

Foreign Language Affects the Contribution of Intentions and Outcomes to Moral Judgment

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Abstract

We examine whether the use of a foreign language, as opposed to the native language, influences the relative weight intentions versus outcomes carry in moral evaluations. In Study 1, participants were presented with actions that had positive outcomes but were motivated by dubious intentions, while in Study 2 with actions that had negative outcomes but were motivated by positive intentions. Participants received the materials either in their native or a foreign language. Foreign language prompted more positive moral evaluations in Study 1 and less positive evaluations in Study 2. These results show that foreign language reduces the relative weight placed on intentions versus outcomes. We discuss several theoretical accounts that are consistent with the results such as that foreign language attenuates emotions (triggered by intentions) or it depletes cognitive resources.

Keywords: foreign language, moral judgment, intention, emotion, cognitive depletion, outcome bias

Introduction

As a result of globalization, citizens and policymakers often judge and decide based on communications in foreign languages. By ‘foreign language’ we denote a nonnative language that has been learned in a classroom context rather than by immersion in a culture (see Pavlenko, 2012). Communication in foreign languages is common practice in international organizations, such as the United Nations and the European Council, whose decisions have global impact. Several such decisions—*Should we impose immigration quotas?*—involve moral considerations. Research has shown that using a foreign instead of the native language can sway our morals (e.g., Cipolletti, McFarlane, & Weissglass, 2016; Costa et al., 2014; Geipel, Hadjichristidis, & Surian, 2015a, 2015b). This finding is in stark opposition with the widely held belief that our morals define who we are (Strohlinger & Nichols, 2014, 2015), and implies that foreign language use might be shaping international policymaking.

Previous work on the moral foreign-language effect examined sacrificial actions that promote the aggregate benefit (Cipolletti et al., 2016; Costa et al., 2014; Geipel et al., 2015a), and taboo actions that are relatively harmless (Geipel et al., 2015b). In both cases, foreign language increased moral endorsement. Presumably, foreign language attenuates the emotions such actions typically trigger thus shifting attention to their outcomes (Costa et al., 2014; Geipel et al., 2015a, 2015b). Here, we examined whether this outcome-focus in moral evaluations extends to actions that garner positive or negative affect through the underpinning intentions. To this end, we tested actions whose outcomes and underpinning intentions had opposite moral valences.

Foreign language sways moral judgments

Initial studies on whether language influences moral judgments employed the trolley dilemmas (Cipolletti et al., 2016; Costa et al., 2014; Geipel et al., 2015a). In these dilemmas,

participants have to imagine that a runaway trolley is in a course to kill five workmen unless an action is taken. In one version—*footbridge*—the action involves pushing a stranger off a footbridge. In another version—*switch*—it involves hitting a switch that would redirect the trolley to alternate tracks where one worker is standing. Participants have to decide (*Yes/No*) whether it is morally permissible to perform the action. Although these dilemmas are similar at an abstract level—*Would you kill 1 to save 5?*—they are psychologically distinct. Most people deem that pushing the stranger is not morally permissible but hitting the switch is (e.g., Cushman, Young, & Hauser, 2006; Greene, Cushman et al., 2009; Greene, Sommerville et al., 2001; Pellizzoni, Siegal, & Surian, 2010). Describing these dilemmas in a foreign language increased action endorsement in the footbridge dilemma, but had no influence in the switch dilemma (e.g., Costa et al., 2014).

Subsequent research examined offensive but relatively harmless actions such as a person eating his dead dog (Geipel et al., 2015b). Describing these actions in a foreign rather than a native language prompted more lenient moral evaluations and less certainty in one's moral judgments. Importantly, the increased moral leniency extended to harmful actions such as selling someone a defective car. Taken together, these results show that the moral foreign-language effect is not limited to dilemmas involving a numerical tradeoff (1 vs. 5). These studies also helped rule out the possibility that the effect is wholly attributable to that participants in the foreign language group adopted a more universalistic stance, or assumed that the scenario characters were outgroup members.

Why does foreign language sway moral judgments?

