

Keeping Track of Needs and Inputs of Friends and Strangers

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Proceeding from the distinction between communal and exchange relationships drawn in previous work, it was hypothesized that keeping track of the needs of a friend would be greater than keeping track of the needs of a stranger and that keeping track of a stranger's inputs into a joint task would be greater than keeping track of the inputs of a friend. These hypotheses were tested in an experiment in which the number of times subjects looked at lights (which never changed) was the dependent measure. In the "needs" condition, a change in the lights meant the other person needed help (which the subject could not provide). In the "inputs" condition, a change in the lights meant the other had made a substantial contribution to a joint task. In support of the hypotheses, it was found that the number of looks at the lights in the "needs" condition was significantly greater when the other was a friend than a stranger, while the number of looks in the "inputs" condition was significantly greater when the other was a stranger than a friend.

A distinction has been drawn by Clark and Mills (1979; Mills & Clark, 1982) between communal relationships, in which members benefit each other on the basis of needs or to demonstrate general concern for each other's welfare, and exchange relationships, in which members benefit each other in response to specific benefits received in the past or expected in the future. Some of the most important support for this distinction has come from research demonstrating that (a) members of exchange relationships, but not communal relationships, keep track of individual inputs into joint tasks for which there will be a reward (Clark, 1984) and (b) members of communal relationships are more likely than members of exchange relationships to keep track of the other's needs if there is no clear opportunity for the other to reciprocate, even when they cannot respond to the other's needs (Clark, Mills, & Powell, 1986).

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The present study was designed with two purposes in mind. In the earlier work indicating that persons in communal relationships are more likely to keep track of the other's needs than persons in exchange relationships (Clark et al., 1986), keeping track of the other's needs was measured by how many times the subjects checked a box for notes from the other requesting help (Study 1) or looked at lights indicating whether the other was experiencing difficulty on a task (Study 2). It might be argued that high scores on these measures indicated something other than concern for the other's welfare, something more general. That is, the differences might have resulted from greater interest in *everything* about the other in a communal relationship.

In the present study we attempted to demonstrate that persons in communal relationships are more interested in keeping track of the needs of the other but not in *all* types of information about the other. To accomplish this, we investigated whether members of communal relationships would be more likely than members of exchange relationships to look at lights when the lights indicated whether the other had a need but not when the lights indicated whether the other had made a substantial contribution to a joint task for which there would be a reward.

Our second goal was to demonstrate that the Clark et al. (1986) finding of greater attention to needs in communal than in exchange relationships also occurs when ongoing, established communal relationships are contrasted with exchange relationships. In the Clark et al. (1986) studies, manipulations were used to lead subjects to desire either an exchange or a communal relationship with someone they were meeting for the first time. Moreover, to date our experimental program of research on the distinction between exchange and communal relationships has examined established communal relationships in only one series of studies (i.e., Clark, 1984). That is, Clark (1984) found not only that subjects led to desire a communal relationship were less likely to keep track of inputs into joint tasks than subjects led to desire an exchange relationship (Study 1) but also that members of ongoing friendships are less likely to keep track of inputs into such tasks than pairs of strangers are (Studies 2 and 3). In order to demonstrate that the effect found in the Clark et al. (1986) research on keeping track of needs also occurs in established communal relationships, in the present study we examined whether members of ongoing friendships would be more likely to keep track of each other's needs than pairs of strangers would.

Such a demonstration, of course, depends on the assumption that ongoing friendships do tend to be communal relationships – in other words, relationships in which people feel a special responsibility for the needs of the other and give benefits in response to those needs. This assumption seemed justified on the basis of prior studies that have indicated, for example, that people believe needs should be taken into account when money is divided between friends to a greater extent than when it is divided between strangers (Lamm & Schwinger, 1980, 1983) and that friends are perceived to be more obligated to help each other than strangers are (Bar-Tal, Bar-Zohar, Greenberg, & Herman, 1977). It is also supported by a finding that providing help in the form of confidant and emotional support is a particularly sensitive positive indicant of whether a relationship will become one that its partici-

pants refer to as a close friendship (Hays, 1985). Finally, it ought to be noted that the present study itself will provide a test of this assumption.

