

*Free Will Beliefs and Moral Responsibility: Disbelief in Free Will Leads to Less Responsibility for Third Person's Crime*

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Asian Conference on Psychology and the Behavioral Sciences 2015  
Official Conference Proceedings

**Abstract**

This study examined the effects of belief in free will on attribution of moral responsibility. Past research conducted in Western countries has found that people's belief in free will influences subsequent social judgment and behavior. For example, induced disbelief in free will caused participants to give lighter prison sentences of the criminal (Shariff, Greene, Karremans, Luguri, Clark, Schooler, Baumeister, & Vohs, 2014). What seems to be lacking, however, is a study which test generalizability of the findings across cultures. The authors therefore attempts to explore whether disbelief in free will results in forgiveness for the criminal in Japan as well. In the experiment, we employed English-Japanese translation to manipulate participants' belief in free will (free will vs. control vs. determinism). Then we presented hypothetical scenarios involving an assault which was caused by a third person or a participant's friend. Participants were asked to rate moral responsibility and sentencing of the criminal. The analyses revealed that participants in the determinism condition judged sentencing of the third person (criminal) less severely. In contrast, disbelief in free will does not have an effect on sentencing of the friend (criminal). These evidence leads to the conclusion that some basic assumptions of the effects of free will beliefs could be generalized across cultures. Implications are discussed with regard to the difference of sentencing judgments between the third person and friend, and also with regard to effects of free will beliefs on attribution of moral responsibility.

Keywords: Free Will, Determinism, Moral Responsibility

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## **1. Introduction**

### **Conceptualizing Free Will Beliefs**

Does belief in free will have a significant influence on people's social judgments and behaviors? In order to answer this question, however, it is necessary to clarify exactly what is meant by free will. It is a commonly-used notion in the philosophical literature and yet is a concept difficult to define precisely. Although differences of opinion still exist, there appears to be some agreement among philosophers that free will refers to the ability to act freely which consists of two elements: alternative possibility and agency (e.g., Haggard, Mele, O'Connor, & Vohs, 2010; Kane, 2005). Alternative possibility means the ability to choose actions from at least two options while agency means the ability to cause intended actions.

Is the above definition of free will shared by ordinary people as well as philosophers? Monroe and his colleagues have recently conducted several experiments which asked people to define the concept of free will on their words (Monroe & Malle, 2010, 2015). The overall pattern of results obtained in their experiments indicates that lay concept of free will is consistent with the one defined by philosophers. In specific, people think of free will as (a) the ability to make a decision/choice, (b) doing what you want, and (c) acting without internal or external constraints. "The ability to make a decision/choice" is considered to reflect alternative possibility (the ability to choose actions). On the other hand, "doing what you want" and "acting without internal or external constraints" are associated with agency (the ability to cause intended actions).

### **Intensity of Free Will Beliefs**

Having defined what is meant by free will, we will now move on to discuss whether people believe in free will or not. In other words, do people believe that they have the abilities to choose actions and to cause intended actions? It seems almost self-evident that we feel to act freely in our everyday lives. This intuition is not off the mark and the idea that we have strong free will beliefs has been supported by empirical research (Laurene, Rakos, Tisak, Robichaud, & Horvath, 2011; Nahmias, Morris, Nadelhoffer, & Turner, 2005, 2006; Paulhus & Carey, 2011; Rakos, Laurene, Skala, & Slane, 2008). For example, Paulhus and Carey (2011) and Rakos et al. (2008) found that people tend to agree with the statements which support the existence of free will whereas they tend to disagree with the statements which deny the existence of free will, such as determinism or fatalism statements.

### **Influence of Disbelief in Free Will**

As explained in the previous section, empirical evidence shows that people have strong beliefs in free will. But what would happen when people are told that they do not have free will? Past research has indicated that people's judgments change significantly under such situations. For example, Brewer (2011) found that when people read an essay which denies the existence of free will, they are less likely to attribute moral responsibility to others in general or those who transgressed in hypothetical scenarios. Accordingly, an anti-free will argument has a significant impact on judgments about moral responsibility.

