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Supplementary information

Situational factors shape moral judgements in the trolley dilemma in Eastern, Southern and Western countries in a culturally diverse sample

In the format provided by the authors and unedited

Supplementary Information

Situational factors shape moral judgments in the trolley dilemma in Eastern, Southern, and Western countries in a culturally diverse sample

Supplementary Materials

1. Moral dilemmas

Directions (Please read it carefully)

Thank you for participating in our survey. The data we collect from you will be anonymous and completely confidential. If you have already participated in this study, please tell the experimenter now.

On the following page you will be presented with a description of a situation and an action that a person in that situation (Joe) might perform in response to that situation. Your job is to tell us (1) whether you think it would be morally acceptable for Joe to perform this action, (2) how morally acceptable/ unacceptable this action would be, and (3) why you think this action is acceptable/unacceptable.

Note that you will NOT be asked to say whether you think Joe, yourself, or anyone else would actually perform this action in this situation. The questions concern the action's moral acceptability, and not what Joe, yourself, or anyone else would actually do in the situation described.

You might feel that the situation as we describe it is not realistic. For example, it might say that if Joe does X, then Y will happen, and you might think that this is not realistic, that Y might not necessarily happen if Joe does X. If you find yourself having these sorts of doubts, "suspend disbelief" just as you would at an unrealistic movie and assume that this situation really is the way it's described.

Likewise, you may feel that you need more information than is provided about the situation before you can give your answer. If this happens, you should make

your best guess about what you think the situation is like without making any

unnecessary assumptions. For example, if it doesn't say that the other person in the situation is related to Joe, then you should assume that Joe and the other person are unrelated.

Please proceed to the next page.

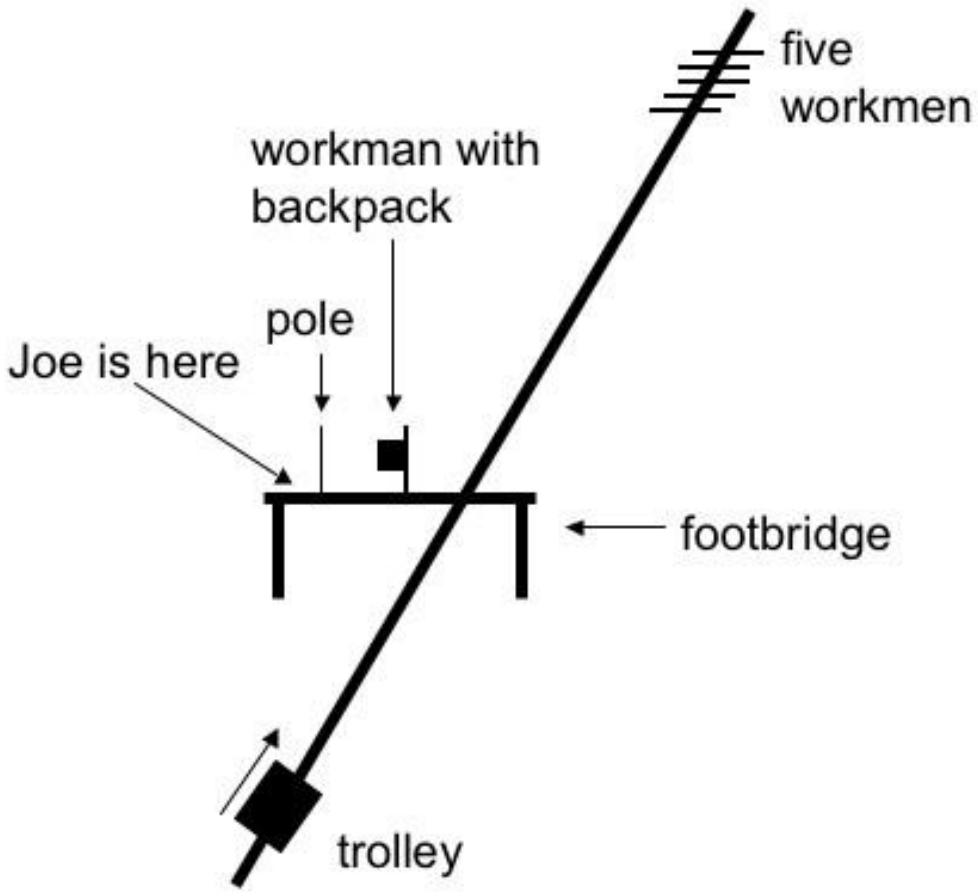
1.1 Experiment 1a Dilemmas

Footbridge pole

An empty runaway trolley is speeding down a set of tracks toward five railway workmen. There is a footbridge above the tracks in between the runaway trolley and the five workmen. On this footbridge is a railway workman wearing a large, heavy backpack. If nothing is done, the trolley will proceed down the main tracks and cause the deaths of the five workmen. (See diagram below)

It is possible to avoid these five deaths. Joe is a bystander who understands what is going on and who happens to be standing right behind the workman on the footbridge. Joe is near a six-foot long pole. Joe sees that he can avoid the deaths of the five workmen by using the pole to push the workman with the heavy backpack off of the footbridge and onto the tracks below. The trolley will collide with the workman, and the combined weight of the workman and the backpack will be enough to stop the trolley, avoiding the deaths of the five workmen. But the collision will cause the death of the workman with the backpack.

Note: Joe cannot avoid the deaths of the five workmen by jumping himself because he is not heavy enough to stop the trolley. There is also not enough time to remove the backpack from the workman.



1. Is it morally acceptable for Joe to push the workman off of the footbridge in order to avoid the deaths of the five workmen, causing the death of the single workman instead?
   Please choose one answer:
- YES
- NO

2. To what extent is this action morally acceptable?
   Please choose one number:
- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

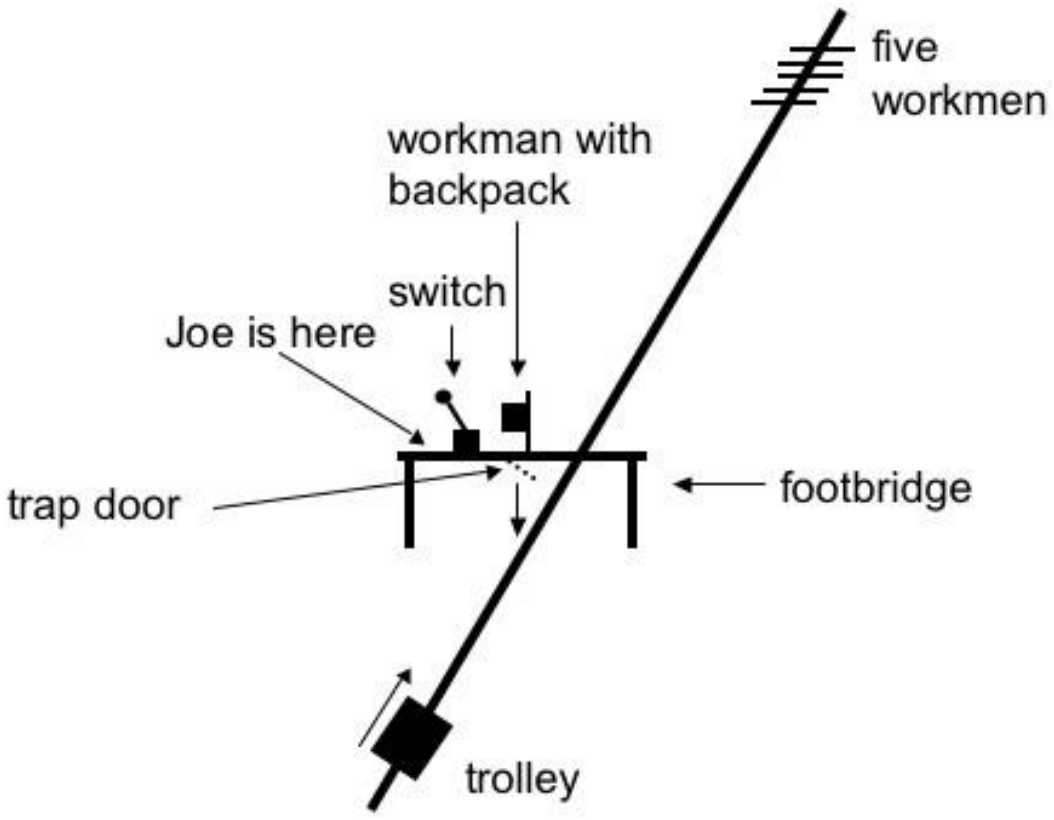
3. Please briefly explain why you think this action is morally acceptable/unacceptable:

