

THE FOREIGN LANGUAGE EFFECT IN MORAL JUDGMENT AND MENTAL IMAGERY

by

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Abstract

The foreign language effect refers to the finding that bilingual and multilingual individuals reason differently in tasks that are presented in their native language as compared to their non-native (foreign) language. These findings have been observed across many different languages and contexts, including judgment and decision-making. The current study addressed three open questions: (1) does the foreign language effect extend to reasoning about morally charged real-world contexts like judgments of war crimes?; (2) does social distance from a scenario being judged moderate the strength of the effect; and (3) does the effect generalize to Albanian/English bilinguals? It was hypothesized that when using their first language, mental imagery vividness would be higher and moral judgment would be harsher than when using their foreign language. The results did not show a significant difference when comparing Albanian and English responses but did show a correlation between stronger mental imagery and harsher moral judgment. The findings also revealed that social closeness was a factor in moral judgment, in that participants judged the scenario that was socially closer to them more harshly. The findings suggest that although the foreign language effect might not be as strong as it is believed, mental imagery plays a part in how harsh one's moral judgment is for a situation and that the judgment is harsher when the situation is socially close.

Keywords: foreign language effect, moral judgment, mental imagery, war crimes, crime judgment

The Foreign Language Effect in Moral Judgment and Mental Imagery

It has now been over twenty years since the Kosovo and Serbia war ended. During the war, more than 13,500 casualties were recorded, though the numbers are not yet definite as a large number of people and bodies are still unaccounted for (Kosovo Memory Book, 2014). As it tends to happen with other wars and conflicts in the world, new information about the Kosovo war is still coming to light, providing experts and families of the victims with realities that they had not been familiar with before. Just this past year, another mass grave which is believed to contain over a dozen Albanian bodies was unearthed in Serbia (Reuters, 2020). Information like this could very well affect an individual's view of another group of people or country—but how exactly does a person perceive and think about such information? Furthermore, does the language one receives information in affect their opinion and possible response?

Today, over half of the world's population uses more than one language on a daily basis (Grenfell & Harris, 2015). There are several reasons for bilingualism or multilingualism being on the rise, but the main ones are immigration, social mobility, and the need to meet educational and career demands (Cenoz & Hoffman, 2003). Besides being able to communicate in languages other than their native one, people might also actively obtain new information that is written or spoken in other languages. However, an individual's experiences with their native language and foreign ones are likely to differ from an early point. Native, or first languages, tend to be acquired at home while foreign languages are usually learned in a classroom setting (Keysar, Hayawaka, & An, 2012). Furthermore, at home is where one usually hears initial expressions of love, reprimands, taboo language like curse words, and other emotionally rich words (Keysar, Hayawaka, & An, 2012; Costa, Foucart, Arnon, Aparici, Apesteguia, 2014). Although people might fully understand the meaning of such words in a foreign language, they tend to react to them less emotionally than they would in their native language (Ayçiçeği & Harris, 2004; Costa

et al., 2014). The difference or decline in one's thinking abilities and decision making when using a foreign language as opposed to their native language is referred to as the foreign language effect (Keysar, Hayakawa, & An, 2012).

Since decision making often involves emotion, a person's decision making could be affected when they use a foreign language as a result of the increased emotional detachment (Costa et al., 2014). In one study, Keysar and colleagues (2012) found that using a foreign language when responding to problems that were framed in terms of losses rather than gains completely diminished the framing effect. This concept is referred to as loss aversion bias, where one is more likely to prefer avoiding losses rather than gaining the equivalent amount. In order to better understand the effect that the use of a foreign language has on decision making, Costa and his fellow researchers conducted a study that examined this framing process when participants used either their native or foreign language when reasoning about different decision-making problems and scenarios (2014). The study's focal point was the impact of heuristic biases, or simple mental shortcuts that we use when making decisions, and how they are affected when using a foreign language.

