



Utilitarian Decisions in Monolingual and Bilingual Children

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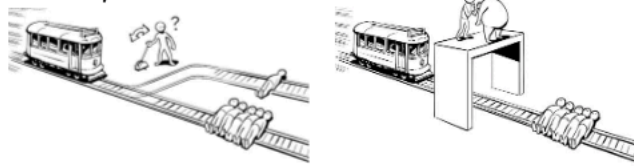


Background

Key Concepts:

Utilitarian decisions: those that save the greatest number of lives or maximize benefit for the greatest number of individuals in a given situation.

Commonly used moral dilemmas:



Trolley Problem: A runaway trolley is speeding down a track towards five people. You can pull a switch to divert it onto a track with just one person. Do you pull the switch?

Footbridge Problem: A runaway trolley is speeding down a track towards five people. You can push a person next to you off of the bridge onto the track so his weight will stop the train. Do you push the man?

- Adults in general tend to say they would pull the switch, but hesitate to say they would push the man (Greene, 2009).
- Late bilingual adults are more likely to say they would push the man in the footbridge when asked in their foreign language (Costa et al., 2014). Early bilingual adults are more likely to say they would push the man when asked in a regional or non-dominant language. (Miozzo et al., 2020; Wong & Ng, 2018).
- This is called the Foreign Language Effect (FLe) in moral decision-making, in which bilingual adults make the more utilitarian choice when asked in a language that is different in some way (i.e. foreign, regional, or non-dominant).

Study to be replicated: Michelin et al., 2010

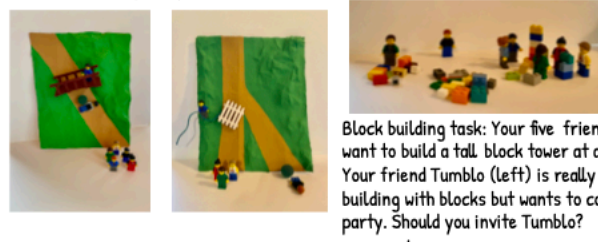
Presented children with footbridge and trolley dilemmas adapted for children. Found bilingual children were more likely to advocate action in the footbridge and trolley dilemmas individually, and to choose to push the man and save 5 people in a comparison task when the two dilemmas were presented together.

Research Questions:

1. Do bilingual children make more utilitarian decisions than monolingual children?
2. Do bilingual children make more utilitarian decisions in a non-dominant language?

Method

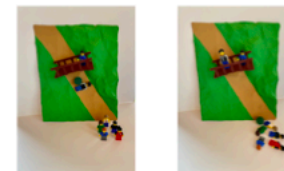
Present study: Replication + extension of Michelin et al., 2010



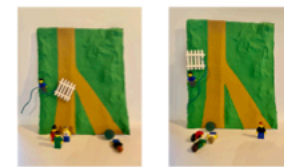
Block building task: Your five friends (right) want to build a tall block tower at a party. Your friend Tumblo (left) is really bad at building with blocks but wants to come to the party. Should you invite Tumblo?

Stimuli: Modified versions of Michelin et al.'s dilemma models, added an everyday dilemma to examine moral decisions in everyday life.

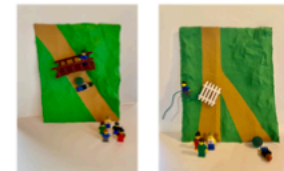
Participants (13 monolingual and 22 bilingual 4-6 yr olds) were presented with four tasks over Zoom. They were read stories about the dilemmas and asked the following test questions:



Footbridge Task
Should John push the person or not push the person?



Trolley Task
Should Albert pull the string or not pull the string?



Comparison Task
Is it better to push one person and save five people or to pull a string and save three people?



Tumblo Task
Should you invite Tumblo to the party or not invite Tumblo to the party?

Results

**Results are exploratory, did not correct for multiple analyses.

Main finding: Monolingual children were significantly more likely than bilingual children to advocate action (to push the man) in the footbridge task. $t(31) = 2.50, p = 0.017$

- Opposite of Michelin et al., where bilinguals were more likely to push the man.

Secondary Findings:

Bilingual children were significantly more likely to advocate action in the trolley task than the footbridge task. $t(11) = -3.56, p = 0.002$
- Bilinguals more likely to pull the string than push the man.

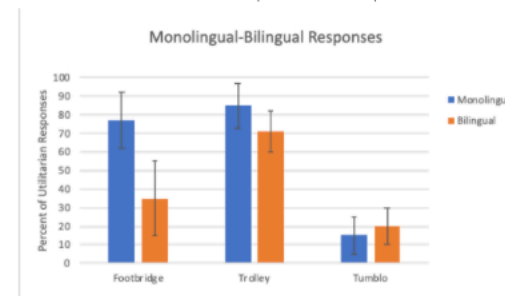
Monolinguals were significantly more likely to push the man in the footbridge than the comparison task. $t(12) = 2.74, p = 0.018$

- When given an alternative to pushing the man in comparison task, monolinguals tended to not push him.

Both monolingual and bilingual children were significantly more likely to act in the footbridge and trolley tasks than in the Tumblo task. $t(11) = 2.35, p = 0.038; t(7) = 4.58, p = 0.003; t(11) = 4.69, p = 0.001$

- All children were less likely to act in Tumblo task than in trolley and footbridge tasks.

Significant positive correlations between age and utilitarian responses in the footbridge and trolley tasks. $r_s = 0.42, p = 0.018; r_s = 0.46, p = 0.009$



Linguistic dominance:

Only 6 children in English non-dominant group, also included balanced children. Non-significant trend for non-dominant children to be less utilitarian than English-dominant, such as not pushing the man in the footbridge (opposite of hypothesis).

Task	Utilitarian Response (Score of 1)	Non-Utilitarian Response (Score of 0)
Footbridge Task	Push the person	Not push the person
Trolley Task	Pull the string	Not pull the string
Comparison Task	Save 5 people by pushing 1 person	Save 3 people by pulling a string
Tumblo Task	Not invite Tumblo to the party	Invite Tumblo to the party

Table 1. Scoring of utilitarian responses for each of the four tasks.

Discussion

- Monolingual children made more utilitarian decisions in the footbridge dilemma than monolingual children. This is a failure to replicate Michelin et al.'s finding, and is instead a significant finding in the opposite direction.

- Bilingual children showed the response pattern typical of adults in general (to act in the trolley but not in the footbridge).

- Bilingual children seem to have been more sensitive to the emotional content of the footbridge dilemma (that one must physically push the man), and were less likely to push him.

- Monolingual and bilingual children were more likely to act in the footbridge and trolley dilemmas than in the Tumblo task.

- Children did not want to exclude Tumblo from the party. Ensuring that no one was excluded seemed to outweigh the material goal of building a tall block tower.

These findings and the failure to replicate Michelin et al.'s findings highlight the complex and often unexpected relationship between language and moral thought, and raise the question of whether it is bilingual/monolingual status that influences moral decisions in children, or if culture and socio-emotional factors too play a role.

References

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- Michelin, C., Tallandini, M., Pellizzoni, S., & Siegal, M. (2010b). Should more be saved? Diversity in utilitarian moral judgment. *Journal of Cognition and Culture, 10*(1-2), 153-169.
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