

# Bonn Melbourne Seminar in Decision Making and Computational Psychiatry

## To give or not to take – framing effects boost generosity during social discounting

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### Abstract

Sacrificing own resources for the benefit of others is a prerequisite for society to function well. The willingness to do so, however, greatly declines as the perceived social distance from the other persons increases. Here, we asked if describing a generous choice as preventing a loss to others rather than granting them a gain would promote generosity, even towards socially remote strangers. We adapted a social discounting task where participants chose between a selfish option – high gain to self and zero-gain to other – and a generous option – lower gain to self and non-zero gain to other. We manipulated the description of the decision problem in two economically equivalent frame-conditions: in the gain frame, a costly generous choice yielded a gain to the other, while, in the loss frame, it implied preventing the loss of a previous endowment to the other. We found that social discounting was strongly reduced in the loss frame, implying that participants were more generous toward remote strangers. We hypothesized that the motives underlying generosity in social discounting are frame-dependent and dissociable on the neural level. Using functional magnetic resonance imaging, we found that temporoparietal junction and ventromedial prefrontal cortex subserved generosity in the gain frame, replicating previous findings, while anterior insular cortex was selectively recruited during generous choices in the loss frame when participants prevented the other-loss. We found support for a network-model according to which TPJ and insula differentially subserve generosity by modulating value signals in the VMPFC in a frame-dependent fashion. In a follow-up study, we found that acute psychosocial stress dampened the framing effects on social discounting, suggesting that, compared to non-stressed controls, stressed participants were much less generous towards strangers in the loss frame. Our results open possibilities for designing future policies aimed at promoting considerate attitudes towards abstract, remote individuals.

**Thursday, 12<sup>th</sup> May 2022, 9am (CEST)**

<https://uni-bonn.zoom.us/j/99726851020?pwd=ZHRpaDQrZ2YzYnFmUE51eitkMjZiZz09>

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