The first experiment of the study aimed to replicate the findings from the Keysar et al. (2012) study on the framing effect in loss aversion. Similarly, Costa and his colleagues found a reduction in framing effects in the foreign language condition where the loss aversion bias was lower than in the native language condition, indicating that using a foreign language reduces loss aversion. Their second experiment looked at the participants' psychological evaluation and accounting of two different economic problems. The researchers found a foreign language effect for psychological accounting in one of the problems, specifically the one where participants were presented the problem in third person rather than first person. The problem being presented in third person meant that the participants had to answer by guessing what they thought another

person might do in the given situation, rather than making a choice that would affect them directly. The researchers suggested that the participants' psychological distance from the situation might have led to the emotional distance that is associated with the foreign language effect, since the emotional involvement was not the same as if the scenario was presented in the first person. The third experiment had the participants respond to three problems assessing risk aversion attitude and risk-taking decisions when probabilities were known and when they were unknown to the participant. The results showed that foreign language processing made people more risk neutral, more consistent with their choices, and led to a reduced ambiguity aversion in comparison to native language processing. In the last experiment, participants were presented with the Cognitive Reflection Test, or CRT, which tends to cause people to intuitively answer logical problems incorrectly. In order to correctly answer, one must be able to move past responding with easily available "System 1" thinking and use more energy in analytical "System 2" thinking. Participants performed poorly in this test, but their performance was not affected by the language used, suggesting that using a foreign language did not impact intuitive System 1 thinking per se.

The overall findings of this study show that although foreign language use leads to reduced heuristic biases in decision making, its effect is not found in problems that lack emotional components but rather in problems that prompt negative emotional reactions. In general, the choices made in response to problems presented in a foreign language were less likely to lead to intuitive biases, but predominantly in contexts where emotion is a big driving factor. In more emotionally neutral cases, the heuristic biases employed by participants when making decisions were not necessarily affected by the language that the problem was presented in. Furthermore, when the emotional reaction prompted by a problem was reduced, this could also affect the participant's psychological distance to the problem—participants might not find

superficial aspects of a situation important when the situation is represented in a less concrete way. In certain situations, the psychological distance might lead to a reduction in heuristic biases and increase rational and logical thinking, which also comes into play when visual/mental imagery is employed.

The foreign language effect has been examined in several types of moral dilemmas, but the trolley problem, and slight variations of it, is one of the more predominant ones (Corey, Hayakawa, Foucart, Aparici, Botella, Costa, & Keysar, 2017; Amit & Greene, 2012; Hayakawa & Keysar, 2012). In such scenarios, participants are given the option to sacrifice one person in order to save a larger number of people. The scenario usually goes that a runaway trolley or tram is heading down a track that has five people working on it and it will kill them all if it remains on this course. The participant has the option to divert the trolley onto a different track with only one worker on it, killing him but saving all the others that would have originally been killed. Similar to previous findings, a study by Corey and colleagues (2017) found that when using a foreign language, people were much more likely to sacrifice the life of one person, even if it means directly killing them, in order to save the lives of multiple others. This is also referred to as the “utilitarian” choice. Across three experiments, the researchers found that participants made the decision to save the larger number of people much more frequently in the foreign language condition than in the native one. The researchers concluded that the foreign language effect they found is not due to increased cognitive control that might be present when language-switching and that language proficiency did not significantly predict utilitarian choice. The researchers, instead, reasoned that the utilitarian decisions made were partially due to the emotional distance and reduced emotional reaction to the situations, which led to participants being less averse to a violent behavior (the killing of an individual) that is ultimately for the greater good (saving five people). This emotional distance, as seen before, was associated with the use of the foreign

language as it might have enabled participants in the foreign language context to make a decision that was still violent in nature, but with more ease than they might have made it in a native language context.

When it comes to visual imagery, researchers have found that it holds an important role in one's automatic emotional response, and therefore, deontological moral judgments (Amit & Greene, 2012). Deontological judgments differ from utilitarian judgments in that they support the rights of the individual more than the greater good. A utilitarian decision, on the other hand, would be one that is right if it benefits the majority, like sacrificing one life in order to save multiple others. For their 2012 study, Amit and Greene (2012) utilized construal-level theory and its multiple levels of abstraction to come up with their hypothesis. They hypothesized that visual imagery facilitates concrete, or low-level, construals that highlight the *means* as opposed to the *ends* of an action, which then leads to more deontological moral judgments. In contrast, verbal representations facilitate more abstract and high-level construals that highlight the ends over the means, leading to more utilitarian judgments.

