The Formation of Group Ties in Open Interaction Groups

Shane Thye¹, Edward J. Lawler², and Jeongkoo Yoon³

Abstract

We examine how task jointness and group incentive structures bear on the nature and strength of the affective and cognitive ties that people forge to a group. The argument is that affective group ties have stronger effects on social order than cognitive group ties. There are two general hypotheses. First, joint tasks generate stronger cognitive and affective ties to groups, whereas group incentives generate cognitive but not necessarily affective ties to the group. Second, affective ties more effectively solve two fundamental problems of social order in groups: (1) sustaining membership (also known as stay behavior) and (2) generating the joint gains of further collaboration (cooperation). The theoretical logic is that joint tasks promote a sense of shared responsibility, and this leads members to attribute their individual emotions to the group as an object, whereas alignment of individual and group incentives does not produce such effects. The theory and hypotheses are tested experimentally in four-person open interaction groups, manipulating task jointness (high, low, none) and incentives (individual based vs. group based). The results generally support the hypotheses underlying the theoretical logic. Affective ties to groups are based primarily on levels of task jointness, and such tasks have stronger effects than incentives on the capacity of groups to retain membership and induce cooperation in social dilemmas.

Keywords
affective ties, cooperation, emotion, group ties, social order

A classic issue in sociology is whether or to what degree person-to-group ties are instrumental or affective (Durkheim [1933] 1964; Parsons 1951; Simmel 1964; Weber [1918] 1968). Group ties are instrumental if they are based primarily on individual rewards or payoffs; group ties are affective if the group is an object of intrinsic worth or value, namely, an end in itself. Such ties are important because how people are tied to a group bears on its stability, for example, the capacity to sustain membership and promote cooperation on behalf of group goals. In this article, we examine how and when fundamental structures and processes promote different forms of group ties that in turn have different...
consequences for group stability and social order.

We theorize the general idea that affective ties to a group generate stronger person-to-group ties and therefore invoke more resilient social orders than instrumental ties (Berger and Luckmann 1966; Collins 2004; Parsons 1951). Affective ties involve feelings about a group, whereas instrumental ties are cognitive and involve a perceived connection to a group. Actors with only instrumental group ties more readily leave groups in response to changes in incentive or reward structures, whereas actors with affective bonds are more inclined to remain in the group and contribute to cooperative endeavors even if they involve risk. Affective ties entail a noninstrumental component in addition to the instrumental component. Affective and instrumental ties are certainly intertwined in any given context, but the analytic distinction is important and has a long tradition in sociology. We aim to pull apart and test the distinct effects of affective-based and instrumental-based group ties, recognizing that they are connected. Similarly, in psychology, cognition refers to perception and affect to feelings. These are known to be interwoven, but they are distinguished for many purposes. In our research, a cognitive tie to a group refers to a perceived connection between self and group, whereas an affective tie refers to a feeling about the group. Instrumental ties are cognitive but not necessarily affective.

The importance of affective group ties is anecdotally illustrated by a program that Hewlett-Packard (HP) developed to involve retired employees who wished to volunteer for the company.¹ Such volunteer work ranged from helping with the company’s marketing and legislative efforts to assisting with their philanthropic activities. HP reportedly mobilized thousands of former employees in such activities, which is itself noteworthy because Silicon Valley is reputed to be a place where company loyalty is as rare as a pinstripe suit. As documented in a New York Times article, many retired employees said they joined such efforts because of their “affection for the company,” and they often noted that these volunteer involvements make them “feel good.” One volunteer said: “I feel like I have two marriages: a wonderful marriage at home for 36 years and a marriage at HP.” Such affective ties to the company by retirees are a source of significant benefits to HP (Lawler, Thye, and Yoon 2009). This news anecdote dramatizes the capacity of affective person-to-group ties to mobilize behavioral commitments to the group.

In this study, we test a theory of social commitments (Lawler et al. 2009, 2015) that posits the structural conditions and processes that determine whether and how social interactions generate affective group ties and more resilient social orders in groups or organizations. This theory builds on the affect theory of social exchange (Lawler 2001; Lawler et al. 2008), but it is distinct in three general ways. First, it extends principles of the theory beyond social exchange and network contexts by expanding the theory’s scope to encompass task groups where members work on a cooperative task and interact openly to accomplish it. A task group is defined here as three or more actors who interact with one another to produce a collective product or result. Second, we elaborate and explicitly test the crucial role of shared responsibility as the mechanism for affective group ties (see Lawler et al. 2009, 2014). This mechanism has not been directly tested in prior work. Third, we compare how and when two distinct structural

¹This example is based on a report in the New York Times, “Going to the Company Elders for Help,” (Richtel 2008).
(exogenous) conditions—the jointness of the task and the individual/group incentives for accomplishing it—generate stronger or weaker ties of individuals to the group. The theory of social commitments highlights the role of person-to-group ties and the kinds of tasks that people work on together. The theory argues that joint group tasks promote stronger affective ties to the group, in which the group becomes an end in itself, whereas group incentives tend to promote instrumental ties to the group, in which the group is a means to individual gain. In this way, we question the prevailing assumption in human resources and organizational behavior that aligning the interests of individuals and a group or organization is most crucial to employee retention and cooperative, group-oriented behavior (Nyberg et al. 2010).

The ties people have to groups are central to the classic problem of social order. At the societal level, Hobbes’s ([1651] 1985) framing and solution to the order problem involved a contractual (i.e., instrumental) tie between the members of a society and the central authority of a group. That tie was based on the capacity of the central authority (i.e., the state) to serve individual interests, in particular, the basic wants and needs of citizens for security and stability. This is an instrumental solution that essentially aligns individual and group interests. Contemporary adaptations of this instrumental solution are found, for example, in game-theoretic accounts of iterated social dilemmas and rational choice analyses of solidarity (e.g., Axelrod 1984; Hechter 1987; Kollock 1994). This principle moreover is integral to many “best practices” frameworks used by management professionals. Here, interest alignment is a term often used to capture the market logic that shapes compensation schemes that essentially define contemporary employee-employer relations (Cappelli 1999; Colvin and Boswell 2007; Gottschalg and Zollo 2007; Nyberg et al. 2010).