Shariff, Greene, Karremans, Luguri, Clark, Schooler, Baumeister, and Vohs (2014) has recently replicated and expanded the Brewer's (2011) work. In their experiments, participants were first assigned to either the determinism or control conditions. Participants in the determinism condition read an essay of Crick (1994) or a neuroscience article which denies the existence of free will, while participants in the control condition read an essay or article which is irrelevant to the existence of free will. In a subsequent, ostensibly unrelated task, participants in the determinism condition gave shorter prison sentences of the criminal in a hypothetical scenario compared with those in the control condition. Their work thus again demonstrated that free will beliefs and moral responsibility are closely related to each other, and people are less willing to attribute moral responsibility for transgressors when belief in free will is challenged.

### **Explanation of Effects**

Why does disbelief in free will affect people's moral judgments? As was pointed out in the opening section, free will beliefs are composed of alternative possibility and agency. On the grounds of this evidence, people would regard that they cannot choose actions and cause intended actions when they are told there is no such thing as free will. If people believe in the assertion that they cannot choose actions, they would be reluctant to attribute moral responsibility for an act because the actor has no other choices. Likewise, the recognition of lack of agency would make people less willing to attribute moral responsibility for an act because the actor did not intend to behave that way (Frankfurt, 1969). To summarize, people induced to disbelieve in free will would think that they are not able to choose intended actions, resulting in forgiveness for others even if they are criminals.

### **The Present Hypothesis**

Inspired by the research by Shariff et al. (2014), the present article aims to investigate the association between the free will belief and moral responsibility. Although the foregoing review illustrates that reducing people's belief in free will makes them less willing to attribute moral responsibility for criminals, it remains unclear whether the findings could apply to other cultures as well. The current study therefore expands on prior work by testing generalizability of the findings across cultures. Specifically, we conducted an experiment for Japanese people and examine the effects of disbelief in free will on moral judgments. Our prediction is that participants whose belief in free will is challenged would judge sentencing of a criminal less severely than those whose belief in free will is bolstered or unaltered.

In addition to testing generalizability of the findings, the present research has another purpose of assessing the influence of the nature of interpersonal relationship with the criminal (i.e., a third person or friend) on the moral judgments. In the case of judging moral responsibility for friends, the judgment might be less severe than for unfamiliar persons because we are usually motivated to maintain good relationships with our friends and act with more tolerance (Baumeister & Brewer, 2012). As a consequence, it is likely that the effects of disbelief in free will disappear and people forgive the criminal (their friends) regardless of their belief in free will. In contrast, people would forgive the third person criminal only when their belief in free will is challenged.

## **2. Method**

### **Participants**

Eighty Japanese participants from the University of Tokyo agreed to participate in an experiment in exchange for 1,000 yen (approximately US \$10). They were randomly assigned to conditions in a 3 (free will belief: free will vs. control vs. determinism) × 2 (relationship with the criminal: third person vs. friend) between-participants design.

### **Free Will Belief Manipulation**

Participants first completed a task to manipulate free will belief. In this task, participants were shown a series of English sentences on a computer screen and they were asked to translate them into Japanese. The contents of the sentences varied across conditions. In the free will condition, participants translated sentences which support the existence of free will. An example is “To be morally responsible, I have to be the ultimate source of my behavior (Dennett, 2003).” Control participants translated sentences which are irrelevant to the existence or non-existence of free will, such as “Volcanoes are formed when a plate is pushed below another plate, or at a mid-ocean ridge or hotspot (“Mountain,” 2013).” Participants in the determinism condition translated sentences which deny the existence of free will. A sample is “The experience of conscious will comes up at some point after the brain has already started preparing for the action (Wegner, 2002).” Note that some original sentences were rewritten for the purpose of better understanding for participants.

### **Positive and Negative Affects**

In order to check the possibility that the free will belief manipulation affects mood, participants completed the Japanese version of Positive and Negative Affect Schedule (PANAS; Sato & Yasuda, 2001). The Japanese version of PANAS consists of a 8-item Positive Affect subscale and a 8-item Negative Affect subscale.