The researchers tested their hypothesis across three experiments. The first experiment employed visual and verbal matching memory tasks to look at whether participants with visual cognitive styles make more deontological moral judgments than those with verbal cognitive styles. The experiment had a target item, either visual shape or verbal description, followed by two probe items of which participants had to choose one that was most similar to the target. Afterwards, participants were asked to respond to several moral dilemma scenarios where one person would be killed in order to save several others in order to see how utilitarian or deontological their judgments were. The deontological decision in this case would be not choosing to kill one person even though it meant saving multiple others. The results showed that those with more visual cognitive styles made more deontological than utilitarian judgments. The

second experiment was similar to the first one in terms of having participants respond to several moral dilemmas. However, it also included an interference condition where working memory tasks were inserted between the dilemma scenario and moral question as well as between the question and response. The 2-back working memory task was either visual, with shapes being presented and participants having to indicate which shape they saw 2 items earlier, or verbal, where the shapes were instead replaced by their names. Once again, the results supported the hypothesis by showing that visual interference led to fewer deontological judgments than verbal interference did.

Lastly, the third experiment looked at the type of visual imagery present in two scenarios with identical consequences but different natures of action, either pulling a lever or pushing a person. The researchers had participants report the visualized harm that was being done to the individual in the footbridge dilemma, where the harm is either necessary or a means, and the trolley problem, where the harm is either incidental or a side effect. In the footbridge problem, rather than being close to a lever you can pull to divert the tram from the main track onto the other one, you are standing on a footbridge above the tracks and a large man is next to you. Pushing the man down onto the track would stop the tram and save the other people but would result in him dying. The researchers predicted that people would make more deontological judgments and report more visualized imagery of the harm being done in the footbridge case than the trolley one. The results supported the hypothesis and indicated that visual imagery supports deontological judgment since people are more likely to visualize the means when they are harmful than the end when it is beneficial. These three experiments enabled the researchers to connect the dual-process theory of moral judgment and the construal-level theory, which had not been done before.

Furthering our understanding of the links between the foreign language effect, visual imagery, and moral judgment, a study by Hayakawa and Keysar (2018) supports the view that using a foreign language affects how people think, specifically when it comes to mental or visual imagery. Previous research found that the vividness of mental imagery might depend on the concreteness of the language used, that it is easier to recall events that were encoded in the same language as that of the cue, and that mental imagery plays a role in risk perception, moral judgment, and self-control (Marian & Neisser, 2000; Hadjichristidis, Geipel, & Savadori, 2015; Klesse, Levav, & Goukens, 2015). Hayakawa and Keysar took these studies one step further by looking at whether the use of a foreign language leads to less vivid imagery, which in turn might affect the choices one makes. The study consisted of three different experiments where participants were asked to respond in either their native or foreign language. The first experiment had participants respond to Bett's Questionnaire Upon Imagery, where participants were asked to mentally simulate various sensory experiences of different modalities, such as “sand” or “sore throat,” and then rate the vividness of each of those simulations. Although there was some variance across the modalities, the results showed that using a foreign language led to less vivid mental simulations than using a native language did.

The second experiment consisted of a mental imagery task that asked participants to select one stimulus that was different from the rest; this task required mental visualization of the items. For example, participants would be presented with three words and then have to identify which of them differed in shape from the other two (e.g., “pen”, “mushroom”, and “carrot”). These results showed that using a foreign language led to less accuracy, which suggests that using a foreign language may lead to impaired visualization. The third experiment had participants respond to the trolley problem and then rate the vividness of different aspects of it. Participants' visualization of the potential victim was less vivid in a foreign language, supporting

the idea that using a foreign language hinders mental imagery. The researchers theorized that visual imagery could be decreased in a foreign language due to limited access of episodic memories encoded in that language, as well as increased cognitive load and working memory demands. Since using a foreign language might require more cognitive energy, this could take away from resources we employ when constructing a vivid mental image, but not necessarily in every case. The working memory theory, on the other hand, argues that the creation of mental imagery requires the recall of examples from the past and the reconstruction of previous memories in order to create a novel recombination that fits the current context.

