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# To cooperate or not to cooperate: Using new methodologies and frameworks to understand how affiliation influences cooperation in the present and future

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ABSTRACT

How can changes in degrees of group affiliation or identity change one's decision to cooperate or defect in a dilemma? According to the logic of appropriateness, decision changes result from changes in answer to the question, "what does a person like me do in a situation like this?" In two studies, transient group affiliation is systematically manipulated to test its influence on the appropriateness question both in the present and future. Novel methodologies (videotaping group interactions to obtain observed levels of group affiliation, implicit measures of social concept activation and aspect listing protocols) were used to obtain a better understanding of the mechanisms underlying the influence of group affiliation. Increases in group affiliation are accompanied by increases in the accessibility of social constructs, higher levels of cooperation, personal satisfaction and trust in one's group. Similar patterns are observed for decisions in the present and future. There is an order effect observed with decisions to cooperate in the future carrying over to subsequent decisions to cooperate in the present, but a decision to initially cooperate in the present does not translate as strongly to a decision to cooperate in the future. This is in part because a more analytical approach is used for decisions pertaining to the future, while decisions in the present tend to be more affect-based.



## 1. Introduction

Why does a resident of a small town being asked to conserve water during the summer ignore the request if it comes from the county or state government, but pay attention to it when it comes directly from the local village or neighborhood association?[1] Such behavioral variation is not rare in real world social dilemmas and accordingly to Weber, Kopelman, and Messick (2004), the variation in cooperative behavior can result from differences in the answer to the question, "what does a person like me do in a situation like this?" (hereafter referred to as appropriateness question). The answer to this question involves three

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[1] This question is based on an anecdote recounted by a town official in New Castle, NY.

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**Table 1**
Actual financial payoffs and social outcomes in a symmetrical 4-player game.

| Number of players choosing cooperation | Financial reward for choosing | | Social goals that support choosing C |
|---|---|---|---|
| | Cooperation | Defection | Gain due to an intrinsic reward |
| 4 | \$20.00 | – | $+c_4$ |
| 3 | \$18.00 | \$23.00 | $+c_3$ |
| 2 | \$11.00 | \$16.00 | ? |
| 1 | \$7.50 | \$12.50 | |
| 0 | – | \$10.00 | |

interconnected aspects: (1) recognizing the situation as a social one, which (2) activates one or multiple social identities that have rules associated with them that (3) in turn can strongly influence the final behavior.

This paper systematically examines how varying group affiliation or identity influences one's response to the appropriateness question in social dilemmas both in the present and future by using new methodologies that highlight underlying processes. Social dilemmas are defined as situations where rational behavior by individuals and organizations, i.e., acting in their best interest, makes everyone worse off. Classic examples include overgrazing or overfishing (Hardin, 1968), situations where individual decision makers gain economically from unrestricted exploitation of a resource, but where they would all gain more if exploitation were restricted.

Contrary to economic predictions based on rationality, however, in laboratory and natural social dilemmas, people do sacrifice part of their potential individual financial reward and cooperate to benefit the collective (Camerer, 2003). Explanations for such cooperative sacrifice include both individual variables such as social value orientation (Messick & McClintock, 1968), as well as contextual variables such as communication about the dilemma (Dawes, McTavish, & Shaklee, 1977; Dawes, van de Kragt, & Orbell,1988; Gintis, 2000), the creation of trust (Ostrom, 2003), social norms (Akerlof, 1980; Gouldner, 1960; Gächter & Fehr, 1999; Hayashi & Yosano, 2005; Pillutla & Chen, 1999), and group identity or affiliation with others impacted by the dilemma (Brewer & Kramer, 1986; Dawes & Messick, 2000; Kiyonari & Yamagishi, 2004; Onorato & Turner, 2004; Terry & Hogg, 1999; Turner, 1982; Yamagishi & Kiyonari, 2000) (see Dawes and Messick (2000) and Messick and Wilke (1983) for complete reviews).

When an individual aims to answer the appropriateness question, individual (e.g., social value orientation) and situational variables (e.g., group affiliation) can play equivalent roles in answering the appropriateness question: a decision maker faced with a dilemma might find multiple identities activated, each with its own goals and rules, and might use situational cues to help define the "me" to arrive at an answer to the appropriateness question.

## 2. Affiliation and the logic of appropriateness

Greater identification with an in-group increases observed cooperative behavior (Brewer & Kramer, 1986; Caporael, Dawes, Orbell, & van de Kragt, 1989; De Cremer & Van Vugt, 1999; Jackson, 2008; Kramer & Brewer, 1984) because affiliating with a group raises the relative importance of group outcomes (Brewer, 1999) and goals (Krantz, Peterson, Arora, Milch, & Orlove, 2008), thereby increasing the salience of group norms (Jetten, Spears, & Manstead, 1997). In other words, the greater affiliation one feels with a group, the more likely one is to highly value and adopt group/social goals, such as maximizing the good of others in the group. As a result, financial rewards can no longer accurately represent actual "best interests." This is in part because the interdependence between individuals, which can be spontaneous and automatic, prompts individuals to transform the given payoffs in a situation to more "effective" ones that better reflect their interpersonal relationships with group members (Thibaut & Kelley, 1959). In such situations, choices are made to support and fulfill multiple context-dependent goals (Krantz & Kunreuther, 2007), including social, environmental, and financial goals. In a group context, goals associated with group affiliation have been shown to mediate cooperation towards an in-group (Jackson, 2008).

Table 1 shows a four-person payoff array, with both financial payoffs used in this research, and affiliation-dependent payoffs. The number of cooperative choices made by the group is shown in the first column; resulting financial payoffs to cooperators and to defectors are shown in the next two columns. If all four cooperate, the outcome is \$20 per person, the second highest value. But, each of the four has a financial incentive to defect, in order to get \$23 rather than \$20, at the expense of the three remaining cooperators, who would each get \$16. The situation is similar when fewer cooperate: cooperators always have an incentive to defect. The financial Nash equilibrium is 0 cooperating, each receiving \$10, the second lowest outcome.

However, if an implicit reward ($+c_4$, e.g., a good feeling associated with full cooperation or due to individual motivations such as being pro-social) is sufficiently great, the combination of \$20 and $+c_4$ may hold greater value to the individual than \$23 (the best financial outcome). Given such a reward, when all cooperate, nobody has an incentive to defect. The rewards need not be the same for all players. In particular, $+c_4$ might be small for a defector. There could, nonetheless, be sufficient intrinsic reward for cooperation ($+c_3$) for each of the other three people to produce an equilibrium where three cooperate and one defects. However, given rational behavior, all-defect remains an equilibrium: when all defect, nobody has an incentive to cooperate.

Returning to the anecdote regarding water conservation, a possible explanation is that though the requested behavior, reason for the decision, and beneficiaries of the action are the same in both contexts, compliance changes substantially