Accepted manuscript (post-peer-review, pre-copyedit). *Behavioral and Brain Sciences*. Please do not cite this version.

Target article author: Jose Bermúdez

Word counts: Abstract: 55, Main text: 999, References: 194, Total: 1312

Commentary Title: The Study of Rational Framing Effects Needs Developmental Psychology

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Abstract:

Experimental research is reviewed that suggests that rational framing effects influence young children's social activities according to a logic of interdependence. However, young children are unlikely to possess some of the elaborate cognitive skills argued in the Target Article to be prerequisite for rational framing effects. Understanding rational framing effects requires understanding their ontogenetic origins.

Main text:

Understanding rational framing effects requires understanding their ontogenetic origins. Reflecting the centrality of interdependence in ontogeny (Tomasello, 2019), the tasks used in framing research in developmental psychology often rely on a logic of interdependence. Interdependent partners' fates are intertwined such that rewards/punishments for one are rewards/punishments for the other (Roberts, 2005; Tomasello et al., 2012). Children's behavior following interdependent framing illuminates the fundamentally cooperative basis of human rationality. Specifically, interdependent frames increase the sense of commitment towards partners in children as young as 3 years of age.

However, despite their sensitivity to framing, children are unlikely to possess some of the elaborate cognitive skills that the Target Article argues are prerequisite for rational framing effects, such as sophisticated reason-giving skills and a framing analogue of reflexive decentering. A developmental approach to rational framing effects is needed to resolve these issues.

In Koomen et al. (2020), 5- and 6-year-old peer dyads met before going into separate rooms and being separately instructed about the task. Instructions were delivered using either interdependent, solo, or dependent language. Interdependent participants were instructed that both would receive another cookie if both waited the full time without eating (10 minutes) but, if either ate, then neither would get another. Solo or dependent participants' fates were fully or partly decoupled, respectively. Interdependent participants were more likely to wait the full time without eating compared to those in the solo condition (dependence condition intermediate, nonsignificantly different). This pattern suggests that the interdependent condition motivated participants to inhibit their proximal desires in favor of distal rewards. From the classical perspective, participants' behavior in the interdependent condition was "irrational" in that – on a purely extensional reading – uncertainty in the partner's decision rendered the expected payoff of waiting the full time less than that of the solo condition (in which partner's behavior was irrelevant with respect to the probability of obtaining distal rewards). Consequently, the classical perspective predicts that children should less often wait the full time in the interdependent than dependent condition. As the opposite pattern was found, a more useful explanatory perspective is one in which the rationality of waiting inherits from the rationality of upholding commitments in interdependent contexts.

In a study with younger children, Butler and Walton (2013) investigated the effect of framing on children's motivation to persist on difficult tasks. In a psychologically together condition, 4- and 5-year-olds were given a puzzle and told that a (fictive) child was actively working on the same puzzle in another room "right now" and that the two children were working "together." In a psychologically separate condition, participants were told that the other child worked on the puzzle "a few weeks ago" and that it was the participant's turn to work on it. Following framing, children in the psychologically together condition worked on the puzzle longer than did those in the psychologically separate condition. Moreover, children's self-reported liking of the task was greater in the psychologically together than separate condition (also, Cimpian et al., 2007). These findings suggest that framing difficult tasks as social endeavors increases children's motivation to persist in them. Though Butler and Walton (2013) do not use this language, their findings support the idea that children felt more committed to their partner in the psychologically together than separate condition. Arguably, however, the results of Butler and Walton (2013) only weakly support this interpretation, as participants (i) never met the fictive child (though, they saw a prerecorded video of the fictive child working on the puzzle beforehand) and (ii) were not interdependent (i.e., success or failure on the task was independent of that of the fictive child's).

Vasil and Tomasello (2022) provided stronger evidence for the commitment interpretation. These authors investigated 3- and 4-year-olds' commitment, sharing, and helping towards partners during a dyadic activity framed as either a collaborative ("we"-framing) or individualistic endeavor ("you"-framing). Participants and a puppet colored alongside one another on their own sheets of paper at a table, ostensibly to "help decorate for a party later." In the "we"-framing condition, the puppet told children "**We** will color **our** papers with **our** markers" ("you"-framing: replace bolded

forms with **you** and **your**). Thus, children (i) actively co-participated alongside their partner and (ii) were interdependent only in the "we"-framing condition (i.e., because "success" in that condition required that "we" complete the activity). While partners colored, another person began to play a fun game in the same room; children were free to abandon their partner to play with them. When they abandoned their partner, 3-year-olds more often took leave following "we"-framing compared to "you"-framing (i.e., by nonverbally or verbally excusing themselves before leaving). Moreover, only following "we"-framing did 4-year-olds abandon their partner less often than 3-year-olds. Thus, following "we"-framing, 3-year-olds were more polite when they abandoned partners, whereas 4-year-olds simply did not leave. Framing did not influence children's sharing or helping behavior. Overall, these results converge with those above by suggesting that interdependent framing increases children's sense of commitment. The rationality of commitment inherits from interdependent thinking, in which "we" succeed only if "we" work together.

Despite their sensitivity to rational framing effects, children in the studies above were unlikely to possess elaborate cognitive skills of the type suggested in the Target Article to be prerequisite for rational framing effects. Two such skills are reflective reason construction and analysis and reflexive decentering. While 3-year-olds sometimes produce appropriate reasons for their actions in simple situations (Köymen et al., 2014), only 5-year-olds – two years older than the youngest children who were sensitive to framing, above – competently reason in more complicated situations, e.g., involving reflective meta-talk about the reasoning process (Köymen & Tomasello, 2018). Moreover, it is unlikely that young children possess the ability to engage in reflexive decentering, although this requires empirical examination. In fact, a fruitful approach may be to jointly study the emergence of framing effects alongside the emergence of potentially prerequisite

psychological skills to see which of these or other skills are in fact prerequisite for rational framing effects. The study of rational framing effects needs developmental psychology.

Conflicts of interest: None.

Funding statement: This research reviewed no specific grant from any funding agency, commercial or not-for-profit sectors.

Acknowledgements: The author expresses gratitude to Michael Tomasello for insightful feedback on early versions of the manuscript.

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