Besides looking at the effect of foreign language in moral dilemmas such as the trolley problem, researchers have also studied how using a foreign language affects evaluations of more realistic crime scenarios. Based on the previously mentioned ideas that using a foreign language diminishes vivid imagery and increases emotional detachment, Woumans, Cruyssen, and Duyuck (2020) conducted a study where they looked at severity ratings for crimes. The researchers hypothesized that participants using a foreign language would rate crime scenarios as less severe than participants using a native language. After measuring for foreign language proficiency, which in this case was English, the researchers had participants rate the severity of four different murder scenarios in either their native language, which was Dutch or in English. Similar to the trolley problem variation, the study also contained a “personal” condition where the agent of the crime was the participant instead of another person. The rest of the scenarios were in third person, which the researchers believed might lead to increased psychological distance. The results of the study showed that ratings of crime severity were lower in the foreign language than in the native one, but there was no significant effect of the perspective condition, with the foreign language effect persisting even when the participant was more than a bystander. Like previous studies, the researchers claimed that diminished mental imagery and hampered

emotional processing were likely the reasons for the findings based on the participants' severity ratings.

The current study aimed to build on previous research on the foreign language effect and moral decision making. Our study addressed three open questions: (1) does the foreign language effect extend to reasoning about morally charged real-world contexts like judgments of war crimes? (2) does social distance from a scenario being judged moderate the strength of the effect? and (3) does the effect generalize to Albanian/English bilinguals?. The usage of war crimes in an Albanian context is particularly novel due to the relative recency of the war, as well as its continuous effect on the country, and the intense negative emotionality that Albanians in Kosovo associate with the violence and crimes committed. Besides the war crime scenarios, the study aimed to observe the effect that foreign language has on moral imagery, as well. By having a measurement for participants' mental imagery vividness, we would be able to see if and how it moderates their moral judgment. We hypothesized that participants using their first language, Albanian, would make harsher judgments because of the emotional closeness associated with using a native language. We also hypothesized that participants in the native condition would respond more harshly to the Kosovo war crime scenario due to the social closeness. Furthermore, we hypothesized that participants using their foreign language would have less vivid mental imagery than those using their native language, but that this level of mental imagery would be positively correlated with harsher judgments of the war crime scenarios.

Methods

Participants

A total of 107 Albanian speakers from Kosovo volunteered to participate in the study. Participants were recruited through sending out the study link through social media and messaging apps. Since participants were required to speak Albanian as their first or native

language and English as their second or foreign language, the link was only sent out to individuals who the researcher knew fit this criterion. There were initially 108 responses, but one was deleted due to it being a second response by the same person who appeared to have taken the study twice in a matter of minutes. The participants' ages ranged from 18 to 58 ($M = 25.38$, $SD = 7.54$) and all of them identified as ethnic Albanians. Out of the 107 participants, 69 were female, 33 male, 2 nonbinary, and 3 did not disclose their gender.

Materials and Procedure

Upon clicking the link, participants were taken to the online study on Qualtrics. Immediately, Qualtrics randomly assigned each participant to either take the study completely in English or completely in Albanian. The original English version of the study was fully translated to Albanian by one of the native Albanian researchers and then checked for readability and grammatical accuracy by another native Albanian speaker who did not participate in the study. Participants were first presented with the informed consent form which they had to sign in order to proceed with the study. The first task of the study was the mental imagery questionnaire which was adapted from a shortened form of Betts' Questionnaire Upon Mental Imagery (Sheehan, 1967). The task comprised fourteen total items, two for each of seven sensory modalities which include: visual, auditory, tactile, kinesthetic, gustatory, olfactory, and organic modalities. Participants were asked to imagine each item in their mind and self-report its vividness on a sliding scale from 1 (Not vivid at all) to 7 (As vivid as real life). See Appendix A for the complete English mental imagery measure.