### **Moral Responsibility**

Next, participants read a hypothetical scenario describing an offender who used a knife to stab a man to death. The scenario in the third person condition described that the offender was an unfamiliar person to participants. In contrast, the scenario in the friend condition described the offender as a familiar friend of participants. After reading the scenario, participants were asked to determine the guilt or innocence of the offender, and they were also asked how responsible the offender is for his action, using a 5-point scale (1= *not at all responsible* and 5 = *extremely responsible*). In addition, participants determined the length of appropriate punishment for the offender, which ranges from 0 to 20 years (21-point scale). At the end of experiment, participants were probed for suspicion and debriefed.

### 3. Results

#### Preliminary Analysis

We found both Positive Affect subscale (Cronbach's  $\alpha = .86$ ) and Negative Affect subscale (Cronbach's  $\alpha = .84$ ) to be highly reliable. Prior to the substantive analysis, we conducted an ANOVA to see if the free will manipulation affects participants' mood. As the manipulation had no effects on positive and negative affect scores ( $F_s \leq 1.89, n.s.$ ), it is not discussed further.

#### Moral Responsibility

Inspection of the answers to the guiltiness item revealed that all participants judged the offender as guilty, not as innocence. Next, we conducted a 3 (free will belief: free will vs. control vs. determinism)  $\times$  2 (relationship with the criminal: third person vs. friend) ANOVA on the responsibility item. This analysis found, contrary to the hypothesis, the two factors of the free will belief and the relationship with the criminal had no main effects or interaction effects. On the basis of this evidence, it might be seen at first that the manipulations of the present experiment were not effective. However, the mean rating of the responsibility item was 4.79 ( $SD = 0.69$ ), which suggests a strong ceiling effect.

The mean lengths of punishment in each condition are presented in Figure 1. We conducted a 3 (free will belief: free will vs. control vs. determinism)  $\times$  2 (relationship with the criminal: third person vs. friend) ANOVA. This analysis yielded a significant interaction of free will belief  $\times$  relationship with the criminal ( $F(2, 74) = 4.48, p < .05$ ); main effects were not significant ( $F_s \leq 0.51, n.s.$ ). Simple effects tests for the interaction revealed that in the third person condition, participants in the determinism condition ( $M = 8.43; SD = 5.19$ ) judged the length of punishment shorter than those in the free will ( $M = 13.38; SD = 4.29$ ) and control ( $M = 12.43; SD = 5.02$ ) conditions ( $t(74) = 2.62, p < .05; t(74) = 2.16, p < .05$ ).

This indicates that people who are induced to disbelief in free will are likely to attribute less responsibility for unfamiliar offenders. In contrast, the differences among the free will, control, and determinism conditions were not significant in the friend condition. Therefore, when people judge for the criminal acts of their friends, their belief in free will do not play a significant role. Looked at differently, in the determinism condition, participants in the third person condition ( $M = 8.43; SD = 5.19$ ) judged the length of punishment shorter than the friend condition ( $M = 12.92; SD = 4.13; F(1, 74) = 5.59, p < .05$ ). This is a rather surprising finding as people tend to attribute more responsibility for friend offenders than for unfamiliar offenders when belief in free will is challenged. In contrast, the effect of relationship with the criminal does not reach significance in the free will and control conditions ( $F_s \leq 1.96, n.s.$ ). Thus, when people's free will beliefs are unchallenged or affirmed, attribution of moral responsibility do not change between the unfamiliar and friend offenders.