Footbridge switch

An empty runaway trolley is speeding down a set of tracks toward five railway workmen. There is a footbridge above the tracks in between the runaway trolley and the five workmen. On this footbridge is a railway workman wearing a large, heavy backpack. If nothing is done, the trolley will proceed down the main tracks and cause the deaths of the five workmen. (See diagram below)

It is possible to avoid these five deaths. Joe is a bystander who understands what is going on and who happens to be standing right behind the workman on the footbridge. Joe is near a switch that opens the footbridge's trap door, on which the workman with the backpack is standing. Joe sees that he can avoid the deaths of the five workmen by hitting the switch, which will drop the workman with the backpack onto the tracks. The trolley will collide with the workman, and the combined weight of the workman and the backpack will be enough to stop the trolley, avoiding the deaths of the five workmen. But the collision will cause the death of the workman with the backpack.

Note: Joe cannot avoid the deaths of the five workmen by jumping through the trap door himself because he is not heavy enough to stop the trolley. There is also not enough time to remove the backpack from the workman.



1. Is it morally acceptable for Joe to hit the switch in order to avoid the deaths of the five workmen, causing the death of a single workman instead?
   Please choose one answer:
- YES
- NO

2. To what extent is this action morally acceptable?
   Please choose one number:
- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

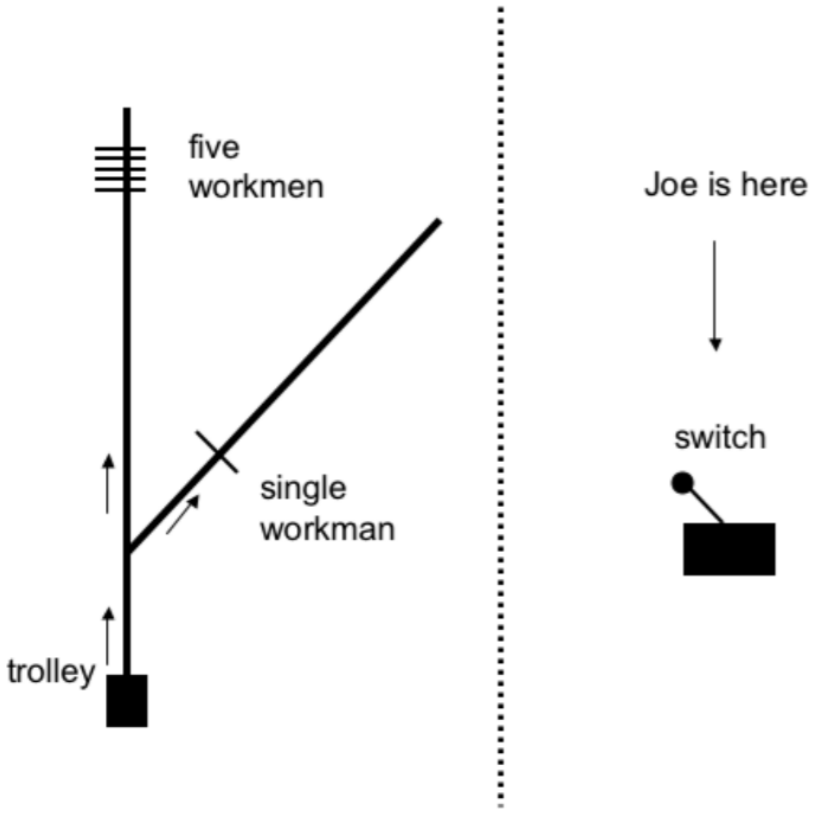
3. Please briefly explain why you think this action is morally acceptable/unacceptable:

1.2 Experiment 2a Dilemmas

Standard switch

An empty runaway trolley is speeding down a set of tracks toward five railway workmen. There is also a set of tracks branching off to the right of the main tracks with a single workman working on them. If nothing is done, the trolley will proceed down the main tracks and cause the deaths of the five workmen. (See diagram below)

It is possible to avoid these five deaths. Joe is a bystander who understands what is going on and who happens to be near a switch that can turn the trolley onto the side tracks. Joe sees that he can avoid the deaths of the five workmen by hitting the switch, which will turn the trolley onto the side tracks. But doing this will also cause the trolley to collide with the single workman, causing his death.



1. Is it morally acceptable for Joe to hit the switch in order to avoid the deaths of the five workmen, causing the death of a single workman instead?
   Please choose one answer:

- YES
- NO

2. To what extent is this action morally acceptable?
   Please choose one number:

- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

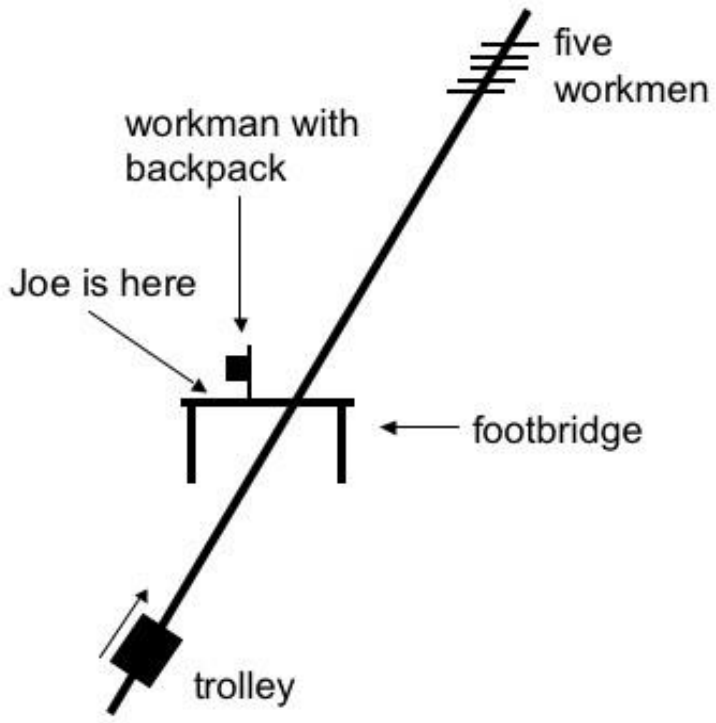
3. Please briefly explain why you think this action is morally acceptable/unacceptable:

Standard footbridge

An empty runaway trolley is speeding down a set of tracks toward five railway workmen. There is a footbridge above the tracks in between the runaway trolley and the five workmen. On this footbridge is a railway workman wearing a large, heavy backpack. If nothing is done, the trolley will proceed down the main tracks and cause the deaths of the five workmen. (See diagram below)

It is possible to avoid these five deaths. Joe is a bystander who understands what is going on and who happens to be standing right behind the workman on the footbridge. Joe sees that he can avoid the deaths of the five workmen by pushing the workman with the heavy backpack off of the footbridge and onto the tracks below. The trolley will collide with the workman, and the combined weight of the workman and the backpack will be enough to stop the trolley, avoiding the deaths of the five workmen. But the collision will cause the death of the workman with the backpack.

Note: Joe cannot avoid the deaths of the five workmen by jumping himself because he is not heavy enough to stop the trolley. There is also not enough time to remove the backpack from the workman.