According to one hypothesis—*the increased deliberation account*—foreign language triggers emotional distance, which in turn prompts deliberative processing (e.g., Costa et al., 2014; see also Keysar, Hayakawa, & An, 2012). This account aimed to explain the results with the trolley dilemmas and is based on Greene and colleagues' dual process theory of

moral judgment (e.g., Greene et al., 2001). According to this theory, moral judgment results from a conflict between an automatic, emotional system that privileges a deontological response (it forbids actions that harm others) and a deliberative, analytic system that favors a utilitarian response (it aims at maximizing net benefit). When an action is highly emotional—pushing a man off a bridge (footbridge dilemma)—the emotional system prevails leading to deontological choices. When an action is less emotional—hitting a switch (switch dilemma)—deliberative responses will surface, leading to utilitarian choices.

Now if foreign language increases deliberation then its effect should be felt in the footbridge dilemma that typically supports deontological responses—it should increase utilitarian choices—but not in the switch dilemma that typically supports utilitarian responses. This is exactly what it was found (e.g., Cicolletti et al., 2016; Costa et al., 2014; Geipel et al., 2015a). The increased deliberation account is also consistent with the finding that foreign language increases moral leniency towards relatively harmless taboo actions (Geipel et al., 2015b). Presumably, it shifts attention to their relatively harmless outcomes.

The increased deliberation account, however, cannot explain why foreign language reduces confidence in one's moral evaluations (Geipel et al., 2015b). Theorists suggest that deliberation increases certainty in one's conclusions (e.g., Mata, Ferreira, & Sherman, 2013; Sloman, 2014). Furthermore, this account cannot explain why foreign language promoted more lenient moral evaluations towards harmful actions such as selling someone a defective car (Geipel et al., 2015b). These actions undermine the aggregate benefit and should be condemned on utilitarian grounds. Importantly, whenever the increased deliberation account 'works' its reduced emotionality assumption suffices to explain the findings. This point is crisply made by Greene (2007) in a comment on why patients with emotion-damage in the ventromedial prefrontal cortex (VMPFC) but also in brain regions associated with controlled processing display more utilitarian responses than control participants: "... if VMPFC

patients lack these emotional responses in the first place, then there is no reason for control” (Greene, 2007, p. 322).

In light of these considerations, Geipel et al. (2015b) proposed the *reduced intuition account* according to which foreign language simply dampens the intuitive response that is triggered by certain actions (see Cushman’s dual-system framework of morality; Cushman, 2013). This account can explain the results with the trolleys, the taboo actions, but also with the potentially harmful actions—foreign language attenuated the aversive response these actions typically trigger. Furthermore, it can explain why foreign language reduces confidence in one’s moral evaluations (Geipel et al., 2015b). The strong aversive reaction that promotes moral condemnation (e.g., Haidt, 2001) might be the same that inspires confidence in one’s judgment. Further supporting evidence comes from other domains. For example, studies show that foreign language influences risk and benefit judgments through affect (Hadjichristidis, Geipel, & Savadori, 2015) and reduces emotion-based decision biases such as framing effects (see Keysar et al., 2012).

The proposition that a foreign language has less emotional resonance than a native language is widely supported (e.g., Caldwell-Harris, 2015) and might be ultimately traced to language-dependent memory (e.g., Marian & Neisser, 2000; Schrauf & Rubin, 2000). Experiences are encoded together with the linguistic context in which they occur, typically the native language. Because of that, a foreign language activates memories of such experiences and their associated emotional content less forcefully than the native language.

The present study

The objective of the present research was to investigate whether using a foreign language, as opposed to the native language, influences the relative weight intentions versus outcomes carry in moral evaluations. In Study 1 participants were presented with actions that had positive outcomes but were motivated by dubious intentions, while in Study 2 with

actions that had negative outcomes but were motivated by positive intentions. The reduced intuition account predicts that foreign language would sway moral evaluations in the direction of the outcomes by dampening the affect associated with the underlying intentions. This would result into more positive evaluations in Study 1 and less positive evaluations in Study 2.