In addition to the two primary goals just outlined, because our experiment also included conditions allowing for a conceptual replication of the earlier finding that members of exchange relationships are more likely to keep track of individual inputs into joint tasks for which there will be a reward than members of communal relationships (Clark, 1984), we predicted that we would replicate those findings.

In sum, our two primary goals were to demonstrate that (a) although people in communal relationships are more attentive to the other's needs, they are not more attentive to *everything* about the other and (b) our earlier results revealing greater attentiveness to needs when subjects are led to expect a communal relationship than when they are led to expect an exchange relationship would be paralleled by a finding that people in ongoing communal relationships are more likely to keep track of each other's needs than strangers are. In addition, we expected to be able to conceptually replicate the Clark (1984) findings of greater attention to inputs into joint tasks in exchange than in communal relationships.

The specific hypotheses tested were:

1. Members of ongoing friendships will be more likely to keep track of each other's needs than pairs of strangers.
2. Pairs of strangers will be more likely to keep track of each other's inputs into joint tasks for which there will be a reward than members of ongoing friendships.

METHOD

Overview

Subjects in an experiment ostensibly on task performance were paired either with their friend or with a stranger who was the friend of a different subject. They were left to wait alone while the person with whom they were paired supposedly worked on a task. Subjects in the "needs" condition had been instructed that lights in their room would change whenever the other person needed help (which the subject could not provide). Subjects in the "inputs" condition had been instructed that the lights would change whenever the other made a substantial contribution to a joint task for which there would be a joint reward. The number of times the subject looked toward the lights (which never changed) was observed by an experimenter who was unaware whether the observed subject had been assigned to the "needs" or to the "inputs" condition.

Subjects

Forty-two college students, 28 males and 14 females, served as subjects and received either credit toward fulfilling a course requirement or \$3.00 in pay in exchange. Each subject signed up with a friend, and both members of each pair of friends were randomly assigned to either the "communal" (friends) or the "exchange" (strangers) condition. In addition, each subject was randomly assigned to either the

“inputs” or the “needs” condition (with the exception of members of the final few pairs, who, prior to arriving for the study, were assigned to the “inputs” or “needs” condition in such a way as to best balance the number of male and female subjects as well as the sex composition of pairs among the four conditions).¹ Two additional students were run, but they were not counted as subjects, nor were their data included in any analyses, because, as will be explained in more detail under Procedure, their behavior interfered with collection of the dependent measure. One of these subjects had been assigned to the communal/inputs condition, the other to the communal/needs condition.

Procedure

After signing up for a questionnaire study on friendship along with a friend, each subject was contacted by phone and informed that the study on friendship had been completed. However, the caller continued, subjects were still needed for another study, on task performance. The experimenter secured each person’s consent to participate in the new study. Then that person and his or her friend were scheduled to participate in the new study, either together or paired with the members of a different pair of friends.²

Upon arrival, each of the two scheduled subjects was greeted by the male experimenter and taken to a different room. The subject to be run first was taken into the experimental room and seated at a desk facing one wall. Mounted on the lid of a mailbox on the opposite wall from the desk were two small lights, one green and one red. The experimenter began by explaining that the research being conducted that day was part of a collaborative project between some faculty members in the psychology department and some faculty members in the university’s business school. It involved studying workers’ strategies and performances. One factor that might influence strategy selection on tasks was whether a person worked in the same room with another person or in a separate room. During the current session, the two subjects would be working in separate rooms.