Distinct traditions across the social sciences converge on the notion that to motivate behaviors in the collective interest, the key is to align individual and group interests. Nevertheless, a substantial body of theory and research indicates that (1) repeated exchanges generate individual emotions and (2) under some conditions, these feelings transform exchange relations into affective objects of attachment or commitment (Lawler et al. 2000; Lawler and Yoon 1996; Thye et al. 2014; Thye, Yoon, and Lawler 2002). What makes exchange instrumental is the repeated flow of benefits and reciprocity between the same actors in the context of an exchange network (Emerson 1972a; Emerson 1972b; Molm 2003; Willer 1999). What makes exchange affective is that repeated exchange generates an emotional buzz in the form of everyday feelings of pleasure, satisfaction, or excitement. Research now demonstrates that repeated exchanges are likely to transform instrumental ties into relational ties due to the cognitions such as uncertainty reduction or trust and affective states such as pleasure or satisfaction (e.g., Collins 2004; Cook and Emerson 1984; Kollock 1994; Lawler and Yoon 1996; Lawler et al. 2008). In our theorizing, a cognitive tie is defined as a perceived connection to the group (e.g., Tajfel and Turner 1986), and we propose that it likely emanates from instrumental incentives, whereas an affective tie refers to feelings about the group and tends to emanate from the task activity.2

2There is growing empirical evidence for the impact of task jointness on individual-to-group ties in social exchange (Kuwabara 2011; Lawler, Thye, and Yoon 2008) but also in employee-to-organization ties in work organizations such as nursing homes and schools (see Price and Collett 2012; Taylor and Pillemer 2009).
Conceptually, ties may be of multiple forms—to other persons (person-to-person ties) or to the group itself (person-to-group ties). This distinction was integral to Parsons’s (1951) approach to social order, Mead’s (1934) classic distinction between specific and generalized others, and Simmel’s (1964) comparison of dyads and triads. Research in social psychology demonstrates that person-to-group ties are distinct, theoretically and empirically, from person-to-person ties, and implicitly they have different implications for social order (Brewer and Gardner 1996; Prentice, Miller, and Lightdale 1994; Tajfel and Turner 1986). For example, turnover in groups that are founded on the ties members have to each other should be more disruptive than turnover in groups founded on the ties individuals have to the group itself (for evidence, see Prentice et al. 1994). The theory of social commitments (Lawler et al. 2009) focuses on how person-to-group ties develop or strengthen, tracing these to the social interactions that unfold while individuals address a common problem or shared goal.

For the most part, person-to-group ties are neglected in contemporary sociological theorizing, much of which is informed by social network imagery or cultural frames. With network imagery, sets of interconnected person-to-person ties constitute and sustain larger units, and the larger units as such are not meaningful groups to the actors in those networks (Faris and Felmlee 2014; Gorman and Marsden 2001; Granovetter 1985; Watts 2003). For theorists adopting a cultural frame, actors access and use cultural resources to interact with others in the context of taken-for-granted or assumed ties to a larger social unit (Benford and Snow 2000; Swidler 1986). Neither approach treats person-to-group ties as problematic. Yet, group ties clearly emerge even under minimal conditions. For instance, social identity theory suggests that people readily define themselves as members of a cognitive unit, even minimal units, without any social interaction or emotional content (e.g., Tajfel and Turner 1986).

Our theoretical argument boils down to the following general claims: Affective ties to groups emerge and are sustained if (1) members interact with each other, (2) that interaction centers on a joint task, (3) their interactions generate a sense of positive emotion and shared responsibility, and (4) shared responsibility leads them to attribute their feelings to the group. This process is predicted to yield stronger person-to-group ties that are manifest in (1) intentions to stay in the group and (2) cooperation with other members in the context of risk. Prior research finds evidence of these effects in standard exchange settings and networks (e.g., Lawler and Yoon 1993, 1996, 1998; Lawler et al. 2008; Thye, Lawler, and Yoon 2011), but some implications of the theory, especially the precise role of shared responsibility, have never been tested. This research tests the role of shared responsibility and extends the argument to an open interaction setting in a way that allows for a novel and more complete test of the theory in a single study. At issue is whether or not the hypothesized shared responsibility mechanism occurs in small open interaction task groups, as exampled by a university committee or organizational team.

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Few scholars in microsociology examine social processes in the context of open interaction (cf. McLeer et al. 2011; Smith-Lovin, Skvoretz, and Hudson 1986). Early sociologists began with open interaction task groups (e.g., Bales 1950; Durkheim 1915; Homans 1961), but the study of such groups gradually gave way to more controlled experimental settings in which interaction is
constrained to isolate specific phenomena or processes (Berger et al. 1977; Lawler and Yoon 1993; Thye 2000; Willer 1999). A noteworthy feature of the current research is the focus on task groups with open interaction. Our research is part of an effort, reflected in some work of others as well (Allen, Sargent, and Bradley 2003; Keyton 2016; McLeer et al. 2011), to bring the task group back into contemporary sociological focus. We do so by examining small groups who work on an engaging problem (i.e., have high experimental realism) that resembles common everyday situations where people interact with one another to produce a common product (i.e., have high mundane realism).

SOCIAL COMMITMENTS THEORY

The theory of social commitments (Lawler et al. 2009) is essentially a theory of person-to-group ties, and it provides an explanation for how affective group ties develop among individuals working on a common task. In the theory, the task and interests are primary “social connectors.” The task structures social interaction around a common issue and shapes the activity directed at the group goal. A joint task encourages social interaction and engagement to succeed at the task. In other parlance, joint tasks enhance or strengthen the collective orientation of the group. Interests are a complementary but distinct type of social connector. Shared interests motivate cooperation as a pathway to individual benefit or gain. The task is about the process, whereas the interests are about the individual-level payoffs or outcomes. Applied to a task group or organizational context, the joint interests of members can be portrayed as the proportion of individual rewards members derive from their individual efforts versus the group efforts. This concept of joint interests reflects a common condition of work organizations in which employees receive a portion of their total compensation from their individual performance and a portion from the collective or company performance.