Next, participants were presented with the two war crime stimuli, which were counterbalanced by Qualtrics to ensure that some participants got the Kosovo scenario first while others got the Rwanda scenario first. The two war crime scenarios were adapted from two separate Human Rights Watch reports, one on the Kosovo war and the other on the Rwanda war.

No significant fictional elements were added to the stories besides framing the reports as trials and adding an anonymous central figure that represented the perpetrator for each scenario. The paragraphs were streamlined for brevity and clarity and no names were used for any of the figures in order to ensure that participants did not rely on any previous associations with a particular name when making their judgments, as this could be a confound. The two scenarios were about the same in length, with a difference of twenty words. Each scenario was followed by a set of eight questions that looked at the self-reported vividness of the crime and how harshly and severely the participant judged the crime and perpetrator. The questions were the exact same for both scenarios and the responses were made on a sliding scale from 1 to 7, with question-specific meanings for the numbers. See Appendix B for the complete English war crime stimuli and response questions.

Then, participants responded to the demographics questionnaire that asked them to report their age, gender, ethnic group, highest level of education, number of languages spoken, and where they learned English. The options for the ethnic group question consisted of the major Kosovo ethnic groups since the participants recruited were all Kosovars. When responding to the question about the number of languages spoken, participants had the option to write in the other languages that they speak if they selected one of the options besides “Two (Albanian and English)”. Lastly, participants were debriefed before being able to leave the study link.

Results

Out of the 107 total participants, 52 of them were in the Albanian condition while 55 were in the English condition. We created two composite “morality judgment” scores for the war crime scenarios by averaging together the sliding scale responses for the Kosovo war crime (Cronbach’s $\alpha = .69$) and for the Rwanda war crime (Cronbach’s $\alpha = .78$). Note that the two last questions in each scale had to be reverse coded before obtaining the average scores since

the sliding scale responses for those two questions measured in the opposite direction of the other questions before them. Higher scores on the composite measure indicate harsher moral judgments to the war crime scenarios. A single “imagery” score was also obtained by averaging together the scores from the fourteen mental imagery questions. Higher scores on this measure indicate more vivid mental imagery.

We conducted three independent samples t-tests to compare mental imagery vividness, Kosovo war crime severity ratings, and Rwanda war crime severity ratings between the two conditions. There was no significant difference between the two conditions on any of these measures. When comparing the moral judgment score for the Kosovo war crime in the Albanian condition ($M = 5.97, SD = .78$) to that of the Kosovo war crime in the English condition ($M = 5.88, SD = .86$) there was no significant difference found, $t(105) = .53, p = .60$. Similarly, the difference between the moral judgment score for the Rwanda war crime in the Albanian condition ($M = 5.35, SD = .95$) and the English condition ($M = 5.4, SD = 1.1$) was also not significant, $t(105) = -.24, p = .81$. Finally, there was also no significant difference between the imagery scores in the Albanian condition ($M = 4.78, SD = .96$) and the scores in the English condition ($M = 4.98, SD = .97$), $t(105) = -1.12, p = .27$. Collapsing across language condition, however, a paired samples t-test revealed that moral judgment scores for the Kosovo war crime ($M = 5.93, SD = .82$) were significantly harsher than the scores for the Rwanda war crime ($M = 5.38, SD = 1$), $t(106) = 8.38, p < .001$.

A Pearson Correlations analysis was conducted to examine the relationship between mental imagery and moral judgment. The results revealed that there was a significant, positive correlation between the imagery scores and the moral judgment scores for the Kosovo war crime $r(105) = .24, p = .014$, as well as between imagery scores and moral judgment scores for the Rwanda war crime $r(105) = .28, p = .003$. Consistent with previous work, more vivid mental

imagery was associated with harsher moral judgments for both war crime scenarios. See Figure 1.