1. Is it morally acceptable for Joe to push the workman off of the footbridge in order to avoid the deaths of the five workmen, causing the death of the single workman instead?
   Please circle one answer:
- YES
- NO

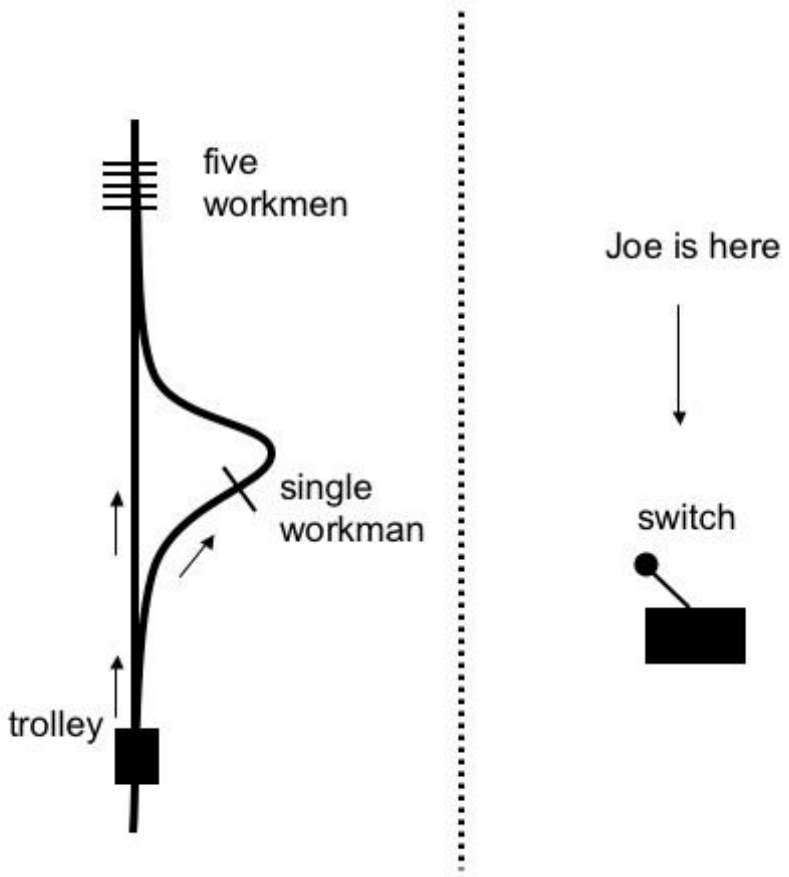
2. To what extent is this action morally acceptable?
   Please circle one number:
- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

3. Please briefly explain why you think this action is morally acceptable/unacceptable:

Loop

An empty runaway trolley is speeding down a set of tracks toward five railway workmen. There is also a set of tracks branching off to the right of the main tracks with a single workman working on them. These tracks join up with the main tracks at a point before the group of five workmen. If nothing is done, the trolley will proceed down the main tracks and cause the deaths of the five workmen. (See diagram below)

It is possible to avoid these five deaths. Joe is a bystander who understands what is going on and who happens to be near a switch that can turn the trolley onto the side tracks. Joe sees that he can avoid the deaths of the five workmen by hitting the switch, which will turn the trolley onto the side tracks. The trolley will collide with the single workman, causing the trolley to stop, avoiding the deaths of the five workmen. But the collision will cause the death of the single workman. If the single workman were not on the side tracks, the trolley would return to the main tracks and cause the deaths of the five workmen.



1. Is it morally acceptable for Joe to hit the switch in order to avoid the deaths of the five workmen, causing the death of a single workman instead?
   Please choose one answer:
- YES
- NO

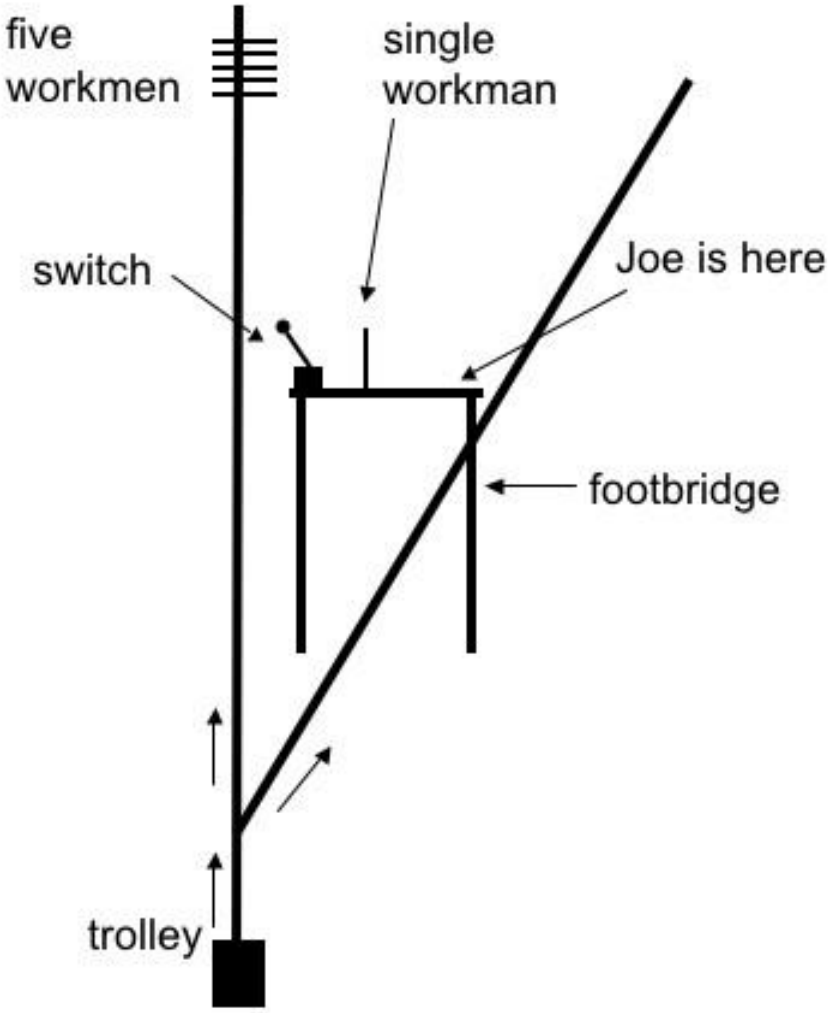
2. To what extent is this action morally acceptable?
   Please choose one number:
- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

3. Please briefly explain why you think this action is morally acceptable/unacceptable:

Obstacle collide

An empty runaway trolley is speeding down a set of tracks toward five railway workmen. There is also a set of tracks branching off to the right of the main tracks. Above these side tracks is a footbridge. On this footbridge is a single railway workman. If nothing is done, the trolley will proceed down the main tracks and cause the deaths of the five workmen. (See diagram below)

It is possible to avoid these five deaths. Joe is a bystander who understands what is going on and who happens to be on the footbridge. Across the footbridge from Joe is a switch that can turn the trolley onto the side tracks. The single railway workman is in between Joe and the switch. Joe sees that he can avoid the deaths of the five workmen by running across the footbridge and hitting the switch, which will turn the trolley onto the side tracks. Because the footbridge is narrow and because there is no time to explain, Joe cannot get to the switch in time to avoid the deaths of the five workmen without colliding with the single workman. But doing this will cause the single workman to fall off of the footbridge and onto the ground next to the tracks, causing his death.



1. Is it morally acceptable for Joe to run across the footbridge (and collide with the workman) in order to avoid the deaths of the five workmen, causing the death of the single workman instead?

   Please choose one answer:
   - YES
   - NO

2. To what extent is this action morally acceptable?
   Please choose one number:
   - (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

3. Please briefly explain why you think this action is morally acceptable/unacceptable:

1.3 Experiment 1b Dilemmas

Footbridge pole -Speedboat version

John is driving a small speedboat when he notices five swimmers drowning in the distance. If John does not drive toward them at top speed, he will not arrive in time, and all five will die. In order to drive at top speed, John must lighten the load on his boat. The only way to lighten the load is to push his passenger with an oar, causing the passenger to tumble off the back of the boat. This passenger cannot swim and will drown. If John pushes the passenger, the one passenger will drown, but John will save the five drowning swimmers. If John does not push the passenger, the one passenger will not drown, but the five swimmers will drown.

Is it morally acceptable for John to push the passenger off the boat with an oar in order to avoid the deaths of the five swimmers, causing the death of the single passenger instead?