The theory of social commitments (Lawler et al. 2009, 2014) suggests that high task jointness generates stronger cognitive and affective person-to-group ties, whereas joint interests generate cognitive but not affective ties to the group. Cognitive ties refer to one’s perceptions of a connection to a group (e.g., Tajfel and Turner 1986); such perceptions may or may not have affective elements. Affective ties involve an attribution of individual emotions to the group. The theory of social commitments argues that the latter occurs when the task itself generates a sense of shared responsibility. Shared responsibility is a key mechanism that determines whether individual emotions are associated with or attributed to the group entity. More specifically, the shared responsibility induced by a joint task leads actors to attribute positive feelings or emotions from the task interactions to the group. These are termed social unit attributions of emotion. The idea is that individually felt emotions are attributed to something actors share or have in common and the group affiliation is a salient object or target for these individual emotions. When social unit attributions occur, the result is a stronger affective tie to the group in the case of positive emotions or a weaker

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3Cognitive and affective ties are analytically distinct but empirically intertwined in any given context. Affective ties have cognitive components, and cognitive ties can have some emotional loading or charge. Nevertheless, the difference is important. A cognitive tie itself is not sufficient to make the group an object of intrinsic value or end in itself, whereas an affective tie can produce such a result. We aim to create experimental conditions that can instantiate the theoretical difference, recognizing that there is overlap between the affective and cognitive components.

Task jointness and shared responsibility are, respectively, the objective and subjective conditions for person-to-group ties with an affective component. Social unit attribution is the mechanism through which individual emotions lead to affective ties or attachments to the group. If task activity generates a sense of shared responsibility (Lawler et al. 2008, 2009), social unit attributions transform individual emotions into collective feelings. In comparison, group incentives that align individual and group interests should not foster social unit attributions of emotion. The incentive structure may create a sense of being in a group with shared goals and may even create a mild sense of shared responsibility; however, these should be weaker than those produced by task jointness, and they should not generate social unit attributions of emotion. Joint tasks are especially important to the sense of shared responsibility because they make individual contributions more indistinguishable, that is, difficult to trace.

The theory asserts that if task structures seamlessly interweave individual contributions and generate a group-level sense of shared responsibility among members, they are likely to perceive their individual feelings as jointly produced as well (Lawler et al. 2009, 2014). The sense of shared responsibility is a moderating condition, determining when people make social unit attributions; in other words, it is the interaction of shared responsibility and positive emotions that drives the predicted theoretical process. This is the first study to explicitly test this interaction effect. Figure 1 portrays the theoretical principles of social commitments theory and identifies the key links that lead to the hypotheses to be tested here.

The theoretical model exposes the mechanisms whereby joint tasks and group incentives bear on two important dimensions of stability and order in groups—the propensity of members to stay in the group and also collaborate when they face a decision that pits their own individual interests against those of the group (i.e., a social dilemma choice). In addition, the model has interesting implications for the role of group incentives. It suggests that group incentives alone are not sufficient to produce affective group ties because the social unit attributions of emotion are not present. A minimal group identity may emerge, but without much, if any, emotional content. Thus, whereas instrumental conditions may be the initial impetus for interaction, group ties take on an affective component most prominently under conditions of task jointness.

HYPOTHESES

Following are six hypotheses derived from the theoretical model in Figure 1. The focus is on how task jointness and incentive structure (Hypotheses 1a and 1b) generate affective and cognitive ties, the mechanisms through which these effects occur (Hypotheses 2a and 2b), and the impact on the strength of the group tie manifest in intentions to stay in the group and cooperative behavior.
when members confront a social dilemma (Hypotheses 3a and 3b). \(^5\)

**Hypothesis 1a.** Groups with joint tasks generate stronger cognitive and affective ties to the group than groups without joint tasks.

**Hypothesis 1b.** Group-based incentives generate stronger cognitive ties to the group than individual-based incentives but not stronger affective ties to the group.

**Hypothesis 2a.** The effects of joint tasks on cognitive and affective ties are indirect and mediated by the interaction of shared responsibility and positive emotions.

**Hypothesis 2b.** The effects of group-based incentives on cognitive ties are direct and not mediated by the interaction of shared responsibility and positive emotions.

**Hypothesis 3a.** Affective group ties have a stronger effect on intent to stay than cognitive group ties.

**Hypothesis 3b.** Affective group ties have a stronger effect on cooperation in a social dilemma choice than cognitive group ties.

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**METHODS**

**Overview**

To test the theoretical predictions, an experiment created a scenario in which four people undertook first an individual task and then a group task. The experiment manipulated the incentive structure (i.e., how much profit or pay for the experiment was dependent on the individual task vs. the group task) and the jointness of the group task (no jointness, low jointness, high jointness). The experiment was structured to accomplish three goals: first, to examine the impact of task jointness and incentive structures on cognitive and affective ties to the group. Cognitive group ties capture the extent to which the individual perceives self and group as interconnected, whereas affective group ties reflect the emotional attachment to the group (Lawler et al. 2008). The second goal was to examine whether task jointness promotes a sense of shared responsibility and positive.

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\(^5\)Stay behavior is a standard measure of commitment, and a social dilemma taps the propensity to cooperate in the context of risk. Together, these reflect the capacity of a group to sustain its membership and capture the gains from cooperation.
emotions from the task activity, in particular, whether shared responsibility and positive emotions interact. This mechanism has yet to be tested. The third goal was to test whether affective and/or cognitive group ties mediate the effects of task jointness and group incentives on two behaviors that reflect the strength of the person to group tie: stay behavior and cooperation in a social dilemma. Intent to stay is an inclination to continue working with the same others in the future. Cooperation refers to contributions in a social dilemma, specifically, the degree that actors allocate individual resources to the group or keep them for themselves.

**Experimental Design and Subjects**

The experiment consists of a $2 \times 3$ factorial design crossing incentive structure (whether incentives are individually based vs. group based) and levels of task jointness (none, low, high). When incentive structures were individually based, subjects are told that 80 percent of their pay will be based on their performance on the individual task (i.e., the things that kill us), whereas 20 percent of their pay will be based on the group task (i.e., lost at sea). When incentive structures were group based, we reversed these percentages (20 percent based on the individual task, 80 percent on the group task). A manipulation check on a prequestionnaire confirmed that all subjects understood the incentive manipulation. There were three conditions in the task jointness manipulation. In the no jointness condition, subjects completed the task together in the same room but did so individually and without any communication with the other subjects. This condition serves as a control for the other conditions. These groups do not satisfy our definition of a task group. However, they do constitute a minimal group in the sense that they occupy the same space, are working on the same task, and some portion of their payoffs are interdependent. Research indicates that it does not take much interdependence to produce group-oriented behavior (Kramer and Brewer 1984). Their inclusion in the experiment is to control for such effects and serve as a point of comparison for the other experimental conditions. In the low-jointness condition, subjects could discuss the lost at sea task for up to 10 minutes but then completed it individually and without any further communication with the others. In the high jointness condition, subjects freely interacted for 10 minutes, and then they produced a single collectively agreed on ranking.