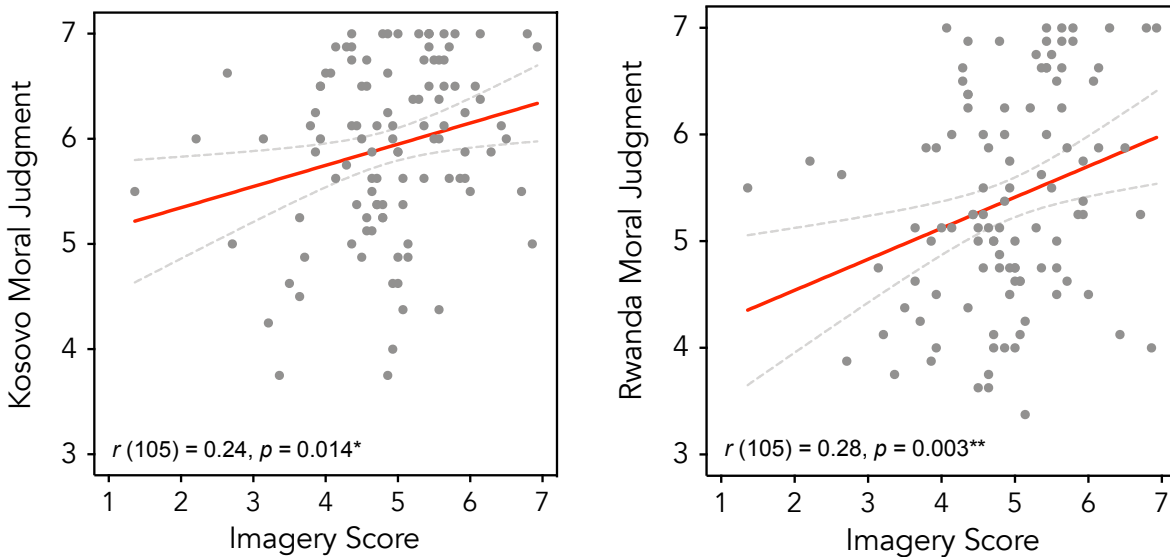


Figure 1. Positive correlations between imagery scores and moral judgment scores for the Kosovo and Rwanda war crimes

Finally, although participant age did not figure into our original hypotheses, we reasoned it could be tied into social closeness due to the fact that the Kosovo and Rwandan wars took place more than two decade ago. Therefore, an exploratory correlational analysis was conducted in order to look at the relationship between age and moral judgment scores. The results revealed that there was a significant positive correlation between age and moral judgment scores for the Kosovo war crime $r(104) = .25, p = .008$. However, there was no significant correlation found between age and moral judgment scores for the Rwanda war crime $r(104) = .13, p = .193$. This means that older participants rated the Kosovo war crime more harshly but did not do so for the Rwanda war crime. An explanation for this could be the social closeness that older Albanians have to the Kosovo war.

Discussion

The goal of the present study was to identify whether the foreign language effect is also prevalent in Albanian speakers who speak English as a second language and if using a foreign language influences moral judgment and mental imagery. More specifically, we were interested to see if Albanian/English bilinguals have more vivid mental imagery and make harsher moral judgments in their first language than in their foreign language. We also hypothesized that mental imagery would be positively correlated with harsher moral judgment and that the Kosovo moral judgments would be harsher due to the social closeness. We obtained a mental imagery score by asking participants to rate the vividness of their mental imagery for fourteen different items and then asked them to judge and respond to two war crime scenarios, a socially close one set in Kosovo and one more distant, in Rwanda. We hypothesized that participants taking the survey in Albanian would report more vivid mental imagery and rate the war crimes more harshly/severely. Our results did not replicate previous research by finding a foreign language effect for moral judgment or imagery, there was no significant differences for the mental imagery scores or the war crime moral judgment scores between the Albanian and English conditions. The results did, however, show that those who had more vivid mental imagery went on to rate the war crimes more harshly. Furthermore, the findings revealed that participants rated the Kosovo war crime more harshly than the Rwanda war crime in general and that older participants rated the Kosovo war crime, specifically, more harshly. These results supported our hypothesis that the Kosovo war crime would be judged more harshly due to social closeness.

