**Supplementary Materials**

**Moral dilemmas**

1. *Surgeon* (adapted from Cecchetto et al., 2017)

ITA

Sei il primario di chirurgia di un ospedale. Cinque dei tuoi pazienti hanno estremo bisogno di trapianti di organi. Ognuno di loro ha bisogno di un organo diverso o morirà. Hai un altro paziente sano che sarebbe un donatore di organi ideale per gli altri. Se trapianti gli organi del donatore nei corpi degli altri cinque pazienti, loro vivranno ma il donatore morirà. Ti avvicini al paziente donatore con l'anestesia e un bisturi. Lui ti supplica terrorizzato di non togliergli la vita.

Decidi di eseguire il trapianto? (Sì/No)

Come valuti questa azione su una scala da 1 a 7? (1 = l’azione è proibita, 4 = l’azione è consentita, 7 = l’azione è obbligatoria)

Pensando allo scenario che ho appena letto, mi sono sentito ... sconvolto, preoccupato, triste (per ogni emozione: 1 = per niente, 4 = un po ', 7 = molto).

ENG

You are the chief surgeon of a hospital. Five of your patients are in dire need of organ transplants. Each of them needs a different organ or they will die. You have another healthy patient who would be an ideal organ donor for the others. If you transplant his organs into the bodies of the other five patients, they will live but the donor will die. You approach the donor patient with anesthesia and a scalpel. He pleads with you terrified not to take his life.

Do you decide to perform the transplant? (Yes/No)

How do you rate this action on a scale from 1 to 7? (1 = the action is forbidden, 4 = the action is permissible, 7 = the action is obligatory)

Thinking about the scenario I just read, I felt… upset, worried, sad (for each emotion: 1 = not at all, 4 = somewhat, 7 = very much).

Did you understand the English text in which the problem was presented? (1 = not at all, 4 = average, 7 = very well).

1. *Factory* (adapted from Cecchetto et al., 2017)

ITA

Sei il capo della sicurezza di una fabbrica. Scoppia un incendio e dal sistema di ventilazione esce del fumo. In una stanza della fabbrica ci sono sei dei tuoi operai. In un'altra stanza c'è n’è uno solo. Il fumo si sta dirigendo verso la stanza dei sei operai che moriranno soffocati. Se sigilli il condotto di ventilazione che porta alla stanza dei sei operai, loro saranno al sicuro ma l’operaio nell'altra stanza morirà a causa del fumo che hai deviato. Stai per sigillare il condotto. Dalle videocamere di sorveglianza guardi l’operaio nell’altra stanza mentre piangendo ti implora di risparmiargli la vita.

Decidi di sigillare il ​​condotto? (Sì/No)

Come valuti questa azione su una scala da 1 a 7? (1 = l’azione è proibita, 4 = l’azione è consentita, 7 = l’azione è obbligatoria)

Pensando allo scenario che ho appena letto, mi sono sentito ... sconvolto, preoccupato, triste (per ogni emozione: 1 = per niente, 4 = un po ', 7 = molto).

ENG

You are the head of security of a factory. A fire breaks out, and there is smoke coming through the ventilation system. In one room of the factory there are six of your workers. In another room there is only one. The smoke is heading towards the room of the six workers who will die of suffocation. If you manually seal the ventilation duct that leads to the six workers' room, they will be safe but the worker in the other room will die from the diverted smoke. You're about to seal the duct. From the video surveillance you watch the worker in the other room who cries and begs you to spare his life.

Do you decide to seal the duct? (Yes/No)

How do you rate this action on a scale from 1 to 7? (1 = the action is forbidden, 4 = the action is permissible, 7 = the action is obligatory)

Thinking about the scenario I just read, I felt… upset, worried, sad (for each emotion: 1 = not at all, 4 = somewhat, 7 = very much).

Did you understand the English text in which the problem was presented? (1 = not at all, 4 = average, 7 = very well).

1. *Bike week* (adapted from Cecchetto et al., 2017)

ITA

Sei un motociclista esperto e stai partecipando ad un evento con alcuni amici. Mentre stai guidando davanti ad un gruppo di sette motociclisti, noti che un motociclista di fianco a te ha un pneumatico difettoso che sta per scoppiare. Questo provocherà un tamponamento a catena, causando la morte dei sette motociclisti dietro di voi. Se spingi il motociclista fuori strada, gli altri sette dietro di voi saranno salvi ma il motociclista morirà. Alzi la gamba per speronarlo. Lui ti guarda spaventato e ti urla di non colpirlo.