A total of 480 undergraduate students at a northeastern and southeastern university participated in the experiment for payment. In all, 120 same-sex tetrads were randomly assigned to one of the six experimental conditions (20 tetrads per cell; 12 female and 8 male each). Because data were collected at two universities, gender and university affiliation were counterbalanced within each experimental condition.

**Experimental Procedures**

The experiment created a situation where four individuals first worked separately...
on an individual task in private cubicles and then worked together in the same room on a second task. Upon their arrival, subjects were escorted to separate cubicles, where they gave informed consent and then began work on the Phase I (individual) task. The Phase I task was titled *The Things That Kill Us*. The instructions for this task explained that people face potentially harmful objects or engage in dangerous activities every day and listed 15 dangers. Subjects were asked to rank order how dangerous a thing is based on the number of yearly deaths caused by that item. Subjects had 10 minutes to complete the task.\(^8\)

After they completed the Phase I task, subjects were escorted to a room and seated around a semi-circular table. Here they completed another ranking task similar in form but not content to the Phase I task. The second, Phase II task was titled *Lost at Sea*. The instructions told subjects they had chartered a yacht for a holiday trip across the Atlantic Ocean when a fierce fire breaks out on the ship. Much of the yacht is destroyed and is now slowly sinking. However, they and the others have salvaged a four-person rubber life raft and managed to save 15 items. Their task is to rank the importance of those items for their survival.\(^9\) Again, subjects were told they had 10 minutes to complete the task.\(^10\) Subjects completed the Phase II task with some degree of joint interaction (high or low) or no joint task at all (control).

Following the Phase II task, subjects were escorted back to separate cubicles where, in the following sequence, they (1) completed a questionnaire designed to measure several theoretically important variables (e.g., perceptions of shared responsibility, positive emotions, cognitive ties); (2) were presented with a social dilemma choice, which provides a behavioral measure of cooperation; and (3) completed a final (post)questionnaire that contained the intent to stay measure of group ties. Subjects were not provided with information regarding the outcome of the social dilemma until the experiment was over so this information could not affect their responses on the postquestionnaire.

**Measures of Intervening Variables**

Several questionnaire items were administered to capture the intervening factors specified by the theory and test the predicted interaction effects of positive emotions and perceptions of shared responsibility. All were measured on a midquestionnaire administered after the lost at sea task but before the behavioral measures of group tie were administered. First, we measured positive emotions in the form of pleasure/satisfaction, which were derived from prior research (Lawler et al. 2008, 2009; Lawler and Yoon 1993, 1996). Subjects were asked to report how they are feeling about their experience right now using a series of bipolar adjectives with a nine-point scale. The items measuring pleasure/satisfaction were pleased-displeased, happy-unhappy, satisfied-dissatisfied, and contented-discontented (Cronbach’s \(\alpha = .92\)). This measure is virtually identical to that used in previous research and displays consistently good measurement properties (Lawler et al. 2000; Lawler and Yoon 1993, 1996).

Next, we measured perceptions of shared responsibility on the same midquestionnaire. For this measure, subjects were asked how they would describe themselves and the others during the task. There were two nine-point Likert

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\(^8\)See Supplemental Documents in the online version of the article for details.

\(^9\)See Supplemental Documents in the online version of the article.

\(^10\)The experimenter monitored the group through a one-way mirror to ensure no communication occurred.
scale items in the measure; one was anchored by (1) accountable to the self and accountable to the group and the other by (2) sharing little responsibility and sharing much responsibility (Cronbach’s $\alpha = .93$).

Cognitive ties to the group were measured next using a modified version of the Inclusion of Other in Self scale (IOS; see Figure 2). The IOS scale asks the subject to select one of seven diagrams of overlapping circles, representing self and other. Each choice consists of a circle labeled self and another labeled other; we substituted group for other to generate a measure of person-to-group ties. The first of seven images in the measure portrays the self-circle as touching but not overlapping with the group circle. Then, each consecutive diagram shows slightly greater overlap of the self and group circle. In the final choice, the two circles are nearly but not quite superimposed. Specifically, subjects were asked, “Which of the following diagrams best represents how you perceive your relationship to the group of participants in the study?” This measure is simply coded 1 to 7 to indicate how much the individual perceived self to be a part of the group. Aron, Aron, and Smollan (1992) found that the IOS scale displayed high levels of alternate forms reliability ($\alpha = .95$; test/retest $r = .85$) and is a good predictor of whether or not dating couples would still be dating 3 months later. Aron and Fraley (1999:142) offered, “Over a variety of samples and relationship types, it has high test-retest and alternate form reliability and indications of convergent and discriminant validity equaling or surpassing a variety of much more elaborate verbal self-report measures of intimacy or closeness.” We view this measure as a parsimonious way to assess the degree that individuals perceive a tie to the group, recognizing that this tie may have both cognitive and emotional elements. Theoretically, the IOS measure does not say anything about people’s feelings or emotions toward the group. The emotional elements are better captured by our affective tie measure, and statistically, we model these as distinct but interrelated constructs.

Affective ties to the group were measured using a four-item index administered on the postquestionnaire. The measure included a series of bipolar adjectives on nine-point scales. Subjects

![Figure 2. Modified Inclusion of Other in Self from Aron, Aron, and Smollan (1992).](image-url)
were asked, “How do you feel about your relationship to the group?” on the following items: bad-good, detached-attached, negative-positive, and disloyal-loyal (Cronbach’s $\alpha = .94$). A variant of this measure has been used in past research where it also displayed desirable measurement properties (Lawler et al. 2008). Confirmatory factor analysis indicates that the four intervening variables are distinct.$^{11}$

**Measures of Dependent Variables**

**Strength of group tie** was measured in two ways. First, based on standardized measures of group commitment in the organizational literature (e.g., Price and Mueller 1986), we measured the subject’s intent to stay in the group on the post-questionnaire. This measure consists of a two-item index appearing on the post-questionnaire. The first item asks the subject to choose how many (if any) of the participants they would choose to work with again. Subjects could respond from zero to all three of the others. The second item consists of a 9-point Likert scale that asks, “If you could, would you like to work with the same participants again?” Here the scale was anchored by no, not at all and yes, definitely. The responses from these items were standardized (i.e., converted into Z-scores) before being combined into a single index. This index ranged from $-1$ to $+1$ (Cronbach’s $\alpha = .69$).