Not finding a foreign language effect in the imagery and war crime scenario judgments might mean that the foreign language effect is not as strong as it is believed to be, at least not strong enough to prevail in Albanian speakers who speak English as a second language. However, we suggest that there could be another reason for this as well. One explanation for our findings could have to do with the participants' ages. The average age was 25, meaning that the

participants were relatively young and most likely grew up immersed in the English language a lot more than older Albanians might have been. The majority of schools in Kosovo begin teaching English as a second language in elementary school and the younger generations are exposed to English almost every day, be it through social media or movies and TV shows. Many young Albanians are also pursuing higher education in foreign countries where they are taught completely in English or have to communicate with their foreign peers in English on a daily basis. This could mean that constant use of the second language over a prolonged period might have led to a diminished emotional and cognitive distance, which could explain why they did not score and rate significantly higher in Albanian than English.

Although participants rated the Kosovo war crime more severely than the Rwanda war crime, which we hypothesized would happen due to social distance, an additional interesting finding was that older participants gave harsher moral judgments for the Kosovo scenario. This backs up our social closeness hypothesis since older Albanians were more involved in the war and have stronger memories and emotional ties to it than most younger Albanians do. Most older Albanians in Kosovo have first-hand experience with the war, and many were victims of some sort of violence and even lost loved ones in terrible ways. Naturally, these individuals tend to be very emotional about the subject and feel strongly about it, resulting in harsher judgments for the alleged perpetrators.

That said, an alternative reason for the Kosovo war crime being judged more severely than the Rwanda one might be that the Kosovo scenario was more disturbing in nature. Most notably, the Kosovo scenario talks about the murder children and women, including a pregnant woman who had been mutilated. The Rwanda scenario, although also very disturbing and graphic, focuses on the torture of the war prisoners and briefly mentions death as something that

nearly happens. To most, the first scenario is arguably worse and might be deserving of harsher judgment, no matter the social closeness.

Limitations and Future Research

Future research could replicate this study with a larger sample of people from Kosovo with a wider age range in order to see if age is affecting the foreign language effect. Since we believe that age is an important factor and potential confound for the results, it would be informative to look at a sample with more variety in age and see if the participants being on the younger side did lead to there being no foreign language effect. Future research could also include other stimuli to test the foreign language effect such as the trolley problems from previous studies where researchers did find an effect to see if it replicates in Albanian speakers. This would eliminate the possibility of the stimuli eliciting a strong response out of most individuals, as graphic war crime scenarios might.

In the future, we could ask participants about having aphantasia, which is the inability to visualize mental images (Zeman, Dewar, & Della Sala, 2016). Even though only a small percentage of the population has aphantasia and some might not even be aware of it, this might be affecting how people score on the mental imagery task and therefore how they judge the war crimes. We could also potentially measure proficiency of participants' second language and ask about age of language acquisition. Although it is unlikely that responses were affected by participant's inability to understand the stimuli in English, it might be helpful to completely eliminate the possibility by having participants take a proficiency test. Also, it would be interesting to see if the age when participants began learning their second language has an effect on their emotional distance since, as mentioned before, it is possible that a person might be more used to a language and be as emotionally close to it as they are with their first language if they have spoken it from a very young age.

In sum, we found that Albanian/English bilinguals did not show a foreign language effect when it came to mental imagery and making moral judgments, however, we did find that more vivid mental imagery is correlated to harsher moral judgment and that social closeness also plays a part in moral judgment. This adds to our understanding of the nature and scope of the foreign language effect and the relationship between mental imagery and moral reasoning. The foreign language effect might not have been present due to the nature of the scenarios, which might have led to strong emotionality despite the language they were presented in. The age of the participants might have also played a role in the findings, which suggests that some younger people today might not be as prone to the foreign language effect.