Decidi di spingerlo fuori strada? (Sì/No)

Come valuti questa azione su una scala da 1 a 7? (1 = l’azione è proibita, 4 = l’azione è consentita, 7 = l’azione è obbligatoria)

Pensando allo scenario che ho appena letto, mi sono sentito ... sconvolto, preoccupato, triste (per ogni emozione: 1 = per niente, 4 = un po ', 7 = molto).

ENG

You are an experienced biker and you are attending an event with some friends. While you are riding in front of a group of seven bikers, you notice that a rider next to you has a faulty tire that is about to burst. This will cause a rear-end collision, killing the seven riders behind you. If you push the rider off the road, the other seven behind you will be safe but the rider will die. You raise your leg to ram him. He looks at you scared and yells at you not to hit him.

Do you decide to push him off the road? (Yes/No)

How do you rate this action on a scale from 1 to 7? (1 = the action is forbidden, 4 = the action is permissible, 7 = the action is obligatory)

Thinking about the scenario I just read, I felt… upset, worried, and sad (for each emotion: 1 = not at all, 4 = somewhat, 7 = very much).

Did you understand the English text in which the problem was presented? (1 = not at all, 4 = average, 7 = very well).

Non-moral dilemmas (fillers)

1. *Train or Bus* (Geipel, Hadjichristidis & Surian, 2015).

ITA

Devi viaggiare da Milano a Roma per partecipare a una riunione che inizia alle 14:00. Puoi prendere il treno o l'autobus. Il treno ti porterà lì giusto in tempo per il tuo incontro, qualunque cosa accada. L'arrivo dell'autobus è previsto un'ora prima della riunione, ma a volte è in ritardo di diverse ore a causa del traffico. Sarebbe bello avere un'ora in più prima della riunione, ma non puoi permetterti di arrivare in ritardo.

Decidi di prendere il treno anziché l'autobus per assicurarti di non essere in ritardo per la tua riunione? (Sì/No)

ENG

You need to travel from Milan to Rome in order to attend a meeting that starts at 2:00 PM. You can take either the train or the bus. The train will get you there just in time for your meeting no matter what. The bus is scheduled to arrive an hour before your meeting, but the bus is occasionally several hours late because of traffic. It would be nice to have an extra hour before the meeting, but you cannot afford to be late.

Do you decide to take the train instead of the bus to ensure you are not being late for your meeting? (Yes/No)

Did you understand the English text in which the problem was presented? (1 = not at all, 4 = average, 7 = very well).

1. *Plant Transport* (Geipel, Hadjichristidis & Surian, 2015)

ITA

Stai portando a casa un certo numero di piante da un negozio che si trova a circa 5 chilometri da casa tua. Il bagagliaio della tua auto, che hai rivestito di plastica per raccogliere il fango dalle piante, conterrà la maggior parte delle piante che hai acquistato.

Decidi di fare due viaggi per evitare di rovinare la tappezzeria della tua auto? (Sì/No)

ENG

You are bringing home a number of plants from a store that is about 5 kilometers from your home. The trunk of your car, which you have lined with plastic to catch the mud from the plants, will hold most of the plants you have purchased.

Do you decide to make two trips to avoid ruining the upholstery of your car? (Yes/No)

Did you understand the English text in which the problem was presented? (1 = not at all, 4 = average, 7 = very well)

**Supplementary Tables**

**Table S1*.*** *Parameters of the final model for the analyses of the moral decision (i.e., number of utilitarian choices) for the Surgeon dilemma.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effects |  | b | SE | z | p value |
| Intercept |  | -1.37 | 0.31 | -4.40 | <.001 |
| Proficiency |  | -0.17 | 0.38 | -0.44 | .65 |
| AoA |  | -0.23 | 0.32 | -0.72 | .47 |
| Dominance |  | -0.15 | 0.39 | -0.39 | .69 |
| Proficiency X AoA |  | 0.07 | 0.43 | 0.18 | .85 |
| Proficiency X Dominance |  | -0.32 | 0.46 | -0.70 | .48 |
| Dominance X AoA |  | -0.80 | 0.38 | -2.10 | .03 |
| Proficiency X Dominance X AoA |  | 1.43 | 0.68 | 2.08 | .03 |

*Note*. SE = standard error.