Second, following the Phase II task, each subject was presented with a social dilemma choice: to keep or allocate 16 lottery tickets for a $150 cash prize. Subjects could allocate these in blocks of 8 to themselves or to the group. In other words, the subject could keep all 16, keep 8 tickets and give 8 to the group, or allocate all 16 to the group. Tickets allocated to the group would be increased by 50 percent and then distributed equally among the participants. Thus, if all subjects kept all of their tickets, each would leave the experiment with 16 tickets. However, if one subject donated all of his or her tickets to the group and the other three subjects kept all of their tickets, the donating subject would receive 6 tickets total, and the others would receive 22 total tickets (16 donated tickets turn into 24 tickets, which are divided four ways). In the event that all subjects donated all 16 tickets to the group, those 16 would turn into 24 total tickets for each subject. Subjects made their decisions to keep or give the tickets in private and had no information on the contributions of others. It was only when the experiment was finished that subjects learned the outcome of their decision and were given the tickets. The subjects were correctly told that their tickets would be placed in a random drawing to take place after all study sessions were completed, with the winner receiving a $150 cash prize. This procedure has been used by Batson et al. (1995) and others to create a basic social dilemma and measure prosocial behavior. For our purposes, the number of tickets each subject donated to the group is a measure of group tie strength under conditions of risk or possible defection.$^{12}$

$^{11}$See Supplemental Documents in the online version of the article.

$^{12}$Of course, other factors contribute to cooperation levels in a social dilemma. Research indicates that forces such as trust, fear, greed, and the shadow of the future all impact cooperation rates (Simpson 2003). While these are not manipulated or controlled in the current study, there is no reason to believe these factors would vary across experimental conditions in the manner that affective ties do, especially given the large number of subjects and random assignment of subjects to conditions.
RESULTS

The results are divided into three sections: (1) analyses of variance to assess the hypotheses for the impact of joint task and incentives on cognitive and affective ties to the group, (2) multilevel structural equation modeling using Mplus version 7.11 (Muthén and Muthén 2012) to test the mediating mechanisms and effects on the nature and strength of group ties, and (3) supplementary analyses to examine other relevant measures. Our primary purpose is to test the theoretical hypotheses and theorized associations between constructs of the Figure 1 theory of social commitments. Support for that theory would come in the form of statistically significant associations between those constructs, and we give less emphasis to the size of the effect. While the focus of our experiment and subsequent data analysis is on theory testing, we also address issues related to overall model fit.

**Table 1.** Means and Analyses of Variance for Key Measures across Conditions

<table>
<thead>
<tr>
<th>Experimental Conditions</th>
<th>High Joint Task</th>
<th>Low Joint Task</th>
<th>No Joint Task</th>
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<tbody>
<tr>
<td></td>
<td>GBI</td>
<td>IBI</td>
<td>GBI</td>
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<tr>
<td>Affective tie to the group</td>
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<tr>
<td>Jointness</td>
<td>F(2, 120) = 52.1***</td>
<td>(.96)</td>
<td>(.65)</td>
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<tr>
<td>Incentive</td>
<td>F(1, 120) = .52</td>
<td></td>
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<tr>
<td>Cognitive tie to the group</td>
<td></td>
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<tr>
<td>Jointness</td>
<td>F(2, 120) = 163.7***</td>
<td>(.60)</td>
<td>(.94)</td>
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<tr>
<td>Incentive</td>
<td>F(1, 120) = 4.07*</td>
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<tr>
<td>Shared responsibility</td>
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<tr>
<td>Jointness</td>
<td>F(2, 120) = 163.1***</td>
<td>(.66)</td>
<td>(.93)</td>
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<tr>
<td>Incentive</td>
<td>F(1, 120) = 3.44+</td>
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<tr>
<td>Positive emotion</td>
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<tr>
<td>Jointness</td>
<td>F(2, 120) = 1.69</td>
<td>(.95)</td>
<td>(.83)</td>
</tr>
<tr>
<td>Incentive</td>
<td>F(1, 120) = .55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of cases</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Note: GBI and IBI refer to group- and individual-based incentives, respectively. Standard deviations are in parentheses. Cells in a given row with different superscripted letters (a, b, c) are significantly different using Tukey’s Honest Significant Difference multiple range test for pairwise comparisons, controlling for the overall Type I error rate at $\alpha = .05$. That is, within each row, values superscripted with an a are significantly different from values superscripted with b or c.  
$\dagger p < .07$. $^*p < .05$. $^*^*p < .01$. $^*^*^*p < .001$ (two-tailed test).

**Task Jointness and Incentives:**

**Hypotheses 1a and 1b**

Table 1 shows means, standard deviations, and analyses of variance (ANOVA) results that test Hypotheses 1a and 1b. Hypothesis 1a predicts that groups with joint tasks generate stronger cognitive and affective ties to the group than groups without joint tasks; Hypothesis 1b predicts an impact of incentive structure on cognitive but not affective ties to the group. Table 1 contains the means, ANOVA results, and post hoc Tukey Honest Significant Difference (HSD) tests (controlling the overall Type I error rate at $\alpha < .05$).

The ANOVA results support Hypotheses 1a and 1b. There was no interaction between task jointness and incentive structure, so we proceed directly to the main effects. There are significant main effects of task jointness on both affective ties to the group ($F = 52.1$, $p < .001$) and cognitive ties to the group ($F =$...
Note that the two joint conditions (high and low) are significantly different than the no joint condition. There is also a significant impact of group- versus individual-based incentives on cognitive ties to the group \( (F = 4.07, p < .05) \) and, as expected, no effect on affective ties \( (F < 1.0) \). More group-based incentives produced stronger perceptual overlap between self and group (i.e., cognitive ties) compared to individual-based incentives. In sum, task jointness and group incentive structure have the expected effects. Group-based incentives promote cognitive but not affective group ties, whereas task jointness promotes both.

Post hoc tests elaborate the patterns across the six experimental conditions (see superscripts in Table 1). Here are the most important results. First, the two joint task conditions (low and high) produce stronger affective ties to the group than the no joint condition; although the mean for high jointness is higher than that for low jointness, the difference is not statistically significant (combined Ms = 6.24 vs. 6.09). Task jointness (M = 4.32) also generates stronger cognitive ties to the group compared to the no joint conditions (M = 1.75), and high jointness (M = 4.17) is significantly greater than the low joint condition (M = 3.93). Second, the strength of cognitive ties is greater with group-based incentives (M = 3.60) than individual-based incentives (M = 3.32). The post hoc tests affirm that the group versus individual incentives condition does not have a significant effect on affective group ties. Although the overall pattern of means based on post hoc tests is generally consistent with Hypotheses 1a and 1b, it is important to acknowledge that the differences between the high and low joint conditions are not statistically significant in all cases.