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Appendix A: Mental Imagery Questionnaire – English Version (Sheehan, 1967)

1. Imagine the appearance of a sunset. How vivid is this image?
2. Imagine the appearance of a friend you know well. How vivid is this image?
3. Imagine the sound of an ambulance siren. How vivid is this sound?
4. Imagine the sound of children playing. How vivid is this sound?
5. Imagine the smell of freshly cut grass. How vivid is this smell?
6. Imagine the smell of a freshly painted wall. How vivid is this smell?
7. Imagine the taste of a lemon. How vivid is this taste?
8. Imagine the taste of sea water. How vivid is this taste?
9. Imagine touching a tree trunk. How vivid is this feeling?
10. Imagine touching a soft towel. How vivid is this feeling?
11. Imagine the bodily sensation of jumping into a pool. How vivid is this feeling?
12. Imagine the bodily sensation of walking quickly in the cold. How vivid is this feeling?
13. Imagine feeling scared. How vivid is this feeling?
14. Imagine feeling in love. How vivid is this feeling?

Appendix B: War crime scenarios and questions – English Version

Kosovo war crime trial

A former member of the Serbian armed forces is facing trial for alleged war crimes in Kosovo during the war. The former soldier was part of a unit that has been identified as being responsible for a civilian massacre that took place outside Donja Obrinja in September of 1998. The victims of the massacre were an ethnic Albanian extended family that were hiding in the forest close to their village after it had been attacked by Serbian forces. At the time, Human Rights Watch observed multiple bodies located approximately 1 kilometer outside the town in a forested area. The corpses of five women and two children, aged five and seven, were lying in a narrow gully near a makeshift tent where villagers said a family had sought refuge from the shelling. All of the victims had been shot in the head at close range, apparently while attempting to flee the attack. The bodies of several other victims displayed clear evidence of mutilation and one female victim, aged twenty-eight, was seven months pregnant at the time of her death; her belly had been cut open and the fetus was removed. The former soldier claims he was only following orders and that he acted in self-defense, as he believed the adult male victims were armed combatants that had committed crimes against Serbian civilians.

Rwanda war crime trial

A former army captain that served at the Kami military camp in Rwanda is facing trial for alleged war crimes during the past decade. The former captain is being accused of unlawful military detention and torture. Multiple former detainees have come forward and accused him of relentless beatings and various forms of torture in order to extract information. One former detainee described being blindfolded and taken outside at night, having his arms tied and a plastic bag put over his head so he could not breathe. In order to avoid dying, the detainee was forced to sign a document confessing to things that were not true. Another former detainee describes having a rope tightly tied to his feet so he could be turned upside down and then was beaten all over his body with metal clubs until he lost consciousness. He was then put in a cell with no food or water for three days and on the third day was physically unable to eat the small amount of corn and water they gave him. Another former detainee describes an electronic gadget being used to shock him into confessing something that was not true. He was electrocuted close to death multiple times and violently beaten to the point where he could not speak properly for five months. The accused former army captain claims that he was acting under orders from superiors and the detainees were believed to be members of an armed rebel group.

Severity questions for each scenario:

- How vivid in your mind were the alleged war crimes described in the report? (1 = not vivid at all; 7 = extremely vivid, like a picture in my mind)
- How severe should the punishment be for the accused soldier that is standing trial? (1 = not severe at all; 7 = extremely severe)
- How many more resources should be allocated into investigating these alleged war crimes? (1 = no resources, 7 = the maximum amount of resources possible)

- How much to blame for the alleged war crimes is the soldier standing trial? (1 = not at all to blame; 7 = 100% to blame)
- How responsible is the soldier standing trial for the actions described in the report (1 = not at all responsible; 7 = 100% responsible)
- How serious are the alleged war crimes described in the report? (1 = not serious at all; 7 = extremely serious)
- Does it matter if the victims of the alleged war crimes really were armed combatants in war? (1 = does not matter at all, 7 = it matters a great deal)
- Does the context of war excuse the alleged war crimes described in the report (1 = does not excuse the alleged crimes at all, 7 = fully excuses the alleged crimes)