Study 1: Dubious Intentions – Positive Outcomes

Methods

Participants. We recruited 107 volunteers¹ (79 female, 24 male, 4 unknown; $M_{\text{age}} = 25.8$ years, age range: 20–59 years). Fifty-six native Italian speakers completed a paper-and-pencil questionnaire during a lecture, and 51 native German speakers completed an online version of the study. The foreign language for both groups was English. Within each group, participants were randomly assigned either to the foreign or the native language condition. Altogether, 60 participants were assigned to the foreign language condition, and 47 to the native language condition. Participants in each condition received the entire questionnaire in the corresponding language. Preliminary analyses revealed no differences in how foreign language influenced moral evaluations in the Italian and German groups, and thus we combined them.

Materials and Procedure. Participants judged the moral goodness (0 = *not at all good*, 9 = *extremely good*) of three target scenarios and two control scenarios. The target scenarios involved actions with positive outcomes that were underpinned by potentially dubious motivations (adapted from Eyal, Liberman, & Trope, 2008): *company* (a fashion company donates money to charity possibly to increase its profit), *inheritance* (a wealthy elderly man donates money to charity to avoid family quarrels), and *adoption* (a couple adopts a disabled child possibly to receive money from the state). The control scenarios

¹ For sample-size calculations see Appendix A.

involved helpful actions with no mention of intentions (adapted from Seidel & Prinz, 2012): *mother* (helping a mother with a baby carriage) and *poor man* (giving money to a poor man). We predicted no language effect with the control scenarios. The scenarios are presented in Appendix B.

Following each scenario, participants in the foreign language condition were asked: “How well did you understand the scenario?”, and responded on a scale ranging from 50% (*some understanding*) to 100% (*excellent understanding*). Overall, understanding was extremely high ($M = 93.7\%$, $CI [91.4\%, 95.6\%]$; for further participants’ details see Table C.1, Appendix C).

Results

We submitted the moral goodness ratings to a 2 (Language: Foreign vs. Native) \times 2 (Scenario: Target vs. Control) mixed-factor ANOVA. There was no main effect of language, $F(1, 105) = 0.75, p = .387, f = .08$, but a main effect of scenario, $F(1, 105) = 21.54, p < .001, f = .45$. Unsurprisingly, the target scenarios that involved dubious intentions promoted less positive moral evaluations ($M = 6.24, CI [5.94, 6.53]$) than the control scenarios that did not ($M = 6.91, CI [6.64, 7.18]$). Critically, we found a significant Language \times Scenario interaction, $F(1, 105) = 8.36, p = .005, f = .07$, which we scrutinized with Bonferroni corrected planned comparisons. For the *target* scenarios we found a significant language effect, $F(1, 105) = 4.52, p = .036, f = .21$. As predicted, foreign language promoted more positive moral evaluations ($M = 6.56, CI [6.16, 6.95]$) than the native language ($M = 5.92, CI [5.48, 6.36]$) (see Figure 1). For the *control* scenarios the effect of language was non-significant, $F(1, 105) = 0.54, p = .466, f = .07$. Foreign language induced similar goodness ratings ($M = 6.81, CI [6.45, 7.17]$) as the native language ($M = 7.01, CI [6.60, 7.42]$). The non-significant language effect in the control scenarios supports that the participants

understood the materials; misunderstanding would have pulled the foreign language group's ratings towards the midpoints of the scale (4 and 5).

