

How do children ascribe intentional action in a moral dilemma?

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Introduction

Making sense of other's actions is fundamental to our social lives. It builds on a grasp of the subjective intentionality behind behavior: Agents do many things simultaneously but which constitute intentional actions, in contrast to merely foreseen side-effects depend on the description under which acts are represented (Searle, 1983). Given moral dilemmas in which the agent foresees harmful effects of his doing, we asked:

1. How are foreseen, harmful actions represented?
2. Which presumptions influence representations of the underlying intentional structure?

One way to represent actions are act trees (Goldman, 1970); see Figure 1. Recent studies suggest that we can use statements linking action descriptions with “in order to” to examine participants' complex interpretations of action (Knobe, 2010; Levine, Leslie, et al., 2018).

Methods

- Study 1a ($N = 222$ adults) and Study 1b ($N = 116$, 8- to 10-year-old children)
- Online non-interactive settings
- Moral dilemmas in video format
- 3 between-subjects conditions:
 - **Baseline**: no additional motive
 - **Intention+**: beneficial motive stated
 - **Intention-**: malicious motive stated
- Intentional action questions
 - e.g. “Did Jakob cut the rope *in order to* throw off the heavy thing?”
- Moral judgment
 - Study 1a: Adults answered “Is it morally acceptable to cut the rope?” on a scale from [1] *no, not acceptable at all* to [7] *yes, fully acceptable*
 - Study 1b: Children chose on a smiley scale whether Jakob's act was ‘very good’ [4], ‘a little good’, ‘a little bad’, or ‘really bad’ [1].

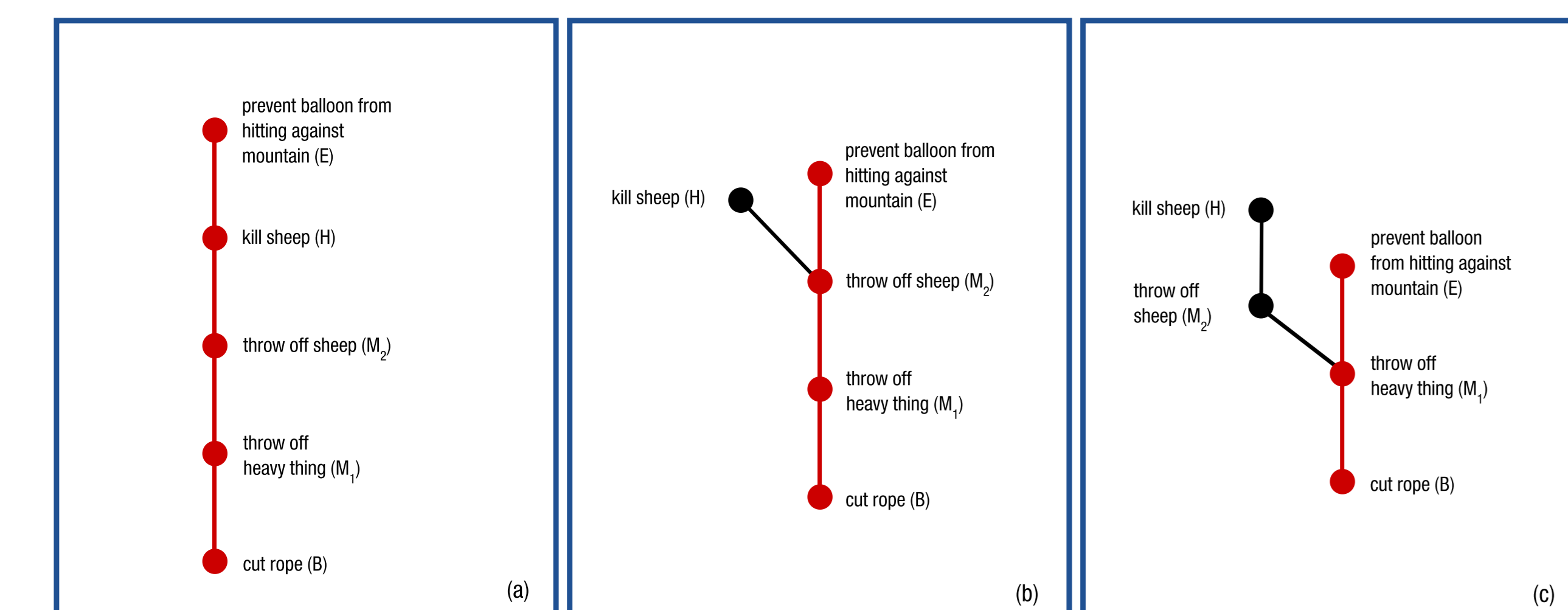


Figure 1: Possible act tree representations of a moral dilemma of two agents in a hot-air balloon trying to cross a mountain with too much ballast.