1. Please choose one answer:
- YES
- NO

2. To what extent is this action morally acceptable?
   Please choose one number:
- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

Footbridge switch -Speedboat version

John is driving a small speedboat when he notices five swimmers drowning in the distance. If John does not drive toward them at top speed he will not arrive in time, and all five will die. In order to drive at top speed, John must lighten the load on his boat. The only way to lighten the load is to accelerate quickly, causing the passenger to tumble off the back of the boat. This passenger cannot swim and will drown. If John accelerates quickly, the one passenger will drown, but John will save the five drowning swimmers. If John does not accelerate quickly, the one passenger will not drown, but the five swimmers will drown.

Is it morally acceptable for John to accelerate the boat quickly in order to avoid the deaths of the five swimmers, causing the death of the single passenger instead?

1. Please choose one answer:

- YES
- NO

2. To what extent is this action morally acceptable?
   Please choose one number:

- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

1.4 Experiment 2b Dilemmas

Standard switch – Speedboat version

John is driving a motorboat when he notices five swimmers drowning in the distance. If John does not drive toward them at top speed he will not arrive in time, and all five will die. In order to drive at top speed, John must accelerate quickly. Accelerating quickly will also cause a passenger to tumble off the back of the boat. This passenger cannot swim and will drown. If John accelerates quickly, the one passenger will drown, but John will save the five drowning swimmers. If John does not accelerate quickly, the one passenger will stay safely on the boat, but the five swimmers will drown.

Is it morally acceptable for John to accelerate the boat quickly in order to avoid the deaths of the five swimmers, causing the death of the single passenger instead?

1. Please choose one answer:
- YES
- NO

2. To what extent is this action morally acceptable?
   Please choose one number:
- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

Standard footbridge – Speedboat version

John is driving a motorboat when he notices five swimmers drowning in the distance. If John does not drive toward them at top speed, he will not arrive in time, and all five will die. In order to drive at top speed, John must lighten the load on his boat. The only way to lighten the load is to push his passenger off the boat. This passenger is resting behind a large empty container. If John pushes the container, it will cause the passenger to tumble off the back of the boat. This passenger cannot swim and will drown. If John pushes the passenger, the one passenger will drown, but John will save the five drowning swimmers. If John does not push the passenger, the one passenger will not drown, but the five swimmers will drown.

Is it morally acceptable for John to push the passenger off the boat in order to avoid the deaths of the five swimmers, causing the death of the single passenger instead?

1. Please choose one answer:

- YES
- NO

2. To what extent is this action morally acceptable?
   Please choose one number:

- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

Loop – Speedboat version

John is driving a small speedboat when he notices five swimmers drowning in the distance. If John does not drive toward them at top speed he will not arrive in time, and all five will die. In order to drive at top speed, John must lighten the load on his boat. The only way to lighten the load is to accelerate quickly, causing the passenger to tumble off the back of the boat. This passenger cannot swim and will drown. If John accelerates quickly, the one passenger will drown, but John will save the five drowning swimmers. If John does not accelerate quickly, the one passenger will not drown, but the five swimmers will drown.

Is it morally acceptable for John to accelerate the boat quickly in order to avoid the deaths of the five swimmers, causing the death of the single passenger instead?

1. Please choose one answer:

- YES
- NO

2. To what extent is this action morally acceptable?
Please choose one number:

- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

Obstacle collide – Speedboat version

John is driving a small speedboat when he notices five swimmers drowning in the distance. If John does not drive toward them at top speed, he will not arrive in time, and all five will die. In order to drive at top speed, John must lighten the load on his boat. The only way to lighten the load is to push a large heavy container off of the back of the boat. However, there is a passenger resting behind the container. If John pushes the container, it will cause the passenger to tumble off the back of the boat. This passenger cannot swim and will drown. If John pushes the container, the one passenger will drown, but John will save the five drowning swimmers. If John does not push the container, the one passenger will not drown, but the five swimmers will drown.

Is it morally acceptable for John to push the container off the boat in order to avoid the deaths of the five swimmers, causing the death of the single passenger instead?

1. Please choose one answer:

- YES
- NO

2. To what extent is this action morally acceptable?
   Please choose one number:

- (Completely unacceptable) 1 2 3 4 5 6 7 8 9 (Completely acceptable)

2. Additional Questionnaires

Oxford Utilitarianism Scale

1) "If the only way to save another person's life during an emergency is to sacrifice one's own leg, then one is morally required to make this sacrifice."
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree Nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree
2) "It is morally right to harm an innocent person if harming them is a necessary means to helping several other innocent people."
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree Nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree
3) "From a moral point of view, we should feel obliged to give one of our kidneys to a person with kidney failure since we don't need two kidneys to survive, but really only one to be healthy."
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree Nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree
4) "If the only way to ensure the overall well-being and happiness of the people is through the use of political oppression for a short, limited period, then political oppression should be used."
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree Nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

5) “From a moral perspective, people should care about the well-being of all human beings on the planet equally; they should not favor the well-being of people who are especially close to them either physically or emotionally.”
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree Nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree
6) “It is permissible to torture an innocent person if this would be necessary to provide information to prevent a bomb going off that would kill hundreds of people.”
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree Nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree
7) “It is just as wrong to fail to help someone as it is to actively harm them yourself.”
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree Nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree
8) “Sometimes it is morally necessary for innocent people to die as collateral damage—if more people are saved overall.”
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree Nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree
9) “It is morally wrong to keep money that one doesn’t really need if one can donate it to causes that provide effective help to those who will benefit a great deal.”
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree Nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

Individualism-Collectivism Scale

Scale: All items are answered on a 9-point scale, ranging from 1= never or definitely no and 9 = always or definitely yes.

Horizontal individualism items

1) I'd rather depend on myself than others.
2) I rely on myself most of the time; I rarely rely on others.
3) I often do "my own thing."
4) My personal identity, independent of others, is very important to me.

Vertical individualism items

1) It is important that I do my job better than others.
2) Winning is everything.
3) Competition is the law of nature.
4) When another person does better than I do, I get tense and aroused.

Horizontal collectivism items

1) If a coworker gets a prize, I would feel proud.
2) The well-being of my coworkers is important to me.
3) To me, pleasure is spending time with others.
4) I feel good when I cooperate with others.

Vertical collectivism items

1) Parents and children must stay together as much as possible.
2) It is my duty to take care of my family, even when 1 have to sacrifice what I want.
3) Family members should stick together, no matter what sacrifices are required.
4) It is important to me that I respect the decisions made by my groups.

Religiosity

1) On a scale from 1 to 10, how religious are you?
   - 1 2 3 4 5 6 7 8 9 10

2) With which of the following do you identify?
   - Agnostic
   - Atheist
   - Baha'i
   - Buddhist
   - Chinese Traditional
   - Christian
   - Christian (specifically Catholic)
   - Christian (specifically Protestant)
   - Hindu
   - Humanist
   - Jewish
   - Muslim
   - No religion
   - Other, please specify:
   - Sikh
   - Taoist

Careless responding questions

1) I was born on February 30th.
   - Yes
   - No

2) I've travelled to the Moon three times.
   - Yes
   - No

3) I can read and write.
   - Yes
   - No

Attention check question

Which description below most accurately describes the first dilemma that you saw?
Please read ALL of the options very carefully before you make your decision.

a. To avoid the death of 5 workmen, Joe had to push the workman with the heavy backpack off the bridge with his bare hands. (standard footbridge correct solution)

b. To avoid the death of 5 workmen, Joe had to push a workman with a heavy backpack off the bridge with a pole. (footbridge pole)

c. To avoid the death of 5 workmen, Joe had to hit a switch which opened a trap door that dropped a workman with a heavy backpack off of the bridge. (footbridge switch)

d. To avoid the death of 5 workmen, Joe had to hit a switch which redirected the trolley to a different track. Even if there was no one on the side track, the 5 workmen would have been saved. (standard switch)

e. To avoid the death of 5 workmen, Joe had to hit a switch which redirected the trolley to a side track so it could hit a single workman. Without the single workman standing on the side track, the trolley would kill the 5 workmen. (loop)

f. To avoid the death of 5 workmen, Joe had to run across the footbridge to hit a switch, but by doing so, he had to collide with a single workman who would fall off the bridge and die. (obstacle collide)

Which description below most accurately describes the second dilemma that you saw?
Please read ALL of the options very carefully before you make your decision.

