Do we prefer **Omission** over **Commission** given a *Chance* of **Harm**? Our Meta-Analysis - **Yes**, but *may* be weakened to Several Moderators – **Between-Subject** Design Type, **High Responsibility** over Target, **No clear Negative Outcome**?

Omission-Commission Asymmetries in Morality:
Meta-analysis of Omission-Bias

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INTRO

- Omission bias – preference (morality + blame + decision) for inaction (omission) over action (commission), given chance of harm

Mechanisms:

1) Causal relevance hypothesis – action causality > inaction (Spranca et al., 1991), 2) Sense of responsibility – action responsibility > inaction (Kordes-de Vaal, 1996; Zeelenberg, van der Pligt, & de Vries, 2000), 3) Salience – action salience > inaction (Kordes-de Vaal, 1996), 4) Action-effect and regret – action regret > inaction? (Kahneman & Tversky, 1982) Complex with contradictory findings

Key Motivations for the meta-analysis:

- *Mixed findings* - Connolly and Reb (2003) – Preference towards Vaccination (Commission)
- Sensitive / weakened to several moderating factors? – familiarity, responsibility (*mixed findings*), (no clear negative) outcome, weakened in between-subject design?

METHODS

- Pre-registered in Open Science Framework

Search:

- Article search – Google Scholar + Contacting Authors
  Inclusion and Exclusion Criteria:
  - Clear contrast between omission and commission
  - DVs related to blame, morality, or a decision
  - Enough statistics for effect sizes calculation
  - Single target (NOT different people/groups, no trolley dilemma)
- Coding and verification by three authors
- 21 samples (some >1 DV)/13 articles included

Analysis:

- Key R packages (RStudio Team, 2015): Metafor (Viechtbauer, 2010) and Metaforest for moderator analyses to address for high heterogeneity, small sample size and lack of power (van Lissa, 2017)
- Effect sizes unavailable -> descriptive statistics or inferential statistics used to calculate effect sizes
- Main-effects – random-effects model; Moderator Analyses – two-level fixed-effects model, multivariate three-level model (Article as third level), Metaforest
- Heterogeneity - Q-statistics, and I square statistic.
- Publication bias analyses - Published vs non-Published analysis, Funnel plots, trim and fill, rank test, Egger's regression, p-uniform, p-curve, PET and PEESE, 3-Parameter Selection Model (3PSM), Henmi and Copas (2010)

RESULTS

Effects of Interest	Findings
Main Effect of Omission Bias	Large effect; $g = 0.80$; remained medium to large adjusting for publication bias. Very high heterogeneity, $I^2 = 94.3\%$, $Q(25) = 525.59$. Publication bias: Mixed results with different methods
Familiarity over Target	Two Level and Three Level model – no significant difference. MetaForest – Ranked as the least important (but positive) variable
Responsibility over Target	Two Level – non-significant; Three Level - *stronger* omission effect, with *no clear responsibility*; MetaForest - Second most important variable, positive importance
Self-Other Difference	Stronger omission effect for self-rating studies compared to others as affected target studies
Outcome Valence	Omission effect still meaningful without clear negative outcome; stronger omission bias when the outcomes are negative with Three-Level model, non-significant with Two-Level model. MetaForest - Third most important variable – positive importance
Study Design	Omission effect is medium with between-subject design, larger with within-subject design. Significant difference with two-level model, but non-significant with three-level model. MetaForest – Most important variable – positive importance

DISCUSSION

- Support for the existence of omission bias; effects remain medium to large after adjusting for publication bias

- Very high heterogeneity – some studies with minimal effect or even opposite effect (Connolly and Reb, 2003)

- Inconsistencies in moderator results with two-level versus three-level models + lack of power -> Adopted Metaforest

- Metaforest – Design type: most important moderator (within-subject design stronger effect than between-subject design); Other moderators are also important

Limitation:

- Lots of studies were excluded due to missing statistics

Future Research Directions:

- Some moderator findings (e.g. Familiarity) do not support classic findings -> Well powered replications-extensions (e.g. Haidt & Baron, 1996)

- More studies on boundary conditions & Reversal of Omission Effect in morality

- Transparent reporting of descriptive + inferential statistics and codes

- Different designs (e.g. both within-subject and between-subject) + different measures (e.g. measuring both moral wrongness and responsibility/blame)

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