Children (& adults) make fine distinctions in intentionality judgments and expect others to act out of good intentions.

Results

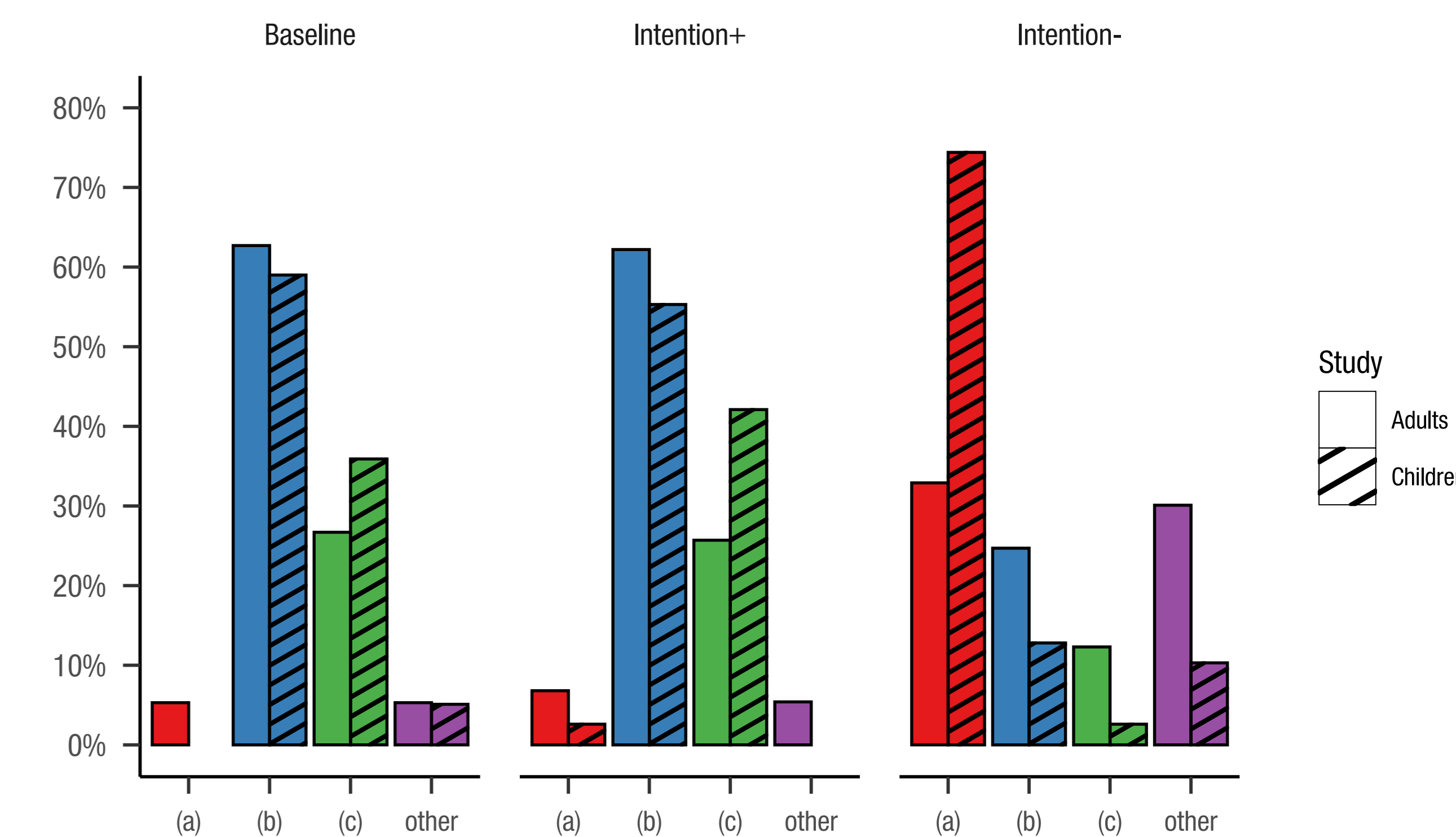


Figure 2: Distribution of act trees in percent across studies.

