Utrecht University

# Research Seminar in Social Neuroscience

Research Proposal Motivation

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# What has a Stronger Effect on Individual Decision Making: Morality or Social Conformity?

## Introduction

The social credit system in China is a system designed to control, monitor and predict the trustworthiness of individuals, firms, organizations, and governments. Individuals get scores based on their behavior and these scores are used to determine what consequences the behavior has. The better their behavior, the higher the scores will be. The scores give access to certain services like education, markets, and tax deductions. Poor ratings lead to restrictions on these services (Liang et al., 2018). The people in China will be directed into the right behavior because of this system even though they might have made choices differently when they would not be in the system. In this proposal, we want to see what has a stronger effect on pushing people to behave in a certain way. We want to compare moral choices with choices that are socially conforming. That is why we ask the question: What has a stronger effect on individual decision making, morality, or social conformity?

## Morality

First, we will discuss two papers that explain how morality is affected in a group context. In their research, Ellemers et al. (2020) found that people, in general, are highly motivated to do what is right and appear moral to themselves and to others. This wanting to appear moral can lead to moral decisions differing in a group context. This decision-making is often influenced by people's concerns about moral critique from others and the fear of social exclusion.

In their paper, Kundu et al. (2012) discussed the following question: Can conformity influence something we consider to be an integral part of our identities; namely, morality? Their results show that there is a strong conformity effect, meaning that moral judgment is susceptible to conformity pressure. These findings are in line with the more dated research from Crutchfield (1955). Both researchers had participants answer moral questions individually and then in a peer group. The participants' opinion on what was the morally right thing to do shifted significantly when discussing the questions in a group. This indicates that there is indeed a strong conformity effect.

**fMRI and social conformity**

By using functional magnetic resonance imaging Klucharev et al. (2009) found that conformity is connected to the areas of reinforcement learning, it complies with the same mechanisms. Klucharev et al. (2009) did a study in which facial attractiveness was first judged individually and measured with fMRI. Later on, the facial attractiveness was adjusted to the opinion of the group. When participants are in conflict with group opinion a neuronal response in the rostral cingulate zone and the ventral striatum is triggered similar to the "prediction error". Many reinforcement learning models include a "prediction error" which is a difference between the expected and obtained outcome. Decision-making is guided by reward prediction error by signalling the need for adjustment of behavior. The amplitude of the conflict-related signal predicted following conforming behavioral adjustments. Moreover, the amplitude of the conflict-related signal in the ventral striatum is correlated with differences in conforming behavior across subjects.

**Study design**

In this study, there will be 60 participants between the ages 18 and 25. The experiment will last two days, in which morality and social conformity are manipulated. All of the participants will join for the two days of the experiment. On each day, ten moral dilemmas will be shown to the participants and they will have to pick the best answer according to them. There is no time limit to answering the dilemmas, they just have to pick the best answer to the question.

There are four conditions within morality and social conformity. Within the two days, morality is important on the second day and not important on the first. On the second day, when morality is important, this is made clear to the participants in the instructions. On the first day, morality is not important and thus not explicitly told to the participants. They will be told at the beginning of each day that points will be given or taken away with each answer in order to give them an incentive to indeed pick the best answer. The most moral answer is worth the most points and the least moral answer is worth the least number of points (negative points). On the first day, they will not be told that the most moral answer is worth the most points. They will also be told that the points they have at the end of the experiment are worth a reward. The more

points they have, the higher the reward will be. Social conformity is measured on both days. The participants will see in some random trials that one of the answers is picked the most in their age-group. This will be the same on both days, but this condition is randomly switched between questions.

Apart from the answers participants picked on each dilemma, an fMRI method is also used to see whether the same brain areas that are activated found in the study by Klucharev et al. (2009) are also activated in this study. In this way, fMRI might be able to show whether the participants chose the answer the group also chooses because of social conformity or because it was simply also their own choice.

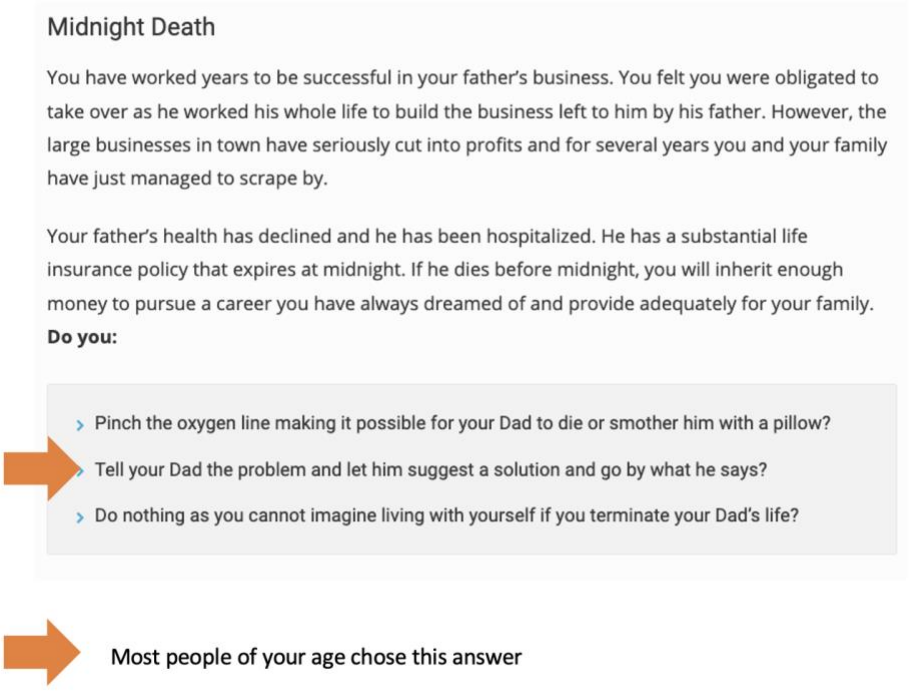


Figure.1. Example of a moral dilemma as shown in the experiment with the answer the ingroup chose.

## Conclusion

The conclusions drawn from the papers of Crutchfield and Ellemers et al. suggest that social conformity will have a bigger effect on individual decision making than morality. We will use fMRI techniques and the participants' answer sheet to confirm that the participants indeed conformed to their group, and did not solely choose an answer because it was their own choice and they agreed with it. An increase in the amplitude of the conflict-related signal indicates a disagreement with the most common choice. Thus, if this amplitude is increased while the participant chooses an answer, it means that they did not intrinsically agree with this, but they chose it because their group did. This increase in amplitude would indicate an increase in social conformity, meaning that this has a bigger influence on individual decision making.

If social conformity has a bigger impact on individual decision making that would mean that without being in a group people are susceptible to the moral choice other people make. The individuals still want to conform to the norm. Decision-making task

## References


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