to remain "impersonal" and to not look at the participant after making their correct or incorrect judgment.

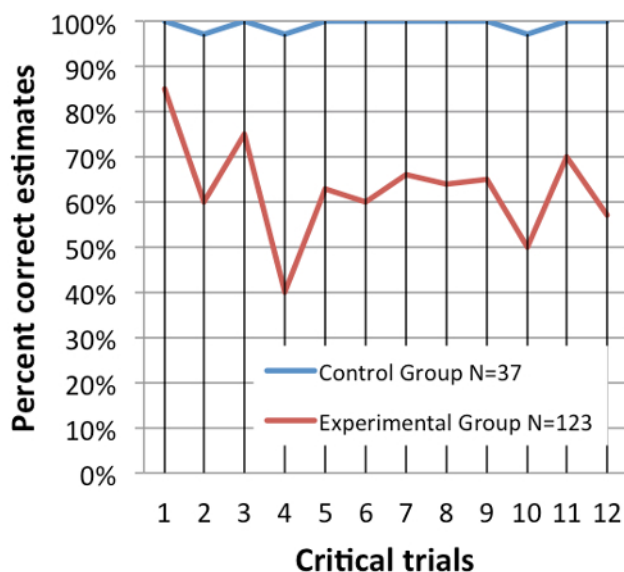
### 2. Data Collection

1. First, create the cards containing lines for the experiment.
  1. For card A, the standard line should be  $\frac{3}{4}$  in. in width and vary from 2-10 in. in length.
  2. Card B should be placed 40 in. away from card A and should contain three lines—all spaced out 1 $\frac{1}{4}$  in. from one another on the card.
  3. The three lines' lengths should vary between 2-10 in., and one should match the standard line on card A.
2. Arrange confederates in two rows of four people.
3. Leave an open spot for a single participant in the second row, 2<sup>nd</sup> seat from the left, where they will sit when they arrive for the experiment.
4. Once the participant arrives, explain the cover story of the experiment.
  1. State that the experiment is about testing visual discrimination. All people in the room (confederates + the participant) are shown a pair of cards, card A and card B. Card A has one line on it, and card B has three lines, numbered 1-3, that differ in length. One of those three lines matches the length of the one line on card A. The goal of the task is to judge which of the three lines on B matches the length of the line on A. The experimenter calls on each person to make their judgment (1-3) out loud in sequence. Explain that there will be 18 total judgments made.

5. Begin with trial 1, where all confederates choose the correct line. Ask the confederate on the far left of the first row to call out their answer, and then moving left to right, continue until getting to the participant in the second row.
6. Then ask the participant to provide his answer. Remain indifferent and show no reaction to the participant's answer, even on the critical trials. This process continues for all 18 trials without a break.
7. Make sure that the types of errors made by the confederates are varied on a trial-to-trial basis for the critical trials.
  1. Critical trials 1, 2, 4, 7, 8, and 10 are "moderate" errors where the majority choose the incorrect line that is the second closest to the standard line.
  2. The other critical trials are "extreme" errors in which the majority chooses the line on card B furthest from the standard line.
  3. There is also the option to randomize whether the error made by the majority is an overestimation of the length of the standard line or an underestimation of the length.
8. For the control condition, have participants do all 18 trials, but rather than any public statements of answers for each round, instruct them to privately record their answer on a sheet of paper.
  1. In order to match the group size of the experimental condition, the control participants can be run 8 participants at a time. The responses from all participants in the group can be used as data since there are no critical trials and no confederates.

## Results

The results showed that there were more participant errors made per critical trial in the experimental group than in participants in the control group (**Figure 1**). The mean amount of errors per critical trial was 4.41 in the experimental group but only 0.08 in the control group. Put another way, 36.8% of all participant judgments were distorted (in line with the majority error) in the experimental condition, whereas less than 1% of judgments were incorrect in the control condition. However, the results also showed large individual differences, such that there was a large range of reaction to an incorrect majority. Some participants (~25%) never yielded to the majority, some almost always yielded (~25%), and 50% of participants yielded on at least some trials.



**Figure 1: Correct estimates made on critical trials, comparing control and experimental groups.** The experimental group had a lower number of correct estimates consistently throughout the experiment. Participants' estimates were skewed because they followed the majority opinion of confederates that purposely made an incorrect estimate.

## Applications and Summary

Results of the Asch conformity study showed that a majority of participants will conform to group norms at least sometimes, even when the group norm is at odds with something a person knows to be untrue. Even though participants could ostensibly tell that the majority was incorrect on the critical trials, participants either second-guessed themselves or simply followed what the majority said. These data provided a springboard for future research (much of which was conducted by Asch himself later) looking to identify the boundary conditions of conformity to group norms.

These results have considerable implications for areas such as politics, marketing, and education. Showcasing the considerable power of conformity in part explained, along with later research on obedience, why people may perform actions they normally would not personally condone in extreme circumstances such as times of war. In these cases, such as with German soldiers in World War II, there may be immense social pressure from group norms established by one political or military organization on individuals to follow their behaviors. Part of human nature may simply be to "go with the grain" and cooperate with the established behaviors and values of the group or culture we happen to be in.

In terms of marketing, these results showcase the power of making one's product that normative item for a particular usage. This research suggests that if individuals perceive that "everyone" is using their product, people are likely to buy the product simply because they feel pressure

to fit into the norm. Once a company or brand establishes initial momentum and gains a large enough user base, the popularity of the product should begin to grow even larger as people follow what is trending. Companies could use this knowledge to try and create advertisement campaigns that imply their product is the most popular among other competing products.

In terms of education, these results help shed light on the phenomenon of peer pressure by showing that it is a very powerful urge that children have. Instead of singling out problematic children and trying to punish their behavior, educators could try to enforce the idea that the majority of children as behaving in a way differently than the child. This could make the group norm more salient, and potentially help the problematic child fall into the normative behavior. The research also suggests that making an effort to set up an environment in which achievement (rather than failure) appears to be normative could put more pressure on children to try to achieve.

## References

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