a. To avoid the death of 5 swimmers, John had to push a passenger off the boat with an oar. (footbridge pole correct solution)

b. To avoid the death of 5 swimmers, John had to lighten the load of the boat that he only managed to do so by accelerating quickly, making a single passenger fall off. (footbridge switch and loop)

c. To avoid the death of 5 swimmers, John had to accelerate the boat quickly that made a single passenger fall off. (standard switch)

d. To avoid the death of 5 swimmers, John had to lighten to load of the boat, which he could do by pushing a single passenger off the boat. He had to push a container to make the passenger tumble off of the boat. (standard footbridge)

e. To avoid the death of 5 swimmers, John had to lighten the load of the boat by pushing down a large, heavy container. The container pushed a single passenger off of the boat too, but John never intended to push off the single passenger. (obstacle collide)

Comments and experience

1) Did you experience any technical problem during the experiment? If yes, please explain. (free text)

2) Do you have any further comments? (free text)

Confusion – Disbelief

Please circle the answer below that best applies to you:
a. I did not find the material on the preceding pages confusing.
b. I found some of the material on the preceding pages confusing at first, but after reading the material carefully and examining the diagram I felt that I understood the material well enough to give reasonable answers to the questions I was asked.
c. By the time I answered the questions on the preceding page, I was still somewhat confused by the material. I do not think I understood this material well enough to give reasonable answers to the questions I was asked.

Please circle the answer below that best applies to you:
a. I found the description from the preceding pages to be rather realistic.
b. I did not find the description from the preceding pages to be completely realistic, but I "suspended disbelief" and responded under the assumption that it was completely accurate. More specifically, I assumed that Joe's / John's action (or inaction) would affect the situation as the description said it would.
c. I did not find the description from the preceding pages to be realistic, and my answers reflect my inability to take seriously the description that was given.

3. Demographic questions

Income

Please write the total amount of income **your household** earned in 2018 in the space below. Consider all forms of income, including salaries, tips, interest and dividend payments, scholarship support, student loans, parental support, social security, alimony, and child support, and others.

Yearly income: (free text)
Currency: (dropdown)

The average household income in your country:

Place of living

Would you consider your living area rural or urban?

- Rural
- Urban

Level of education

What is your highest level of education?

- Below high school
- Highschool
- Bachelor's degree
- Master's degree
- Doctoral degree

Age

What is your age? Please give your answer in years. (number dropdown)

Sex

What is your sex?

- Female
- Male
- Other
- I wish not to answer

Country of origin

What is your country of origin?

Immigrant background

Are you coming from an immigrant background?

- Yes
- No

4. Sample size estimation

We analyzed the operational criteria (probability of inferential error) of our design and analysis plan using Monte-Carlo simulations. The main goal of the study is to determine whether the effect reported in the original study would replicate in different cultures, so the analysis plan was optimized to be able to reliably detect an effect at least ⅔ of that originally reported. Thus, the sample size estimation was also carried out assuming the following scenario: Both H1a and H1a, are true, that is, the effects reported in the original study exist in all cultural clusters. The original study reported effect sizes for effects of interest to be a standardized mean difference of 0.4 (personal force effect). We used a standardized mean difference of 0.26 (2/3 of the original effect) for Hypotheses 1a and 1b, to make our analysis plan more robust in case the true effect size is smaller than that originally reported. 10,000 simulations were performed for each of these cases. We calculated the proportion of iterations in which all of our inferences were correct which means we should find strong evidence (BF >10) for the existence of the original effect with regard to Hypotheses 1a and 1b. Incorrect inference rate means that we would incorrectly support the null hypothesis, whereas correct inference rate means that we correctly find support for the alternative hypothesis. We found that with 1000 participants per condition per cluster for Hypotheses 1a and 1b, we reach > 95% correct inference rate in our simulated scenario. This rate means that all 3 statistical inferences in the study were correct in more than 95% of the iterations. With the same sample size, incorrect inference rate is estimated to be < 0.001%.
If we were to find the same effect size as in the original studies (Greene et. al., 2009), we would only require 500 participant per cluster per condition for Study 1 (3000 altogether). For completeness, we conducted our power analysis for Study 2 (Hypotheses 2a and 2b), and found that to reliably detect the original (d = 0.28) interaction effect (interaction between intention and personal force) we would require 1800 participants per cultural cluster per condition, summing up to 21,600 participants. However, detecting this interaction effect is not the primary aim of this study.

Our analysis plan is not optimized to be able to reliably detect null effect. Nevertheless, we calculated the incorrect inference rates in scenarios where there is no effect in some or all culture clusters. With this estimated number of participants, our simulations show that, in case of a null effect, our incorrect inference rate is between 0.001% and 0.009%, depending on how many culture groups have no effect. Should our results remain between our target evidential thresholds, we will declare that we do not have convincing evidence to support either the null or the alternative models and we will interpret the Bayes factor values, as they are, relative evidence between the two hypotheses.

Should we find inconclusive results after we collected the maximum number of participants (BF < 10 & BF > 1/10), we will say that the design was either insensitive to detect these effects or that we did not have sufficient number of participants to detect the effects. Should we find a BF < 1/10 in any of the clusters, we will conclude that we have evidence that the effect is not universal to that cluster. Should we find BF < 1/10 for all of the clusters, we will conclude that the original effect failed to replicate with the current design.
Although a high number of labs volunteered to collect data in this study, we plan to recruit more labs following Stage 1 in principle acceptance, especially from underrepresented regions. The code for this sample size estimation is publicly available on the Github page of the project.

Supplementary Analysis

1. Demographics

Table S1. Demographic description of the sample by country.

	Country	N	Age (SD)	Male %	Higher education %	Collectivism[1]
By country						
Eastern	China	1677	24.7 (7.6)	42.7%	88.5%	0.075
Eastern	India	502	22.6 (6.1)	33.7%	63.7%	0.069
Eastern	Iran	235	31.0 (9.6)	55.1%	89.5%	0.059
Eastern	Japan	396	44.0 (10.8)	63.6%	68.2%	0.073
Eastern	Lebanon	20	34.1 (16.6)	50.0%	95.0%	0.069
Eastern	Malaysia	171	20.5 (2.4)	17.0%	54.4%	0.133
Eastern	North Macedonia	282	22.1 (3.8)	55.7%	26.6%	0.066
Eastern	Pakistan	423	22.7 (3.7)	36.4%	87.5%	0.078
Eastern	Thailand	91	19.4 (1.0)	22.0%	53.8%	0.079
Eastern	United Arab Emirates	80	24.8 (3.7)	33.8%	71.2%	—
Southern	Argentina	253	34.3 (14.7)	27.4%	79.0%	0.101
Southern	Chile	54	34.4 (13.3)	40.7%	70.4%	0.079
Southern	Colombia	278	27.8 (12.0)	41.0%	87.6%	0.090
Southern	Czechia	411	28.1 (9.6)	69.8%	50.4%	—
Southern	Ecuador	45	23.3 (4.5)	31.1%	97.7%	0.130
Southern	France	935	33.8 (13.9)	17.6%	71.9%	0.083
Southern	Hungary	941	21.7 (3.8)	21.0%	22.0%	0.100
Southern	Mexico	64	33.1 (5.6)	64.1%	100.0%	0.082
Southern	Peru	141	24.5 (11.4)	36.9%	47.5%	0.102
Southern	Philippines	282	20.3 (3.0)	33.7%	57.0%	0.127
Southern	Slovakia	560	22.4 (6.0)	11.6%	19.7%	—
Southern	Turkey	1369	24.6 (8.1)	24.0%	42.8%	0.069
Western	Australia	1164	21.7 (6.9)	28.2%	25.2%	0.032
Western	Austria	346	24.8 (8.5)	35.1%	27.8%	—
Western	Brazil	267	30.1 (12.1)	36.7%	70.4%	0.097
Western	Bulgaria	316	27.7 (11.0)	14.9%	36.4%	0.066
Western	Canada	751	23.0 (7.6)	40.9%	58.9%	0.029
Western	Croatia	250	21.9 (4.1)	17.2%	19.6%	—
Western	Denmark	1299	36.7 (15.9)	46.6%	57.1%	—
Western	Germany	2887	30.2 (11.6)	29.1%	21.2%	0.047
Western	Greece	515	26.1 (11.0)	20.4%	52.8%	—
Western	Italy	500	35.6 (13.9)	44.4%	61.3%	0.045
Western	Kazakhstan	122	33.5 (9.1)	29.5%	100.0%	0.106
Western	Netherlands	479	20.6 (2.8)	34.4%	18.4%	0.049
Western	New Zealand	214	26.2 (10.6)	21.5%	35.0%	0.032
Western	Poland	1416	30.0 (11.0)	32.5%	49.1%	0.059
Western	Portugal	716	28.5 (9.5)	36.6%	70.0%	—
Western	Romania	755	24.5 (8.5)	14.0%	28.2%	0.078
Western	Russia	426	31.4 (8.2)	35.4%	91.5%	0.071
Western	Serbia	485	27.1 (11.0)	25.6%	52.5%	0.028
Western	Singapore	102	22.6 (1.7)	23.5%	57.8%	0.030
Western	Spain	257	21.5 (6.8)	16.0%	99.2%	0.041
Western	Switzerland	549	23.0 (7.2)	29.9%	22.1%	0.067
Western	United Kingdom	865	25.2 (11.2)	23.2%	42.5%	0.075
Western	United States	3611	20.7 (4.9)	23.4%	22.9%	0.000
By region						
Eastern	—	3877	26.1 (9.7)	42.9%	75.2%	—
Southern	—	5333	26.3 (10.5)	27.2%	48.7%	—
Western	—	18292	25.9 (10.4)	28.4%	38.4%	—
All						
All	—	27502	26.0 (10.3)	30.3%	45.8%	—