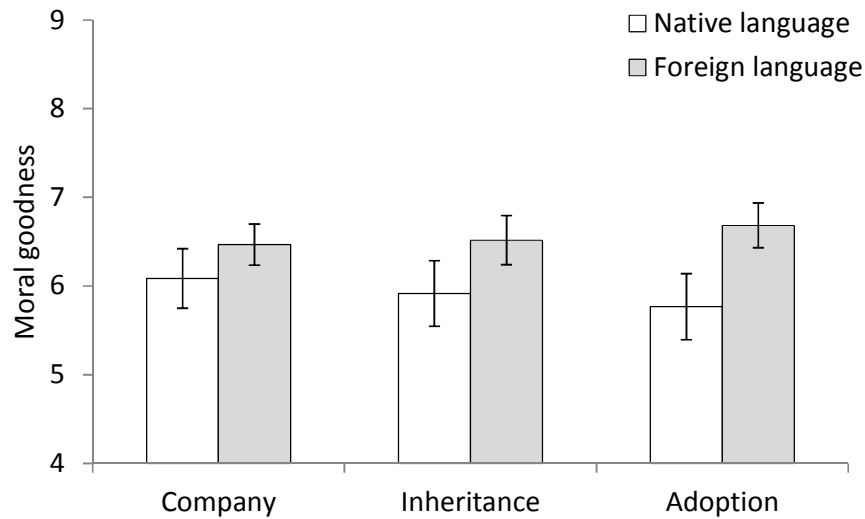


Figure 1. Mean moral goodness ratings (0 = not at all good, 9 = extremely good) by target scenario and language condition in Study 1. The native language was Italian or German, and English the foreign language. Error bars indicate standard errors of the mean.

Study 2: Positive Intentions – Negative Outcomes

In Study 2 we swapped the valence between intentions (now positive) and outcomes (now negative). Here, the reduced intuition account predicts less positive moral evaluations in the foreign language. If supported, Study 2 would be the first to show that foreign language might prompt less positive moral evaluations than the native language.

Methods

Participants. We recruited 144 Italian students attending foreign language English courses at the University of Trento (101 females, 41 males, 2 unknown, $M_{\text{age}} = 22.5$ years, age range: 19–38 years). Of these, 78 participants were randomly assigned to the foreign

language condition and received the entire questionnaire in English, and 66 to the native language condition and received the entire questionnaire in Italian.

The majority of participants in the foreign language condition had a B2 qualification in English (independent user—*vantage*), with a range from B1 (independent user—*threshold*) to C2 (proficient user—*mastery*) (Council of Europe, 2001). These participants were highly proficient in the foreign language (see also Table C.1, Appendix C). To ensure that eventual findings are not due to misunderstanding, participants were instructed to answer to scenarios only if they have fully understood them.

Materials and procedure. Participants were presented with two moral scenarios that involved an intentionally good action that resulted in a negative outcome (see Appendix B). In the *jacket* scenario an individual gave a homeless person his jacket, but other people beat the homeless person thinking that he had stolen it. In the *drug* scenario an individual gave a poor boy money, which the boy used to buy drugs and as a result died of an overdose. Following each scenario, participants were asked to make a moral judgment (“In your opinion, how morally good was [agent’s action]?”) on a scale ranging from 0 (*not at all good*) to 10 (*extremely good*).

Results

We submitted the moral goodness ratings into a 2 (Language) \times 2 (Scenario) mixed-factor ANOVA. As expected by the reduced intuition account, foreign language promoted less positive moral evaluations ($M = 6.87$, CI [6.51, 7.22]) than the native language ($M = 7.46$, CI [7.07, 7.84]), $F(1, 142) = 4.93$, $p = .028$, $f = .19$ (see Figure 2). There was a main effect of scenario, $F(1, 142) = 100.02$, $p < .001$, $f = .84$, but no Language \times Scenario interaction, $F(1, 142) = 0.47$, $p = .493$, $f = .05$.