At this point the experimenter handed the subject a packet of pages filled with rows of numerals and a set of written instructions in a manila folder. He explained that the task involved searching the matrices for certain sequences of four digits, which were specified on a separate list that would be provided shortly. The four-digit numbers were supposedly embedded horizontally, vertically, or diagonally, as well as forward or backward, in the matrices. The subject and his or her partner would take turns at this task. The partner was to work on his or her packet first and search for numbers for 15 min. Then the subject would work on a different packet for 15 min. While the partner took his or her turn, the subject was to simply relax in his or her room. There was a stack of magazines in the room, and the subject was told to look through them if he or she wished. The subject was given a set of written instructions to read, and the experimenter left the room, supposedly to instruct the other subject.

The first half of the written instructions reiterated what the experimenter had just said; the second half was used to manipulate the “needs” versus “inputs” variable. Because the instruction sheet was placed in a manila folder that the experimenter

picked up from a stack of randomly ordered folders, the experimenter was able to remain unaware whether the subject had been assigned to the “needs” or the “inputs” condition.

In the “needs” condition, the second section of the instructions, entitled “Explanation of the Lights,” noted that in a different condition of the study the experimenters were interested in keeping track of when participants felt they were having difficulty with the task and needed help. This was done by having the participant press a button if and when that participant felt he or she was in need of help. Each time the other person felt he or she was in need of help, he or she would press a button, a green light in the subject’s room would turn off, and a red light would turn on. The experimenter could then record exactly when this took place. All this, the instruction sheet explained, was irrelevant to the subject’s version of the task, except that for purposes of control the experimenter wanted to keep conditions as comparable as possible. For that reason, even though the lights were not needed that day, the other person would press a button every time he or she needed help, and the red light would then come on in the subject’s room. In the conditions being currently run, though, the instructions stated, it was not necessary for the subject to observe the lights or to do anything should they change from green to red.

In the “inputs” condition, the first section of the instructions was identical to that in the “needs” condition. The second section noted that it was important to keep subjects’ motivation high in order for them to do well on the task. Therefore, a reward based on the subject’s and his or her partner’s performance would be given after their completion of the task. The size of the reward would be determined by how well they did as a pair. For every 10 number sequences each person found, the pair would receive a monetary bonus. At the completion of the task, the person “with a red star at the top of his/her page” would be given the entire reward to divide. Who had this star supposedly had been determined by the flip of a coin. Because it was not specified on which page this star would appear, it was ambiguous to the subject whether the subject or the partner would be dividing the reward. Following this was a section labeled “Explanation of the Lights.” It explained that in a different condition of the study the experimenters were interested in recording exactly when participants found 10 sequences on a single page. When the other person found 10 sequences on a single page, he or she would press a button, the green light in the subject’s room would turn off, and the red light would turn on. The experimenter could then record exactly when this took place. All this was supposedly irrelevant to the subject’s version of the task except that for purposes of control the experimenter wanted to keep conditions as comparable as possible. For that reason, even though the lights were not needed that day, the other person would press a button every time he or she found 10 sequences on a single page, and then the red light would come on in the subject’s room. In the conditions currently being run, though, it was not necessary for the subject to observe the lights or to do anything should they change from green to red.

The subject was left in the experimental room to wait while the experimenter supposedly went next door to start the partner on his or her task. In fact, the experimenter had previously given the first subject’s partner an “individual” filler task

TABLE 1 Mean Number of Looks at the Lights

<i>Meaning of Lights</i>	<i>Relationship Type</i>	
	<i>Friend</i>	<i>Stranger</i>
Inputs	Mean = 1.31 SD = 2.14 Range = 0-7 (<i>n</i> = 13)	Mean = 3.78 SD = 2.49 Range = 1-8 (<i>n</i> = 9)
Needs	Mean = 4.36 SD = 5.57 Range = 0-20 (<i>n</i> = 11)	Mean = 1.00 SD = 1.22 Range = 0-3 (<i>n</i> = 9)

to complete, after which, that other subject was led to believe, there would be another task involving both subjects. Instead of going to the partner's room, the experimenter immediately entered a room adjacent to the experimental room and observed the subject through a one-way mirror for 10 min (beginning within 10 sec of leaving the experimental room). The experimenter counted the times the subject turned away from his or her desk to observe the lights on the opposite side of the room. To reduce potential suspicion, all but the very edge of the one-way mirror was covered with a poster on the subject's side. After 10 min the experimenter reentered the experimental room, administered a suspicion check, and then debriefed the subject.