[1]Distance from the US in collectivism. Some countries do not have a collectivism score.

2. Additional analysis

2.1 Effect of physical contact

In sum, when assassing the effect of physical force, we found inconclusive evidence for the effect of physical contact, regardless of dilemma type (trolley/speedboat). The summary of the results can be found in the tables below.

Table S2. The effect of phyisical contact on moral dilemma judgements on Trolley dilemmas

Exclusion	Cluster	BF	t	df	p	Cohen's d	Raw effect	89% CI
Exclusion	Eastern	4.11e-01	-0.22	121.63	0.828	0.03	0.07	[-0.34, 0.47]
	Southern	1.94e-01	0.46	388.70	0.643	0.04	-0.09	[-0.38, 0.2]
	Western	1.72e-01	0.18	512.54	0.857	0.01	-0.02	[-0.23, 0.18]
Include familiar	Eastern	1.76e-01	0.61	254.06	0.544	0.06	-0.12	[-0.39, 0.21]
	Southern	9.49e-02	1.17	756.54	0.244	0.08	-0.15	[-0.34, 0.06]
	Western	7.91e-02	0.73	1099.31	0.464	0.03	-0.07	[-0.2, 0.08]

2.2 Comparing the standard switch and standard footbridge dilemmas

When comparing the standard switch and standard footbridge dilemmas in all clusters for the trolley and the speedboat tasks we found evidence for a difference between the two dilemmas in moral acceptability ratings. The summary results of each comparison separately can be found in Tables below.

Table S3. Comparing the Standard Switch and Standard Footbridge Dilemmas (all exclusion applied).

Dilemma	Cluster	t	Bf	df	p
Trolley	Eastern	4.81	2.49e+03	154.32	< .001
	Southern	10.38	2.32e+19	229.92	< .001
	Western	16.88	1.99e+54	780.55	< .001
Speedboat	Eastern	6.29	3.61e+05	130.68	< .001
	Southern	9.61	5.50e+15	335.65	< .001
	Western	14.58	4.01e+41	1618.57	< .001

Table S4. Comparing the Standard Switch and Standard Footbridge Dilemmas (familiarity exclusion not applied)

Dilemma	Cluster	t	Bf	df	p
Trolley	Eastern	6.79	8.73e+07	282.63	< .001
	Southern	14.59	3.91e+38	544.52	< .001
	Western	27.95	1.86e+148	2310.31	< .001
Speedboat	Eastern	7.30	8.06e+08	257.05	< .001
	Southern	11.03	6.30e+22	647.03	< .001
	Western	24.06	4.93e+116	4352.64	< .001

2.3 Analysing familiar participants

As we registered, we conducted the analysis on familiar participants, the results can be found below.

Table S5. The effect of personal force on moral dilemma judgements (familiar participants).

Dilemma	Cluster	BF	t	df	p	Cohen's d	Raw effect	89% CI
Trolley	Eastern	1.65e+02	-3.65	437.72	<.001	0.35	0.73	[0.34, 0.99]
	Southern	1.76e+05	-5.35	721.33	<.001	0.40	0.82	[0.54, 1.03]
	Western	2.12e+03	-4.34	778.76	<.001	0.31	0.67	[0.37, 0.86]
Speedboat	Eastern	2.06e+00	-1.82	383.27	0.07	0.18	0.37	[0.01, 0.62]
	Southern	3.2e+03	-4.32	469.42	<.001	0.35	0.68	[0.4, 0.9]
	Western	5.4e+05	-5.56	707.92	<.001	0.40	0.81	[0.55, 1.01]

Table S6. The interaction of personal force and intention on moral dilemma judgemnts (familiar participants).

Dilemma	Cluster	BF	F	df	p	Partial η^2	Raw effect
Trolley	Eastern	5.72e+01	-0.500	[-0.66, -0.18]	0.001	0.043	-2.00
	Southern	6.91e+05	-0.463	[-0.57, -0.31]	<.001	0.047	-1.85
	Western	5.01e+18	-0.288	[-0.33, -0.24]	<.001	0.019	-1.15
Speedboat	Eastern	7.56e-01	-0.001	[-0.2, 0.22]	0.993	0.000	-0.01
	Southern	2.33e+01	-0.355	[-0.46, -0.09]	0.003	0.016	-1.42
	Western	2.23e+04	-0.143	[-0.18, -0.09]	<.001	0.005	-0.57

2.4 Oxford utilitarianism Scale

As we registered, we first plot statistics of the Oxford Utilitarianism Scale in each cultural clusters. We applied no exclusion criteria during this analysis. Note however, that due to a technical mistake, some hungarian participants did not see one of the items in the OUS, hence, they were excluded from this analysis.