A key prediction from the theory of social commitments is that task jointness promotes perceptions of shared responsibility and positive emotion. The results from an ANOVA on shared responsibility support the theory \( (F = 163.1, p < .001) \). High jointness produces more sense of shared responsibility than low jointness, and low jointness produces more sense of shared responsibility than the no jointness condition \( (Ms = 7.01, 6.00, \text{and } 3.06, \text{respectively, for high, low, and no joint conditions}) \). However, there are no significant effects of high jointness on positive emotion \( (F = 1.69, n.s.) \). The means for positive emotion \( (Ms = 6.35, 6.27, 6.06, \text{respectively}) \) are on the positive side of the Likert scale, but none of these differences are statistically significant.

Overall, the results for shared responsibility affirm a central idea from the theory—namely, that joint tasks generate a stronger sense of shared responsibility. No effects occur on positive emotion, but the mean levels are on the positive side of the bipolar dimension.\(^\text{13}\) Even though task jointness did not have the predicted effect on positive emotions, greater shared responsibility may still lead to more social unit attributions of the emotion that is present. We test for this possibility next. The most central theoretical prediction is an interaction effect between shared responsibility and positive emotion, indicating that shared responsibility leads people to attribute their positive emotion to the group.

**Mechanisms: Hypotheses 2a and 2b**

In our data, individuals are nested within groups. Thus, to examine the causal mechanisms linking task jointness and incentives to the strength of group ties, we used two-level random coefficients analysis. Task jointness effects on positive emotions may require repeated joint tasks, as has been the case in work finding positive effects of repeated exchange on positive emotions (Lawler et al. 2008; Lawler and Yoon 1996).
modeling to control for the nonindependence of observations. We combined this approach with structural equation modeling with full maximum likelihood estimation (ML-SEM). ML-SEM decomposes the variance of each variable into two components—individual-level variability and a group-level variability. This enables causal modeling of the relationships among variables at each level. As such, ML-SEM provides less biased estimates of coefficients by avoiding the problem of conflating individual-level and unit-level effects (Zhang, Zyphur, and Preacher, 2009).

The first step in our analysis is to test the theoretical model in Figure 1. The second step is to create a refined model that incorporates changes suggested by the modification indices from the first model. Table 2 shows the results of the initial model, strictly testing the theoretical formulation in Figure 1, and Table 3 shows the results for the refined model.

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Social Dilemma Contribution</th>
<th>Intent to Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Responsibility</td>
<td>Positive Emotion</td>
<td>Cognitive Tie</td>
</tr>
<tr>
<td>Group level Low joint task</td>
<td>2.48*** (.29)</td>
<td>.05 (.19)</td>
</tr>
<tr>
<td>High joint task</td>
<td>3.62*** (.25)</td>
<td>.30+ (.17)</td>
</tr>
<tr>
<td>Group-based incentive</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Individual level Positive emotion (PE)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Shared responsibility (SR)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Interaction (PE × SR)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Cognitive tie</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Affective tie</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Intercept</td>
<td>−3.20*** (.56)</td>
<td>−.36 (.31)</td>
</tr>
</tbody>
</table>

Variance estimate

| Group intercept residual | .78** (.31) | .37 (.31) | 1.31*** (.58) | — | — | — |
| Individual residual | — | — | 1.81*** (.12) | 1.37*** (.03) | .56*** (.03) | .32*** (.08) |

Akaike Information Criterion 9,589.81

Chi-square 499.69

(df = 30)***

Note: Low joint task and high joint task are dummy variables, and the omitted category is no joint task; group-based incentive is also a dummy variable, and its omitted category is individual-based incentive; the interaction between positive emotion and shared responsibility is created by mean centering the two variables; entries that correspond to predicting variables are unstandardized estimates; numbers in parentheses are standard errors; the effects of gender and research site are controlled; and the equation errors between affective tie and cognitive tie are correlated for the estimation.

+p < .07. ***p < .001 (two-tailed test).
Most noteworthy, the results of both models support the central role of shared responsibility as a moderator of social unit attributions of the emotion. The modification indices suggested the addition of four paths and the dropping of one path. The four additional paths are as follows: (1) low task jointness to the cognitive tie, (2) high task jointness to the cognitive tie, (3) shared responsibility to the affective tie, and (4) positive emotion to the cognitive tie. These additional paths are shown in bold in Table 3. We also dropped the path from cognitive tie to social dilemma contribution, as indicated by the refined model. The results show that the refined model significantly improves the goodness of fit ($\chi^2 = 318$, $df = 27$ in Table 3; $\chi^2$ improvement = 181 saved for 3 degrees of freedom, $p < .001$; also see the difference in Akaike Information Criterion).
Criterion). Tests of the hypothesized theoretical mechanisms (Hypotheses 2a and 2b) and the consequences for the strength of group ties (Hypotheses 3a and 3b) are mainly based on this refined model.

We present these models together because they are quite consistent and the modifications do not pose any serious problems to the original theoretical model in Figure 1 (see also Figure 3). Tables 2 and 3 contain coefficient estimates (γ) for each test. The first two columns of the tables regress the effects of shared responsibility and positive emotion on the dummy variables for the all experimental conditions, and the next two columns add the interaction term. The most significant support for Hypothesis 2a is shown in Columns 3 and 4 of the two tables. The results reveal a significant interaction of shared responsibility and positive emotion on affective group ties (γ = .07, p < .001 and γ = .07, p < .001, respectively, for Tables 2 and 3). As expected, the interaction between shared responsibility and positive emotion appears to facilitate the social unit attributions that generate affective and cognitive group ties. Turning to the antecedents of positive emotion and shared responsibility, task jointness significantly increases shared responsibility (γ = 2.48 and 3.62, p < .001, respectively, for low joint and high joint conditions in Table 2; γ = 2.31 and 3.45, p < .001 in Table 3). However, the effects of jointness on positive emotion differ between the high and low joint conditions. In the original theoretical model, the effect of high jointness on positive emotion is positive and marginally significantly (γ = .30, p < .07, see Table 2), but this pattern is not replicated in the refined theoretical model.