**Table S2*.*** *Parameters of the final model for the analyses of the moral decision (i.e., number of utilitarian choices) for the Factory dilemma.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effects |  | b | SE | z | p value |
| Intercept |  | 0. 71 | 0.22 | 3.22 | .001 |
| Proficiency |  | -0.35 | 0.26 | -1.33 | .18 |
| AoA |  | 0.16 | 0.22 | 0.72 | .46 |
| Dominance |  | 0.44 | 0.27 | 1.66 | .09 |

*Note*. SE = standard error.

**Table S3*.*** *Parameters of the final model for the analyses of the moral decision (i.e., number of utilitarian choices) for the Bike week dilemma.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effects |  | b | SE | z | p value |
| Intercept |  | -0.29 | 0.20 | -1.44 | .15 |
| Proficiency |  | 0.003 | 0.23 | 0.01 | .98 |
| AoA |  | 0.36 | 0.22 | 1.62 | .10 |
| Dominance |  | 0.02 | 0.23 | 0.11 | .90 |

*Note*. SE = standard error.

**Table S4*.*** *Parameters of the final model for the analyses of the perceived permissibility of moral violation for the Surgeon dilemma.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effects |  | b | SE | t | p value |
| Proficiency |  | -0.17 | 0.19 | -0.90 | .36 |
| AoA |  | 0.08 | 0.19 | 0.45 | .65 |
| Proficiency X AoA |  | -0.45 | 0.21 | -2.06 | .03 |

*Note*. SE = standard error.

**Table S5*.*** *Parameters of the final model for the analyses of the perceived permissibility of moral violation for the Factory dilemma.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effects |  | b | SE | t | p value |
| Proficiency |  | -0.26 | 0.19 | -1.37 | .16 |
| AoA |  | -0.04 | 0.19 | -0.22 | .82 |
| Dominance |  | -0.13 | 0.19 | -0.68 | .49 |

*Note*. SE = standard error.

**Table S6*.*** *Parameters of the final model for the analyses of the perceived permissibility of moral violation for the Bike week dilemma.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effects |  | b | SE | t | p value |
| Proficiency |  | -0.08 | 0.20 | -0.42 | .66 |
| AoA |  | 0.13 | 0.19 | 0.69 | .48 |
| Dominance |  | 0.10 | 0.21 | 0.50 | .61 |
| Proficiency X AoA |  | -0.47 | 0.22 | -2.07 | .03 |
| Proficiency X Dominance |  | -0.30 | 0.15 | -1.95 | .05 |

*Note*. SE = standard error.

**Table S7*.*** *Parameters of the final model for the analyses of the perceived emotional distress for the Surgeon dilemma.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effects |  | b | SE | t | p value |
| Intercept |  | 4.41 | 0.15 | 27.58 | <.001 |
| Proficiency |  | 0.26 | 0.18 | 1.45 | .15 |
| AoA |  | -0.29 | 0.16 | -1.80 | .07 |
| Dominance |  | -0.24 | 0.18 | -1.33 | .18 |

*Note*. SE = standard error.

**Table S8*.*** *Parameters of the final model for the analyses of the perceived emotional distress for the Factory dilemma.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effects |  | b | SE | t | p value |
| Intercept |  | 4.77 | 0.16 | 29.72 | <.001 |
| Proficiency |  | 0.46 | 0.17 | 2.56 | .01 |
| AoA |  | -0.47 | 0.16 | -2.80 | .006 |
| Dominance |  | -0.21 | 0.18 | -1.15 | .25 |
| AoA X Dominance |  | 0.44 | 0.15 | 2.77 | .006 |

*Note*. SE = standard error.

**Table S9*.*** *Parameters of the final model for the analyses of the perceived emotional distress for the Bike week dilemma.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effects |  | b | SE | t | p value |
| Intercept |  | 4.52 | 0.17 | 26.41 | <.001 |
| AoA |  | -0.52 | 0.17 | -2.94 | .004 |
| Dominance |  | -0.04 | 0.17 | -0.27 | .78 |
| AoA X Dominance |  | 0.46 | 0.16 | 2.75 | .007 |

*Note*. SE = standard error.

**Supplementary Figures**

**Figure 1S**. *Spearman’s correlation coefficients (ρ) between measures of bilingual language background. Warm and cold colors indicate positive and negative correlation coefficients, respectively. Color intensity represents the strength of the correlation.*

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