After the first subject had been run, the experimenter escorted him or her to a different room, brought the second subject into the experimental room with the lights, and repeated the same procedure with that subject. No subject indicated suspicions at the conclusion of the study.

As mentioned above, two students who were run were not counted as subjects because their behavior prevented the experimenter from collecting the dependent measure as planned. During the 10-min observation period, these two subjects lifted the top of the mailbox (thereby obscuring the lights mounted on the lid) and looked into the box.

RESULTS

The dependent measure was the number of times the subject looked at the lights. The mean number of looks at the lights in each condition appears in Table 1. As can be seen, the means fell in the expected pattern. As predicted from our first hypothesis, friends looked at the lights more often than strangers did in the "needs" condition but not in the "inputs" condition. As predicted from our second hypothesis and the results of Clark (1984), in the "inputs" condition strangers looked at the lights more often than friends did.

A test for homogeneity of variance between the four conditions revealed a significant departure from equality of variance, $F(\text{MAX}) (4, 12) = 20.70, p < .01$. Therefore, prior to conducting further analyses, the data were subjected to a transformation of the form $x = \log(x + 1)$ followed by a check to see whether there were still significant departures from homogeneity of variance. There were not, $F(\text{MAX}) (4, 12) = 2.22, n.s.$ A 2×2 (Relationship Type \times Meaning of Lights) between-subjects analysis of variance was then conducted on the transformed data. As expected, this analysis of variance yielded a significant interaction between Relationship Type and Meaning of Lights, $F(1, 38) = 16.35, p < .001$. Neither the main effect of Relationship Type, $F(1, 38) = 0.04$, nor the main effect of Meaning of Lights, $F(1, 38) = 0.03$, was significant. The analysis of variance was followed by planned comparisons to test our specific predictions. As expected, the difference between the behavior of friends and strangers in the "needs" condition was significant, $F(1, 38) = 7.15, p < .01$, as was the difference between the behavior of friends and strangers in the "inputs" condition, $F(1, 38) = 9.31, p < .01$.

It might be asked whether the observed effects were due to one or two extreme scores. Whereas the range of number of looks for 41 of the 42 subjects was 0 to 8 looks, there was one extreme score (20 looks) in the communal/needs condition. However, even if this score is truncated to a score of 8 (the next-highest score) and the 2×2 ANOVA on the transformed data is repeated, the predicted interaction between Relationship Type and Meaning of Lights remains significant, $F(1, 38) = 17.02, p < .001$. Moreover, the planned comparisons between the communal/inputs and exchange/inputs conditions, $F(1, 38) = 10.62, p < .01$, and between the communal/needs and exchange/needs conditions, $F(1, 38) = 6.70, p < .01$, also remain significant.³

DISCUSSION

The results provide support for the hypothesis that keeping track of the needs of a friend will be greater than keeping track of the needs of a stranger. When a change in the lights meant the other needed help, the number of looks at the lights was significantly greater when the other was a friend than when the other was a stranger. It is important to note that the subjects were not able to provide help to the other in the "needs" condition.

As mentioned above, this study had two goals. One was to show that our earlier finding (Clark et al., 1986) that subjects desiring communal relationships are more likely to keep track of the other's needs than subjects desiring exchange relationships if there is no clear opportunity for the other to reciprocate was not due to greater interest in *everything* about the other in a communal relationship. The finding in the present study that friends were significantly more likely than strangers to look at the lights when a change meant that the other had a need but *not* when it meant the other had made a substantial contribution to a joint task rules out the interpretation that persons in a communal relationship are more interested in everything about the other. This, of course, does not mean that needs are the only things about the other to which members of communal relationships will be more likely to attend than members of

exchange relationships. For instance, our theoretical position would also lead us to expect them to be more attentive to such things as the other's liking for them and the other's attentiveness to *their* needs (both of which might indicate whether the other shared the subject's interest in a communal relationship). Our point is simply that the greater attention to needs when a communal relationship is desired, observed by Clark et al. (1986), is not indicative of communal subjects' indiscriminate interest in everything about the other.