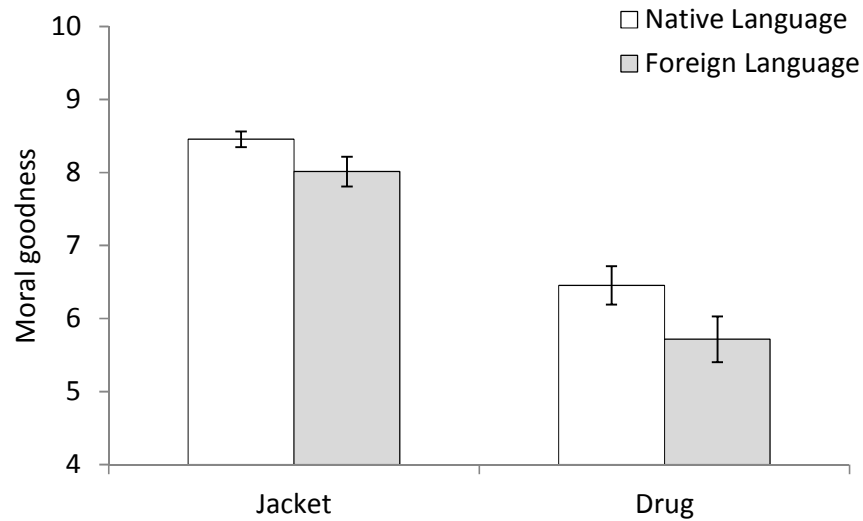


Figure 2. Mean moral goodness ratings (1 = not at all good, 10 = extremely good) by scenario and language condition in Study 2. The native language was Italian, and English the foreign language. Error bars indicate standard errors of the means.

General Discussion

In two studies we found consistent evidence that the use of a foreign language, as opposed to the native language, reduces the relative weight intentions versus outcomes carry in moral evaluations. In Study 1, wherein the intentions were questionable but the outcomes positive, foreign language *increased* moral goodness judgments; in Study 2, wherein the intentions were positive but the outcomes negative, foreign language *reduced* moral goodness judgments. The present results are consistent with the reduced intuition account which posits that foreign language attenuates action-based affect. Unlike previous studies that used aversive actions, here we used actions that gain emotionality through the underpinning motives. Interestingly, VMPFC patients with damage in emotional areas of the brain show a similar reduced consideration of intentions in their moral evaluations (Young, Bechara, Tranel, Damasio, Hauser, & Damasio, 2010).

Are the present results compatible with the increased deliberation account? It depends. If one equates deliberative moral evaluation with a hardline utilitarian stance that places little weight on intentions, then the answer is “Yes.” Both studies support that foreign language promotes attention to outcomes. Notice, however, that an increase in cognitive reflection has been shown to promote a careful consideration of intentions (Pinillos, Smith, Nair, Marchetto, & Mun, 2011; see also Margoni & Surian, 2016). Now, if one assumes that a deliberative moral evaluation weighs both intentions and outcomes—and in the case of outcomes, only when this is logically justified—then the answer is “No.” In the scenarios of Study 2 the agents had good intentions and the foreseeable outcomes were positive (e.g., the homeless person would be kept warm). The fact that the outcomes turned out to be negative is a matter of chance. Taking into account outcome information in cases where this is not logically justified is a bias, the *outcome bias* (Baron & Hersey, 1988; for outcome bias in ethical evaluations see Gino, Moore, & Bazerman, 2010).

Another potential explanation is that foreign language influenced moral judgments through cognitive depletion. Neuroimaging studies suggest that foreign language comprehension requires more cognitive resources than native language comprehension (Hasegawa, Carpenter, & Just, 2002), perhaps because foreign language users “must devote more cognitive resources to lower level processes, such as word identification, semantic access, and syntactic processing” (Miller & Keenan, 2011, p. 874). Critically, studies suggest that cognitive depletion prompts a reduced consideration of intentions versus outcomes in moral evaluations (e.g., Buon, Jacop, Loissel, & Dupoux, 2012).² A similar reduced consideration of intentions is observed with older adults, which could be due to diminished cognitive capacity (e.g., Moran, 2013). These results mirror those found in the current

² Buon et al. (2012) propose that people automatically assign causal responsibility to an agent on the basis of outcomes, which they might later adjust in light of intentions. Cognitive load interferes with the adjustment process.

studies. But notice that such an account cannot explain previous results with the trolley dilemmas. In that context, cognitive load (Trémolière, Neys, & Bonnefon, 2012) and time pressure (Suter & Hertwig, 2011) have been shown to *reduce* utilitarian responses.

Conceivably, foreign language can act through emotion attenuation, cognitive depletion, or both.

In conclusion, in line with previous evidence, we found that that foreign language sways moral evaluations. With respect to the native language, foreign language prompts evaluations that place relatively less weight on intentions than outcomes. We invite future research to examine the underlying mechanisms. Beyond their theoretical implications, the present findings carry significant applied consequences. International decisions, such as those made by the United Nations, might underemphasize intentions relative to outcomes (which could be a matter of chance). Underweighting intentions can have dire consequences in jury decisions, where jurors have to decide whether an accused is guilty “beyond reasonable doubt.” Note that in several countries, such as England, nonnative speakers can sit on a jury.