The aforementioned results and the Table 1 ANOVAs do not reveal major differences between the low and high joint conditions. In light of this, we conducted

![Figure 3. Test of the Refined Theoretical Model.](image)
a supplementary analysis combining the data from both the low and high joint conditions. These results are very similar to those previously described. Task jointness has effects on affective and cognitive ties through the interaction of shared responsibility and positive emotions, and group incentive has effects only on cognitive ties. The general implication is that it does not take much task jointness to generate the predicted effects leading to affective ties. Moreover, the impact of the high/low joint conditions combined compared to the no joint condition reveals the importance of the social interaction component of joint tasks. Joint tasks are likely to have the strongest effect when people engage in interaction to accomplish them. The social interaction could help explain the one new finding in this reanalysis, specifically, that task jointness generated positive emotions ($\gamma = 1.81, p < .001$). This also may reflect the boost in sample size and statistical power that occurs when the two joint conditions are combined.

Hypothesis 2b predicts that the effects of group-based incentives on cognitive ties are direct and not mediated by the interaction of shared responsibility and positive emotions. The results in Table 3 support this hypothesis. Group incentives increase cognitive ties ($\gamma = .24, p < .05$), and the results of the refined model indicate that task jointness also generates greater cognitive ties.

The refined model reveals some effects for shared responsibility and positive emotion not predicted by our theory. First of all, positive emotions from the task activity directly strengthen affective ties to the group ($\gamma = .47, p < .001$, see Table 3), but such emotions have no impact on cognitive group ties. Second, perceptions of shared responsibility also have a positive direct effect on affective ties ($\gamma = .13, p < .001$, see Table 3) but no effects on cognitive ties. Positive emotions and perceptions of shared responsibility play a role in generating affective ties beyond the social unit attribution process captured by the interaction effect of these variables. Thus, the core idea about social unit attributions in the theory is affirmed, but the evidence suggests a somewhat broader role for shared responsibility and positive emotions in the promotion of affective group ties. In addition, it is noteworthy that the results consistently indicate that group incentives have no effect on perceptions of shared responsibility even though members perceive more connection to the group with stronger group incentives.

Impact on Strength of Group Tie: Hypotheses 3a and 3b

Hypotheses 3a and 3b predict that affective ties will have stronger effects than cognitive ties on the capacity of groups to sustain membership and generate collective goods. This is tested by examining the effects of cognitive and affective ties on inclinations to leave the group and cooperation in a social dilemma, controlling for all antecedent variables. The last two columns of Table 3 contain the main results. As predicted, stronger affective ties increase both cooperation in a social dilemma and intent to stay in the group ($\gamma = .20, p < .001$; $\gamma = .60, p < .001$), whereas cognitive ties increase only the intent to stay in the group ($\gamma = .16, p < .001$). The impact of cognitive ties on intent to stay ($\gamma = .16$) is significantly smaller than the impact of affective ties ($\gamma = .60$), and a test for the difference in the size of the two effects is significant at $p < .01$. This supports Hypothesis 3a. Hypothesis 3b is also supported; the impact of affective ties on social dilemma contribution is
significant, but that of cognitive ties is not significant.\(^{15}\)

To conclude, the ANOVA and ML-SEM results provide support for the broad principles of the theory of social commitments. Greater task jointness generates stronger cognitive and affective group ties, a greater sense of shared responsibility, and thus social unit attributions of emotion. Importantly, the experimental condition with the highest task jointness produces the highest scores on virtually all relevant measures, and the no task jointness condition always generates the lowest levels. The high and low joint conditions do not differ in all cases, which may suggest that it does not take much task jointness to produce the sort of effects predicted by our theory; social interaction itself may be sufficient to generate a degree of jointness. Overall, comparing the role of task jointness to group-based incentives, task jointness plays a larger role as predicted by our theorizing. The more limited role for group incentive structures stands in stark contrast to the common, prevailing notion in organizational-related fields that group incentive schemes are the most important condition for promoting group ties and commitment to work organizations.

**Assessing Group-Level Goodness of Fit**

Overall, the data from the experiment support the hypotheses produced by the theory of social commitments. A secondary issue is whether or how well the model fits the data. Although no standardized measure of goodness of fit exists for multilevel structural equation modeling (SEM), there are some ways to access model fit. To check this, we aggregated the data from each group, treating the group mean on all measures as a single unit of observation (\(N = 120\)), and estimated a single-level SEM. In this model, the standardized root mean square residual (SRMR) = .083, and the Comparative Fit Index (CFI) = .80. These results indicate a marginal fit as fitness is typically indicated by \(\text{SRMR} < .05\) and \(\text{CFI} > .90\).

To further understand this, we used LISREL 7 to estimate each moment in the theoretical model to check the associated \(R^2\) values. Those \(R^2\) values are as follows: positive emotion (.022), shared responsibility (.73), affective tie to the group (.66), cognitive tie to the group (.75), social dilemma choice (.085), and intent to stay (.46). Overall, the data suggest that the source of the marginal model fit emanates from positive emotion and social dilemma choice. To strengthen model fit, future investigators may seek alternative ways to model these constructs and other ways to theorize the process.

**DISCUSSION**

Questions about the ties of individuals to social units have been central to sociology from its inception (Durkheim [1933] 1964; Parsons 1951; Simmel 1964; Weber [1918] 1968). For the classical scholars, the links between micro and macro phenomena boil down to whether these are based primarily on the interests and rationality of individual actors or the sentiments and norms of communities (e.g., Durkheim [1933] 1964). The former assumes individuals cognitively assess situations and make choices that are best for them. Group ties are important,
but these social units are purely instruments of individual gain. The latter assumes individuals enact and repeat established scripts, patterns, or recipes for producing a socially legitimate result. Our theory and research revisits this larger, more fundamental issue about the ties that people forge to social units and uses a small groups experiment to examine these broader issues empirically.

There are three general contributions of this research. First, the research reveals fundamental ways that people develop ties to a group and the behavioral consequences of such ties, namely, staying in the group and cooperating when presented with a social dilemma. The focus on and analysis of person-to-group ties distinguishes this research from most other work on social or relational ties (e.g., Hechter 1987; Lawler and Yoon 1993, 1996). Second, the research expands the scope of the theory of social commitments by demonstrating the impact of affective and cognitive ties in a four-person task group where people interact freely to accomplish a joint task. It is important to note that unlike research in exchange settings, actors reveal the effects of emotion on group ties in the absence of (prior to) information on their success at the task.16 Third, this research demonstrates the role of shared responsibility as a crucial condition for the development of affective group ties. This is the first explicit test of the notion that shared responsibility promotes social unit attributions of individual emotions and feelings from a joint task, namely, its moderating effect. Earlier evidence is only inferential or indirect.