Our second goal was to show that the Clark et al. (1986) finding of more attention to the other's needs when a communal rather than an exchange relationship was expected would also occur in ongoing, established friendships (assumed to be communal in nature), compared with relationships between strangers who had no reason to expect to see each other again (assumed to be exchange in nature). Therefore, rather than manipulating desire for a communal or an exchange relationship as in past studies, the behavior of members of existing friendships was contrasted with that of pairs of strangers. The finding that members of ongoing friendships looked at the lights more often in the "needs" condition than pairs of strangers provides valuable evidence of keeping track of needs in ongoing communal relationships. At the same time, it provides evidence supporting our initial assumption that friendships do tend to be communal relationships while relationships between strangers do not. This finding also fits well with a wider prior literature on friendship supporting the assumption that friendships tend to be communal relationships. That literature shows, for instance, that people are more likely to say needs ought to be taken into account when money is divided between friends than when it is divided between strangers (Lamm & Schwinger, 1980, 1983), subjects feel friends are more obligated to help them than strangers are (Bar-Tal et al., 1977), observers react to a friend's success with more positive feelings and failure with more negative feelings than they do to a stranger's success or failure (Finney & Helm, 1982), and providing help in the form of confidant and emotional support is a particularly sensitive indicant of whether a relationship develops into one that its members refer to as a close friendship (Hays, 1985).

In addition to these primary goals, the present study included conditions permitting a conceptual replication of an earlier finding (Clark, 1984) that members of exchange relationships would be more likely to keep track of each other's inputs into a joint task for which there would be a reward than members of communal relationships. The results in the two "inputs" conditions did fall in the predicted pattern, with a significantly greater number of looks at the lights when the other was a stranger than a friend. Thus, the secondary goal of providing a conceptual replication of the Clark (1984) findings was also met.

NOTES

¹Following assignment of subjects to conditions, the communal/inputs condition contained seven male subject/male other pairs, two male subject/female other pairs, two female subject/male other pairs, and two female subject/female other pairs; the communal/needs condition, eight

male/male, one male/female, one female/male, and one female/female; the exchange/inputs condition, three male/male, two male/female, one female/male, and three female/female; and the exchange/needs condition, three male/male, two male/female, two female/male, and two female/female.

²Although we did not include a specific manipulation check on whether our pairs of resulting friends really were more likely to be friends than our pairs of resulting strangers, we have used an identical procedure for sign-up/assignment of subjects to conditions in another study in which such a check was included (Clark & Muchant, 1988). At the conclusion of that study subjects orally rated the closeness of their relationship with a partner on a 1 (*not at all close*) to 7 (*very close*) scale. A *t* test revealed that the closeness ratings in the friends' condition ($M = 5.48$) were significantly higher than those in the strangers' condition ($M = 1.06$), $t(29) = -19.76, p < .0001$.

³Questions also might be raised regarding whether there were any effects of sex of the subject, sex of the other, and/or sex composition of the pair. No predictions regarding these variables were made; nonetheless, an additional 2 (Sex of Subject) \times 2 (Sex of Other) \times 2 (Relationship Type) \times 2 (Meaning of Lights) analysis of variance was performed on the transformed data. It revealed no significant main or interaction effects (nor any with a probability level below .10) involving sex of the subject or sex of the other. In connection with the lack of such effects, however, it should be noted that an insufficient number of subjects were included in the study to test the effects of four different variables and their interactions with much power. Consequently, any firm conclusions regarding how sex of the subject, sex of the other, or sex composition of the pair (tested by the interaction of sex of the subject and sex of the other) might influence (or not influence) the observed pattern of results should await further research.

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