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doi: 10.1016/j.neuron.2010.03.003

Appendix A

Details of a priori sample size calculations for Studies 1 and 2.

A priori sample size calculation Study 1

To determine the sample size of Study 1, we conducted an a priori sample size calculation using *G*power* (Faul, Erdfelder, Lang, & Buchner, 2007) with the following settings: effect size $f = 0.25$ (medium, based on Geipel et al., 2015), alpha level = .05, power = .8, number of groups = 2 (language conditions), number of repeated measures = 2 (target vs. control scenarios), correlation between repeated measures $\rho = 0.2$ (estimated), nonsphericity correction $\epsilon = 1$ (estimated). The calculation indicated a minimum sample size of 70. Here and throughout we recruited more participants in the foreign language condition as a precautionary measure against data loss. Also, in all studies no interim analyses or stopping rules were applied.

A priori sample size calculation Study 2

To determine the sample size of Study 2, we conducted an a-priori sample size calculation using *G*power* (Faul et al., 2007). The parameters were set as follows: effect size $f = 0.21$ (small-medium, based on Study 1), alpha level = .05, power = .8, number of groups = 2 (language conditions), number of repeated measures = 2 (scenarios), and correlation among repeated measures = .5 (estimated). The calculation indicated a minimum sample size of 136.

Appendix B

Details of Moral Scenarios Used in Studies 1 and 2 (English Versions).

Target scenarios used in Study 1

Company. A fashion company goes on a special campaign: for every purchase of clothing at one of the company's stores, the company contributes a similar item to a charity project. Recently, the company ran into financial difficulties. This charity campaign gives the company good publicity and boosts its sales immediately.

Inheritance. A wealthy elderly man has inherited a large sum of money (a few million Euros) from a woman he used to know. The man did not expect that this woman would leave him all this money. The man has three children who are not on good terms with each other. He is afraid that if he told them about the inheritance, they would fight over the money. He decides not to tell anyone about it and donates the entire amount to a charity organization.

Adoption. A young couple discovers they are infertile. They decide to adopt a child and successfully pass the exams of the national adoption agency. They are informed that the children that are available for adoption have various birth defects, which most likely caused their biological parents to abandon them. Adopters receive child's pension as well as a disability pension because of the children's condition. The couple does not have money for international adoption. They decide to proceed with the adoption.

Control scenarios used in Study 1

Poor man. Imagine a poor man asking for donations to support himself while he does not have a job.

Mother. Imagine a young mother is in a train station and she has problems with the baby trolley as she walks down the stairs.

Scenarios used in Study 2

Jacket. Cristiano deliberately and intentionally gave a homeless man his only jacket, even though it was freezing outside. One hour later two guys saw the homeless person with Cristiano's jacket and beat him up as they thought that he had stolen the jacket.

Drug. Giorgio is sitting outside a coffee-shop when a poor boy comes and asks him for some money to get something to eat. Giorgio gives him some money trusting that the boy would use it to get food. The boy used this money to buy drugs and as a result he dies of an overdose.

Appendix C

Details of Participants Assigned to the Foreign Language Conditions.

Table C.1

Details of Participants Assigned to the Foreign Language Conditions.

	<i>Mean, 95% CI</i>
Study 1: Native Italian or German speakers.	
Age of acquisition of the foreign language (years)	8.40, [7.76, 8.98]
Reading and understanding (5-point scale)	3.89, [3.72, 4.06]
Study 2: Native Italian speakers.	
Age of acquisition of the foreign language (years)	8.73, [8.21, 9.26]
Reading and understanding (5-point scale)	4.01, [3.86, 4.14]

Note. Participants were asked to self-assess their foreign language skills in *reading* and in *understanding* on a 5-point scale (1 = *almost none*, 2 = *poor*, 3 = *fair*, 4 = *good*, 5 = *very good*; scale adapted from Caldwell-Harris & Ayçiçeği-Dinn, 2009). Here, we present the mean score across the two items.