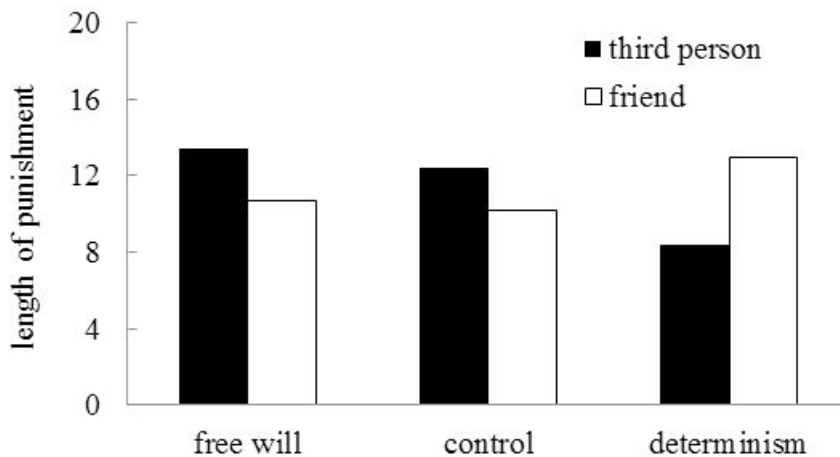


Figure 1: Mean lengths of punishment in each condition

#### 4. Discussion

##### Hypothesis Testing

The present research examined the influence of disbelief in free will on judgments of moral responsibility. On the one hand, we failed to detect a difference among the conditions on the responsibility item, but this is possibly due to the ceiling effect. On the other hand, consistent with our hypothesis, the free will belief manipulation significantly affected judgments of the sentence toward the criminal. Specifically, people whose belief in free will is challenged are likely to give shorter sentence than those whose belief in free will is unchallenged or bolstered. As discussed in the introduction, this effect seems to be mediated by the perception of abilities to choose intended actions; the lack of free will implies the lack of alternative possibility and agency, which are the major requirements for responsibility attribution. Given that the present research was conducted in Japan, it could be understood as that the findings of Shariff et al. (2014) could be generalized across cultures.

##### Relationship with Criminals

Although the current study replicated the findings of Shariff et al. (2014), relationship with the criminal moderated the effects of disbelief in free will. When participants judged the length of punishment for the third person criminal, induced disbelief in free will led to forgiveness for the criminal. In contrast, when participants judged the length of punishment for the friend criminal, disbelief in free will did not motivate them to forgive the criminal. As was mentioned in the introduction, we predicted the effects of disbelief in free will disappear and people forgive the friend criminal independently of the manipulation. While these predictions were partially supported, it was shown that participants gave harsher punishment toward the friend criminal than toward the third person criminal when their belief in free will is reduced.

One potential explanation for this pattern is that people generally expect their friends to act pro-socially, and consider that the criminal act of friends is more disappointing almost as an act of treachery. Therefore, they would judge the length of friend's punishment longer than the length of third person's punishment regardless of the free will belief manipulation. However, the main effect of free will belief was not significant and the length of punishments between the friend and third person offenders did not change under the conditions when people's free will beliefs are unchallenged or affirmed. Accordingly, the validity of this explanation is not supported by empirical evidence.

Another explanation is that reasons of punishment may differ between the conditions. For example, people punish friends to make them a better person whereas punishment for an unfamiliar person is based on the idea that the criminal deserves for his or her acts. The former justification is called retributivism while the latter is called consequentialism, and it has been suggested that justifications of punishment fall into these two categories (Greene & Cohen, 2004; Shariff et al., 2014). Although the present research did not distinguish between retributivism and consequentialism, further research should investigate whether people use different justifications for punishing criminals.

### **Induced Belief in Free Will**

As discussed above, weakening belief in free will motivated participants to forgive the criminal. In contrast, strengthening belief in free will did not motivate them to blame the criminal. If free will beliefs promote attribution of moral responsibility, why bolstering belief in free will did not lead to severe judgments about the criminal? This question can be answered that people generally believe in free will and hence their beliefs and judgments remain unaffected by the messages which support the existence of free will. In accordance with this argument, it has been shown that most people have strong beliefs in free will (Laurene et al., 2011; Nahmias et al., 2005, 2006; Paulhus & Carey, 2011; Rakos et al., 2008), and their beliefs and various types of judgment do not radically change under the manipulation of bolstering free will beliefs (e.g., Baumeister, Masicampo, & DeWall, 2009; Vohs & Schooler, 2008). Consequently, the lack of effects of strengthening free will beliefs does not threaten our interpretation of the findings.

### **Conclusion**

The question whether there is free will or not has been widely debated in the realm of philosophy and theology, some insisting that free will is nothing but illusion (e.g., Crick, 1994; Wegner, 2002). Although the results in the present study are not relevant for this question, they still advance our understanding of psychological processes under the influence of disbelief in free will. In specific, when people are told that there is no free will, they attribute less responsibility to criminals. In this way, scientific or unscientific messages that free will is illusion would have significant impacts on moral judgments in our everyday lives and in the trial scene. Therefore, additional research is needed to further clarify the mechanism involving the effects of disbelief in free will.

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