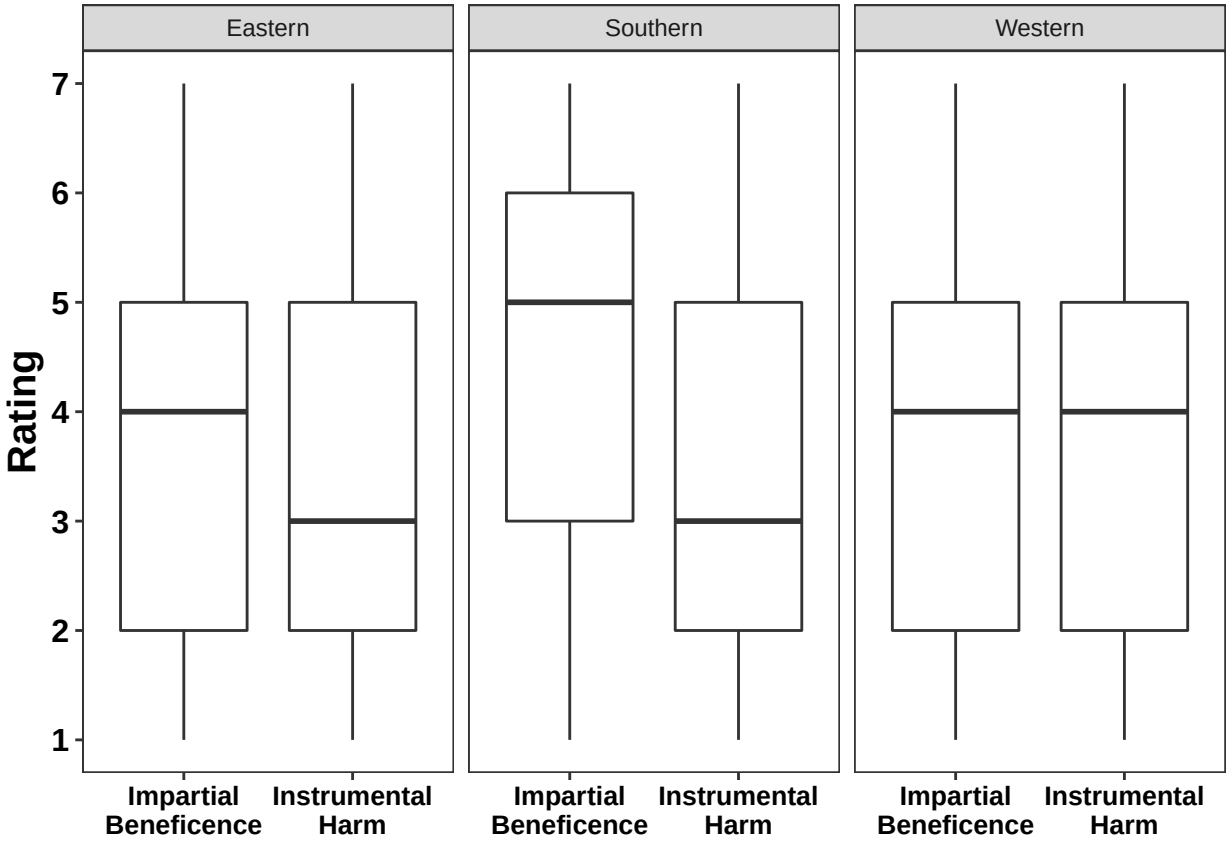


Figure S1: Results on the Oxford Utilitarianism Scale by regions. The X axis shows the two subscales, while the Y axis shows the ratings. The center of the boxplots are the median, while the lower bound corresponds to the first quartiles (25th percentile), and the upper bound corresponds to the third quartile (75th percentile). The lower whisker represents the minimum value at no more than 1.5 times the inter quartile range from the lower bound, while the upper whisker respresents the maximum value at no further than 1.5 times the inter quartile range fro the upper bound.

As registered, we also report means and confidence intervals for each cultural cluster and each subscale of the Oxford Utilitarianism Scale.

Table S7. Means and confidence intervals of the Oxford Utilitarianism Scale.)

	Instrumental Harm		Impartial Beneficence	
Cluster	**Mean**	95% **CI**	**Mean**	95% **CI**
Eastern	3.404114	[3.44,3.37]	3.701470	[3.74,3.67]
Southern	3.339469	[3.37,3.3]	4.219580	[4.25,4.19]
Western	3.500703	[3.52,3.48]	4.013701	[4.03,4]

We also reported correlations between each Oxford Utilitarianism Scale subscales and moral acceptability ratings on each moral dilemma. Results suggests a higher correlation between acceptability ratings and the Instrumental Harm scale, anda somewhat lower correlation between Impartial Beneficence and acceptability ratings.

Table S8. Correlational analysis of the Oxford Utilitarianism Scale subscales with moral accaptability ratings on moral dilemmas.)

	Impartial Beneficence		Instrumental Harm		
Dilemma	**Cluster**	**r**	**p**	**r**	**p**	**df**
Trolley	Eastern	0.45	<.001	0.16	<.001	3875
	Southern	0.44	<.001	0.05	<.001	4860
	Western	0.42	<.001	0.08	<.001	17077
Speedboat	Eastern	0.41	<.001	0.20	<.001	3875
	Southern	0.40	<.001	0.08	<.001	4860
	Western	0.40	<.001	0.12	<.001	17077

3. Exploratory analysis on overall utilitarianism and collectivism

Although not part of the planned analysis, we hypothesized that country-level collectivism would be negatively associated with utilitarian responding (i.e., higher morall acceptibility ratings). We found no evidence for this hypothesis, regardless of familiarity exclusion or dilemma context. Interestingly, however, we found strong evidence for the association between vertical individualism and average moral acceptibility ratings on moral dilemmas, regardless of dilemma context or exclusion criteria. The positive association means that higher levels of vertical individualism is associated with higher acceptance of the utilitarian response option. Although we hypothesized that it would be collectivism that makes people *more* emotional and therefore, less utilitarian, we speculate that individualism made people *less* emotional and therefore, more utilitarian.

In all of the regression models below, we added the random intercept of countries.

Table S9. Is the interaction of personal force and intention affected by individualism/collectivism on Trolley dilemmas?

	With familiarity exclusion			No familiarity exclusion		
Variable	**BF**	**b**	**p**	**BF**	**b**	**p**
Country-level collectivism	2.3e-01	-2.76	0.409	3.8e-01	-3.82	0.216
H. Collectivism	8.0e-02	-0.02	0.491	4.0e-02	0.00	0.861
H. Individualism	2.8e+00	0.06	0.005	2.1e+01	0.05	<.001
V. Collectivism	1.6e-01	0.03	0.135	4.0e-02	-0.01	0.679
V. Individualism	3.6e+13	0.15	<.001	1.8e+23	0.12	<.001

Table S10. Is the interaction of personal force and intention affected by individualism/collectivism on Speedboat dilemmas?

	With familiarity exclusion			No familiarity exclusion		
Variable	**BF**	**b**	**p**	**BF**	**b**	**p**
Country-level collectivism	7.2e-01	-6.50	0.048	4.7e-01	-5.25	0.041
H. Collectivism	7.0e-02	-0.01	0.62	4.0e-02	0.00	0.756
H. Individualism	6.0e-02	0.00	0.876	6.0e-02	0.01	0.335
V. Collectivism	8.0e-02	0.02	0.423	8.0e-02	-0.01	0.253
V. Individualism	6.1e+09	0.13	<.001	1.1e+17	0.10	<.001

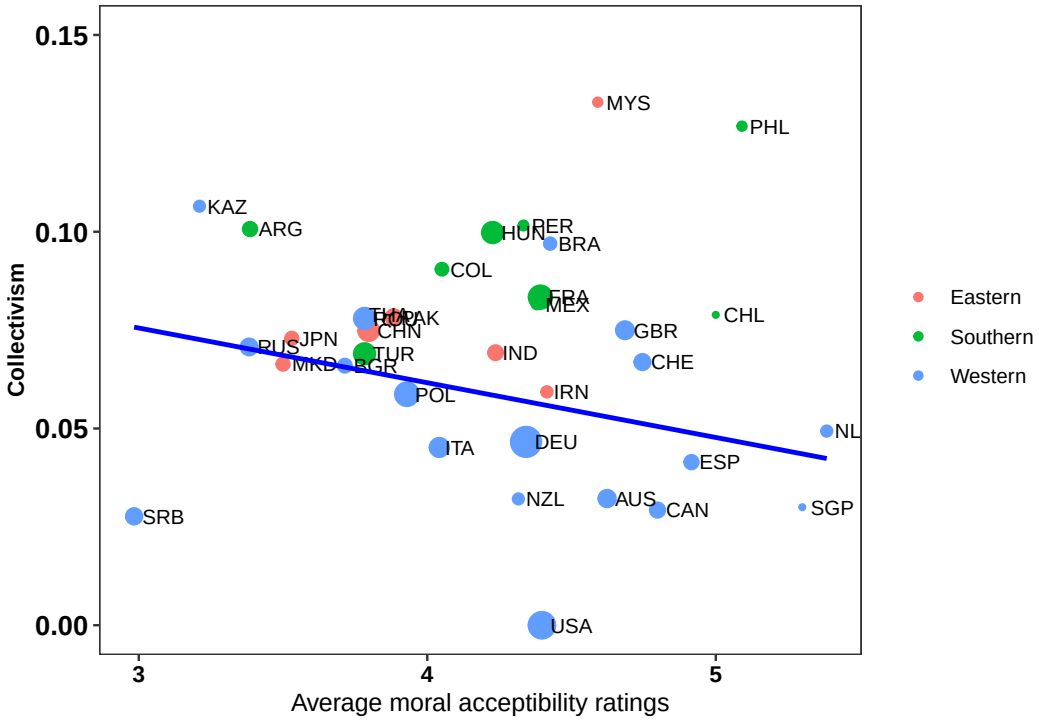


Figure S2: Correlation between country-level individualism/collectivism and moral accessibility ratings on the Trolley dilemmas (higher moral acceptibility means higher acceptibility of the utilitarian choice).

