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Decision-making in multiple-public-goods problems: implications for cooperation and conflict within and between groups

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Summary

Although human groups often present individuals with multiple public goods to cooperate on, such as healthcare *and* education, research on cooperation and conflict has been largely limited to settings in which individuals face only a single public good problem. This leaves unrecognized that individuals, commanding limited resources, need to select which public goods to cooperate on and which ones to leave aside. Which contextual and individual factors influence how individuals make those decisions, and what consequences can occur for public good provision and intergroup relations, are questions I address in the three empirical chapters of this dissertation.

Chapter 2 begins by examining how individuals in groups manage the decision conflict between two public goods that vary in efficiency and (in)equality of returns. Individuals cooperated more on the comparatively efficient public good and on the equal-return (vs. unequal-return) public good, yet when the unequal-returns public good was also the most efficient, individuals cooperated comparatively more on this unequal-but-efficient public good when they themselves benefitted the most from inequality. Low beneficiaries largely ignored public good efficiency and preferentially cooperated on equal- rather than unequal-returns public goods. Expectations, voting decisions, and descriptive norms held by uninvolved arbitrators echoed these cooperation patterns, but uninvolved arbitrators deemed it socially appropriate for individuals to cooperate more on the equal than the unequal public good regardless of those individuals' beneficiary position.

While this pattern of cooperation may be concerning—it could harm the weakest in a group, undermine group cohesion, and seed conflict—we also find something that may otherwise be overlooked: When group members have multiple public goods that are misaligned in terms of efficiency and equality in returns, overall cooperation is highest. In single-public-good provision problems, individuals choose between selfish keeping and cooperating on group welfare. In multiple-public-goods provision problems, individuals choose *which* public good to cooperate on. And to quite some degree, individuals cooperate on both, keeping less to themselves.

Though behavior is often influenced by the environment, individuals with different beliefs may react differently to such contextual factors. We examined this possibility in Chapter 3 by comparing participants with varying political ideology in their degrees of cooperation on multiple public goods that varied in efficiency and (in)equality in returns. Left-leaning individuals cooperated more than right-leaning ones, but only on public goods that

benefitted everyone equally, and not more on public goods that generated inequalities. Left-leaning individuals also trusted and expected others to cooperate more on equal- versus unequal-returns public goods, while self-identified right-leaning individuals did not differentiate between these. Interestingly, in data from an additional norm study, ideology did not predict which public good was deemed more morally appropriate to cooperate on. Results combined specify when and why self-identified leftists can(not) be expected to cooperate more than rightists and reveal how moral decision-making depends on structural elements of the public good provision problems that citizens face, interactively with those individuals' personal features.

With Chapter 4, we broaden the perspective on multiple-public-goods provision problems by exploring the consequences of efficiency and equality trade-offs on intergroup relations. To this end, we performed two incentivized laboratory experiments using the Intergroup Prisoner's Dilemma-Maximizing Differences (IPD-MD) game (Halevy et al., 2008). In one experiment, we varied the relative efficiency of the two public goods across decision-rounds while, in a second experiment, we varied the equality in returns of the two club goods, while holding constant both efficiency and the cost to the out-group. Individuals cooperated more on club goods that were more efficient, even when this created a cost for the out-group. Similarly, individuals cooperated more on club goods that benefitted in-group members equally rather than unequally, even when this created a cost for the out-group, and especially when it prevented them from being disadvantaged in an unequal distribution. Costs imposed on out-groups ignited cycles of retaliation and revenge, ultimately reducing welfare at the individual, group, and collective level. As much as intergroup conflict can motivate in-group cooperation, it can also be the unfortunate by-product of myopic cooperation within groups.

Overall, this dissertation advances knowledge about how humans make social decisions about public good provision—not only on single public goods, but in a more complex environment confronting them with multiple options differing in their properties. I can conclude that, when deciding if and where to invest resources, it matters how efficient the returns are for the in-group and whether benefits (dis-)advantage some group members, potentially contradicting the deciding individual's political ideology. Individuals base their decisions on how they expect companions to behave and, to a lesser degree, on potential negative consequences for out-groups. Additionally, by giving individuals the room to choose, this dissertation offers a novel angle on free-riding, showing that, when an individual defects on a public good, it need not automatically imply they are non-cooperators altogether.