16In related social exchange research (see Lawler et al. 2008; Lawler and Yoon 1996), success at the exchange task (i.e., repeated exchanges) cannot be separated from the affective process leading to commitment. In this current research, the emotional process occurs and is measured prior to information on task success. (see Lawler et al. 2008). In the following, we elaborate the contributions by highlighting several implications of the research.

The first implication concerns the role of affective and cognitive group ties. The prevailing theoretical principle in much sociological work is that group ties are fundamentally instrumental and self-interest based. Groups form, endure, and command commitment so long as they serve the interests of individuals within them. On a practical level, the implied advice is that if you are forming or leading a group, first and foremost, it is critical to provide individuals rewards and benefits that they value and align their individual interests with the group’s collective interests or goals. Our research qualifies this conventional wisdom about interest alignment by showing that affective ties generate more resilient group ties and these ties form through distinct mechanisms.

The second implication concerns the role of tasks that people accomplish in interaction with others. Tasks link social structures to interactions and interactions to structures. This paper emphasizes a particular dimension of tasks—their jointness or propensity to generate a sense of shared responsibility among individuals. This research shows that joint tasks have important effects, independent of structural incentives, on the propensity of people to form affective group ties. Perceptions of shared responsibility play a critical role. Interest alignment promotes a cognitive bond and reduces propensities to leave the group, but it does not necessarily foster a greater sense of shared responsibility or a proclivity to cooperate when social dilemmas arise.

The third implication, building on the second, concerns the conditions and mechanisms under which joint tasks and group incentives generate person-to-
group ties. The theoretical guidance here comes from a theory of social commitments (Lawler et al. 2009). The theory predicts that task interactions produce stronger affective group ties under two conditions. First, task interactions generate positive individual emotions. These feelings can arise from the task activity itself and are not necessarily contingent on the success of the task activity or actors’ knowledge of that success, as demonstrated here. Second, actors perceive a shared responsibility for the task. This sense of shared responsibility may stem from the structure of the task itself, an already given institutional definition of that task, or actors’ interpretation of the task as they undertake it. Shared responsibility transforms individual emotions or feelings into sentiments about the group. Importantly, this study explicitly tests this moderating role for the sense of shared responsibility and thus provides evidence for the core mechanism of the theory. Moreover, it does so in a context that approximates the interactions that occur in naturally occurring, everyday groups, committees, or teams. These two findings suggest that tasks that generate a sense of shared responsibility are an emergent force for social order in a broad array of groups (Lawler et al. 2015).

To assess the independent effects of joint tasks, the research orthogonally manipulated both the incentive structure (individual or group based) and jointness of the task. Theoretically, the most telling comparison, given the hypotheses, is between a context in which actors work side by side and complete the task independently (no task jointness) and a situation where actors interact freely and produce a single, joint task response (high task jointness). The comparison between these two conditions strongly supports our theoretical predictions. Actors with a joint task perceived closer connections to the group and developed stronger affective ties to the group. In the case of incentives, group-based incentives produced closer connections to the group than individual-based incentives but have no effects on affective group ties. In addition, the effects of task jointness and incentives on the strength of the group tie—intent to stay and cooperation in a social dilemma—are indirect. They operate differentially through the affective or cognitive ties. Affective ties reduce intentions to leave the group and increase inclinations to cooperate in a social dilemma with other group members, whereas cognitive ties produce effects on the intent to leave but not cooperation in a social dilemma. These effects are consistent with our theoretical predictions and the more general idea that affective ties provide a stronger person-to-group bond.

Our research also raises questions for future investigators. For instance, the degree of task jointness necessary for the development of affective group ties is an unresolved issue in the current study because there are few significant differences between high and low jointness conditions. It is quite possible that face-to-face interaction itself is sufficient to generate the levels of jointness and sense of shared responsibility that unleash the process theorized here (see Más and Dijkstra 2014). We did find that perceptions of shared responsibility were higher in the high joint condition than in the low joint condition, but this did not produce differences in affective ties or the behaviors that reflect stronger group ties. The issue of how face-to-face interaction, net of other factors, alters the process of developing group ties awaits further investigation.

The evidence indicates that group incentives play a more prominent role in producing cognitive rather than affective ties. However, it is important to acknowledge that affective and cognitive ties are
not completely distinct or separable. Any affective tie involves cognitive components, just as any cognitive tie is likely to have some underlying emotional elements. On an analytic level, affective and cognitive ties are more distinct than they likely are on an empirical level. Our study measured and statistically analyzed cognitive and affective pathways without necessarily eliminating their interrelatedness. While we believe IOS (Inclusion of Other in Self) is a good measure of a perceived tie to the group on conceptual grounds, future research should develop measures that are more empirically distinct, consulting the field of psychometrics.

Returning to the theme of social order, our theory and research, along with recent work by others (e.g., see Burke and Stets 2015; Heise, MacKinnon, and Scholl 2015; Turner 2015), points to an important overarching conclusion: one solution to the problem of social order is affectively laden and emotionally rich person-to-group ties. Recall our experimental groups engage in face-to-face interaction to solve a problem. People in such groups deal with uncertainty along many dimensions, for example, about an unfamiliar task, about each other’s skills or competencies given they have no history, or how to combine their competencies to generate a successful result. In such a context, social order must be socially constructed and engineered along the way. In the small groups literature, this process of construction is addressed implicitly in Bales’s classic work on emergent status structures and in expectation states theory (Berger, Cohen, and Zelditch 1972; Berger et al. 1977, 1992; Ridgeway 2011). Moreover, recent work argues that social order is generated or sustained by the subtle coordination of meanings (Rawls 2010), through mutual verification of identities (Burke and Stets 2009), or by the spread of positive emotions from microlevel experiences to meso- or macrolevel entities (Turner 2007). Of note, none of these processes necessarily require a social dilemma as the problem of order is usually framed (see also Lawler et al. 2015). Problems of social order can and do occur in the absence of a social dilemma. Social dilemmas are indeed important contexts for examining the order problem, but they are not the quintessential representation of the Hobbesian problem as often assumed. Problems of social order that occur in the absence of social dilemmas warrant more systematic attention by scholars, and as our research suggests, understanding the role of emotion and affect is likely to be crucial.

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SUPPLEMENTAL MATERIAL

Supplemental material for this article is available online.

REFERENCES


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