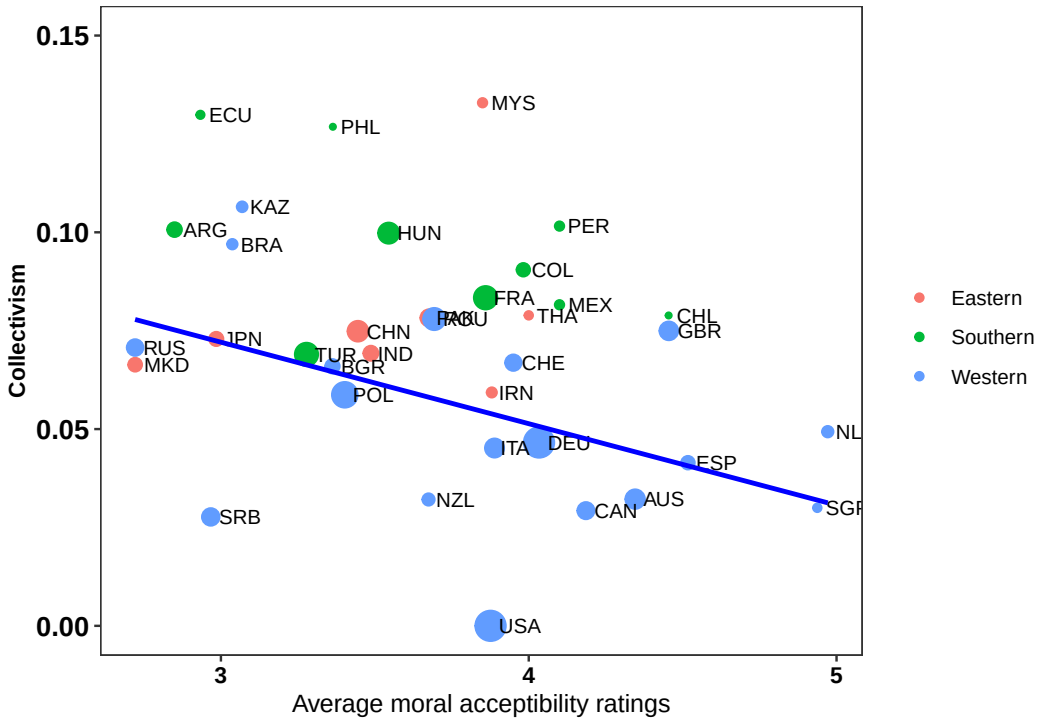


Figure S3: Correlation between country-level individualism/collectivism and moral accessibility ratings on the Speedboat dilemmas (higher moral acceptibility means higher acceptibility of the utilitarian choice)

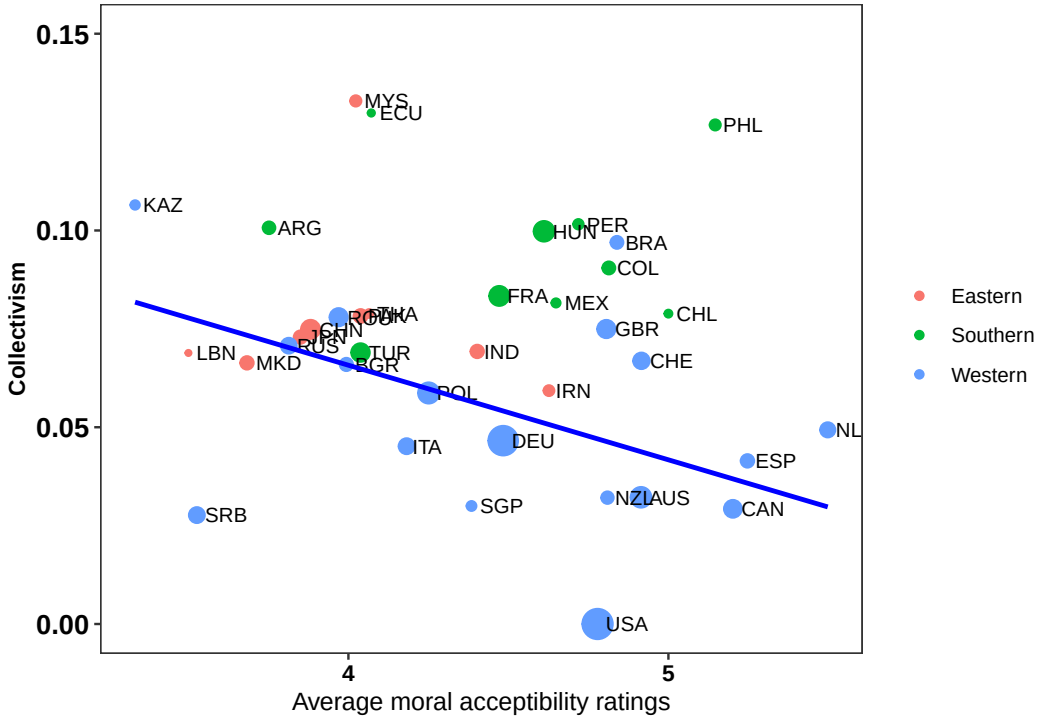


Figure S4: Correlation between country-level individualism/collectivism and moral accessibility ratings on the Trolley dilemmas (higher moral acceptibility means higher acceptibility of the utilitarian choice)

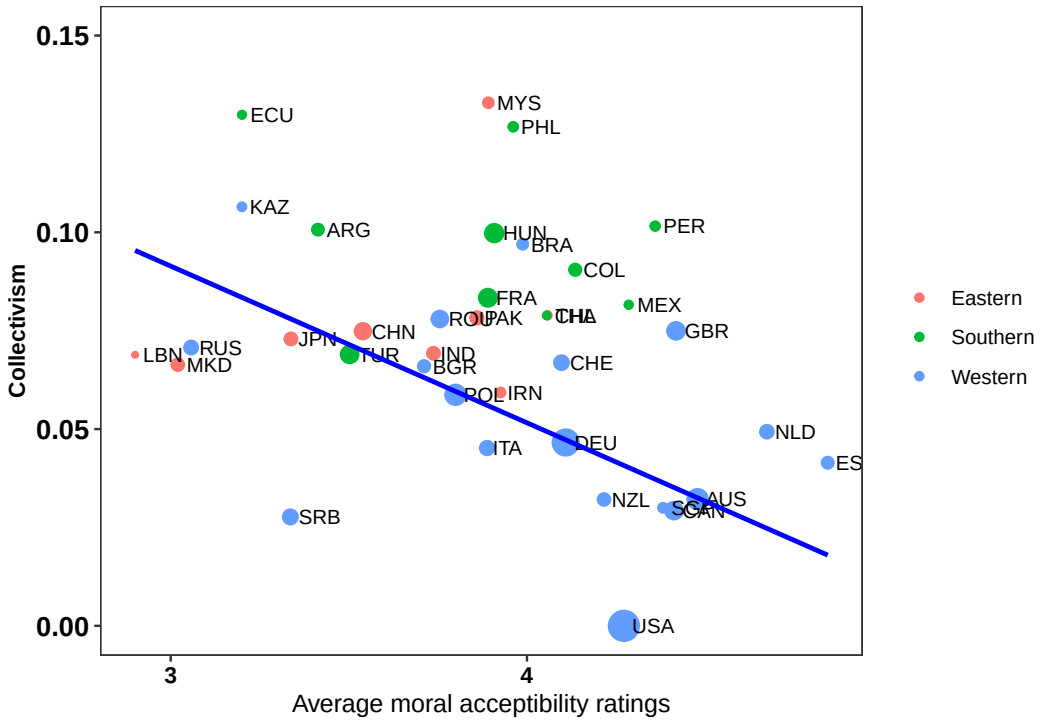


Figure S5: Correlation between country-level individualism/collectivism and moral accessibility ratings on the Speedboat dilemmas (higher moral acceptibility means higher acceptibility of the utilitarian choice)