

# モラルジレンマにおけるメンタルイメージと 第二言語の影響

## The Impact of Mental Imagery and Second Language in Moral Dilemmas

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### 1. Introduction

Morals are commonly acknowledged as being fundamental, and opinions based on morals tend to be unwavering. When people are shown counterarguments to their original moral stance, only a handful express consideration towards changing their decisions. Instead, many rated the support for their original choice to be more compelling than the counterarguments presented (Stanley et al., 2018).

What exactly are moral dilemma scenarios? Moral dilemmas are hypothetical situations where a person must make a difficult decision between two or more morally opposing actions. The two opposing choices offered are known as either a utilitarian decision or a deontological decision. Utilitarianism prioritizes the greater good and is often labeled as the logical choice. Deontology focuses on how the ends do not justify the means and is known as the emotional choice.

Despite how unwavering morals may seem, recent studies have shown that morals are not so fixed after all. One interesting situation is the foreign language effect. The foreign language effect (FLE) is a phenomenon where reading in one's first language (L1) increases the rate of deontological choices compared to when you read the same scenario in one's second language (L2) (Keysar et al., 2012). Many studies across various languages have found similar results to the FLE (Circi et al., 2021; Costa et al., 2014; Corey et al., 2017; Hayakawa et al., 2017).

Though there are many theories as to why this phenomenon occurs, one of the interesting arguments is the role of mental imagery, pictures we can create in our minds. A study by Hayakawa and Keysar (2018) shows that the vividness of visual imagery is much lower in a second language compared to a first language. This difference may explain the changing moral stances in the FLE.

This paper aims to inspect the potential

relationships between second language moral dilemma decision-making and mental imagery.

## 2. Moral Dilemma

Moral dilemmas are heavily involved in our everyday lives. Whether it is global, political, or personal, it often affects the person making the decision as well as the people around them. In this situation, we must consider what may cause someone to choose one difficult and polarizing decision over the other.

### 2.1 Deontological Choices

As stated before, the deontological approach highlights that a positive outcome is not worth the harmful actions. The rejection of harm is often associated with emotional arousal and empathy. Prior studies have shown that emotional arousal can increase the rate of deontological choices (Szekely et al., 2015). Reading moral dilemmas can evoke strong negative emotions as well, leading to higher rates of harm rejection and deontological choices (Reynolds et al., 2019). Finally, individuals who are sensitive to other's feelings tend to reject harming others (Christov-Moore et al., 2017; Reynolds et al., 2019).

### 2.2 Utilitarian Choices

The utilitarian approach, on the other hand, prioritizes the overall benefit of the situation. The decision requires logical reasoning to judge whether a harmful action is worth the end results.

Studies have found that participants who have an analytical (logical) thinking style had a higher rate of utilitarian choices (Li et al., 2018). Other studies have found higher utilitarian choices among those who placed less importance on empathetic concern and processing (Carmona-Perera et al., 2013; Gleichgerricht & Young, 2013; Patil & Silani, 2014).

## 3. Mental Imagery

Mental imagery is a “weak form of [visual] perception” (Pearson et al., 2015, p. 590) presented in the mind when the visual stimulus is absent. This perceptual information is retrieved from memory (Rademaker & Pearson, 2012). As mental imagery and emotion have a complicated relationship, it is important to view this topic in a first language setting.

### 3.1 Emotional Reaction

Mental imagery has been said to have a “special relationship” (Holmes & Matthews, 2005, p. 489) with emotion for many years. In current studies, mental imagery is an important theme in various mental health conditions (Holmes & Mathews, 2005). In many of these cases, sudden intrusive mental imagery can evoke intense emotions and emotional reactions.

Studies found that negative emotions were intensified by visual imagery when reading scary stories (Wicken et al., 2019). The authors suggest that visual imagery is important for amplifying emotional physiological responses, possibly due to its similarity to perception. Another study found that when asking participants to imagine inflicting harm with intent and force, a strong negative emotional response was observed (Amit et al., 2012). In both studies, visual imagery in moral dilemmas create a negative emotional reaction, resulting in harm rejection.

### 3.2 Psychological Distance

Psychological distance is a measure of how removed a person feels from a phenomenon. This distance can refer to the closeness felt between the self and others (Trope & Liberman, 2003). Psychological distance is important for how we view moral dilemmas. The larger the distance, the more abstract the actions become, enabling readers

to focus on the logical aspects (Aguilar et al., 2013).

In relation to mental imagery, psychological distance is often intertwined with mental simulations. For example, imagining in a third-person perspective decreases vividness compared to the first-person perspective due to the third-person perspective having more distance from the simulation (Liberman et al., 2007).

In other studies, when a negative scenario simulation is imagined to be physically coming closer, there is an increase in negative responses and emotional arousal. While scenarios imagined moving away had the opposite effect (Davis et al., 2011). These studies show how mental imagery can influence both emotional distance and moral dilemma decision-making.

#### **4. Second Language**

Observing the relationship between mental imagery and moral dilemmas through the various aspects of reading comprehension, emotional arousal, and empathy, we can say that the vividness of mental imagery most likely plays a role in moral dilemma choices. Now let us view this relationship when a second language is involved.

First, emotional intensity may be lower for L2 reading. Studies show negatively emotionally charged words in a second language elicit less emotional impact (Chen et al., 2015; Sheikh & Titone, 2015). This is caused by how L2 learning is usually through symbol manipulation while L1 learning is more grounded through connections to perception and bodily action (Kühne & Gianelli, 2019).

Second, the vividness of visual imagery in a second language was also found to decrease. Hayakawa and Keysar (2018) found that in the second language condition, participants had higher error rates and slower response times with

organizing objects by shape, which requires imagery, compared to category. They concluded that in our second language, it becomes difficult to elicit vivid imagery as the words and imagery do not have a strong connection compared to their first language.

For both emotional intensity and mental imagery, studies have shown through memory retrieval that mental imagery and emotional intensity are the strongest when both the encoding and retrieval language are the same (Marian & Neisser, 2000). Since L1 has been used longer than L2, it would not be a surprise to have more memories encoded in L1. This difference may lead to a gap in vividness and intensity.

Finally, Costa and colleagues (2014) state that the increase in emotional distance when reading in a foreign language result in the FLE. Based on other studies, we can see that the increase in distance is amplified by the lack of emotional reactions when reading in a foreign language.

#### **5. General Discussions**

As we discussed, the complex relationship between moral dilemmas and mental imagery may be influencing the foreign language effect. In contrast with the studies conducted in a native language setting, the lack of strong emotional reactions and the increase of emotional distance in a second language setting may be creating an environment suited for logical reasoning.

Another consideration is the details of the imagined scenario. The language setting may alter the scene or the characters, which can influence moral decisions. The scenery between the reader's home country or a foreign country may shape the way the reader presents themselves. Whether the characters in the story are imagined as strangers, friends, or foreigners may also change the psychological distance between the reader and the

story. In prior studies, friends are rated closer in psychological distance than strangers (Matthews & Matlock, 2011).

Though the vividness of mental imagery is possibly one of the reasons for the foreign-language effect, further research on how mental imagery influences moral decision-making is required.

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