Multinomial logistic regression `act tree ~ condition`

- Study 1a: McFadden's $R^2 = 0.12$, $\chi^2(6, N = 222) = 63.15$, $p < .001$
- Study 1b: McFadden's $R^2 = 0.35$, $\chi^2(4, N = 110) = 82.04$, $p < .001$
- As predicted by good intention prior (Levine, Mikhail, et al., 2018): in Intention- act tree (b) was less likely than (a) (ia: $OR = 0.07$, 95% CI [0.03, 0.18], $p < .001$; 1b: $OR = 0.01$, 95% CI [0.00, 0.04], $p < .001$) & no sign. differences between Baseline & Intention+

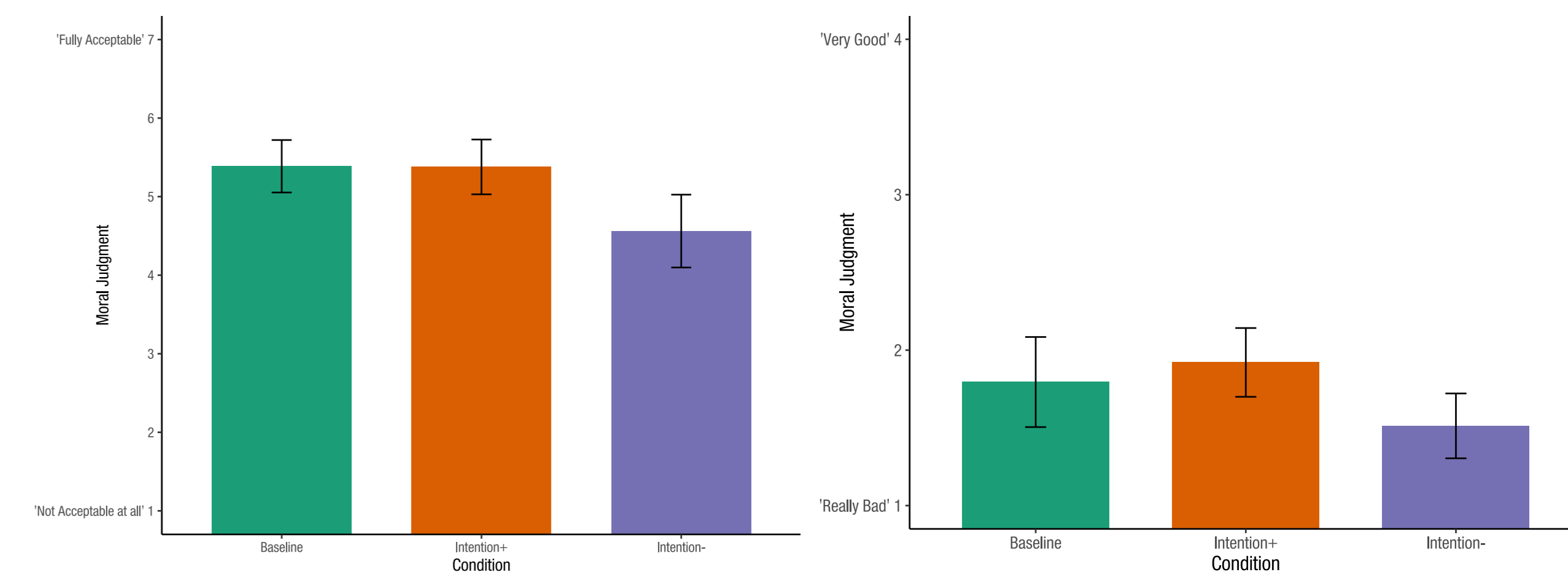


Figure 3: Children's (right) and adults' (left) mean moral judgment across conditions. Error bars show 95% confidence intervals.

Linear regression `moral judgment ~ condition`

- Study 1a: sign. higher ratings in Baseline & Intention+ ($b = 0.82$, 95% CI [0.35, 1.29], $t(219) = 3.46$, $p = .001$) than Intention-
- Study 1b: non sign. full-null model comparison ($F(2, 113) = 3.03$, $p = .052$)

Discussion

- New method of “in-order-to” questions derived from act trees works reliable with adults and children
- Subjects made conceptual distinctions in their action representations between main effects (foreseen and intended) on one branch and side-effects (foreseen and unintended) on another branch
- Subjects operated with prior assumptions of good intentions:
 - Ambiguous cases (no information regarding the agent's intent) were interpreted and morally evaluated as disambiguated cases (explicit information about good intentions); the two were treated differently to explicit bad intentions cases

Open questions

- What is the principle behind the patterns presented here? When and how far do they deviate from the “closeness” argument (Foot, 1967)?
- Can prior assumptions of good intentions be overridden?
- How early do capacities to make fine-grained main/side-effect distinctions in complex action interpretation develop?

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