A review of the literature on reciprocal self-disclosure indicates that scholars have limited their investigations to one aspect of disclosure—intimacy—while recent research suggests that disclosure is a multidimensional phenomenon. A study was conducted to assess the possibility of reciprocation of intimacy, amount, and valence (positive or negative nature) of disclosure. From this assessment, six combinations emerged: (1) intimacy/intimacy, (2) intimacy/amount, (3) amount/amount, (4) intimacy/valence, (5) amount/valence, and (6) valence/valence. The relationship between these forms of reciprocity and evaluations of personality and communication competence as well as uncertainty reduction were then investigated using 126 college students. The subjects were asked to get acquainted with a new classmate and then to complete self-report measures of disclosure and evaluation. The results of a canonical correlation indicated that two forms of reciprocity resulted in positive evaluations of communicative competence: intimacy/amount and intimacy/valence. (FL)
THE IMPLICATIONS OF MULTIPLE DIMENSIONS OF SELF-DISCLOSURE
FOR THE NATURE AND FUNCTIONS OF RECIPROCITY IN INITIAL INTERACTIONS

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Interest in structural aspects of human interaction has recently become paramount to communication scholars. Investigations of control patterns (Courtright, Millar, & Rogers, 1980), talk-silence sequences (Cappella, 1979), and interaction patterns (Fisher, Glover, & Ellis, 1977) are indicative of this recent trend. Although frequently overlooked, one type of communication structure has been subject of many studies over the last 20 years: self-disclosure reciprocity. This paper examines the nature and function of this aspect of communication which also organizes interpersonal communication.

RECIROCITY RESEARCH

One of the most consistent findings in self-disclosure research is that of reciprocity. If one person increases the intimacy of his or her disclosure, the other member of a dyad will increase the intimacy of his or her disclosure. Likewise, if a person decreases the intimacy of his or her disclosure, the other member will also decrease the intimacy of his or her disclosure. The occurrence of this pattern has been observed in contexts ranging from face-to-face encounters to computer mediated interaction (Sermatt & Smyth, 1973).
Chaikin and Derlega (1974) provided evidence that observers are sensitive to this norm. Negative personality evaluation accrued to those individuals who failed to reciprocate the intimacy of an initial disclosure. This effect is observed even if the initial discloser is disliked (Derlega, Harris, & Chaikin, 1973).

We think this conclusion about self-disclosure reciprocity is deceptively simplistic for several reasons. First, there is evidence that disclosive messages are characterized by many traits other than intimacy, e.g., length, intensity, positive-negativeness. One study indicated that reciprocation of language intensity was as important as reciprocation of disclosure intimacy in affecting personality judgments (Bradac, Hosman, & Tardy, 1978). Other studies have demonstrated that reciprocity is qualified by variables such as the timing of the disclosure (Jones & Gordon, 1972; Miell, Duck, & LaGaipa, 1979) and the personalism of the disclosure (Jones & Archer, 1976). Hence, it appears that the reciprocity norm is more complex than originally stated. Aspects of disclosure other than intimacy are also important.

Second, there is evidence that under some circumstances one may not have to reciprocate a particular dimension of disclosure. Berg and Archer (1980) found that an empathic response was evaluated to be just as appropriate as an intimate response to an initial high-intimacy message. Morton (1978) found that one could reciprocate the revelation of private and personal information with statements of strong personal feelings or opinions. Perhaps one may respond to a disclosing other in many ways, all of which are equally appropriate. Previous research may have
overlooked these alternatives by concentrating on only one appropriate response, reciprocity of intimacy, and one inappropriate response, failure to reciprocate.

Reciprocity and Dimensions of Disclosure

The research on reciprocity has, for the most part, overlooked the fact that disclosure is a multidimensional phenomenon (Chelune, 1975; Gilbert & Whiteneck, 1976, Wheeless, 1976). Scholars have not considered the patterns of reciprocity among aspects of disclosure other than its intimacy. For example, many studies of reciprocity have used a common procedure in which subjects are asked to select discussion topics from a list of intimacy-scaled items (e.g., Davis, 1977). This paper explores the possibility that reciprocity is a multidimensional phenomenon.

The most complete typology of self-disclosure dimensions is that of Wheeless (1976). His initial factor analytic studies, as well as subsequent investigations of their predictive validity (Wheeless & Grotz, 1976; 1977), reveal five consistent dimensions: intimacy (depth), valence (positive-negative), amount, intent, and honesty-accuracy. Of these, three are candidates for self-disclosure reciprocity: intimacy, amount, and valence. The remaining two dimensions, intent and honesty-accuracy, are characteristics of the encoding of the disclosure. It seems to us that the concept of reciprocity can refer only to characteristics of messages and not of encoding behaviors.

With three dimensions of disclosure, six patterns of disclosure are possible.
1. **Intimacy-Intimacy Reciprocity.** The most researched aspect of self-disclosure reciprocity is the intimacy of that interchange. Experimental (Cozby, 1972; Rubin, 1975) and descriptive (Jourard & Landsman, 1960; Jourard & Richman, 1963) studies indicate that intimacy is reciprocated.

2. **Intimacy-Amount Reciprocity.** One response to an intimate disclosure may be to increase the amount of one's disclosure. This seems to be a plausible strategy in initial interactions since there is a norm against disclosing highly intimate information (Gilbert, 1977). Hence, if one feels uncomfortable reciprocating an intimate disclosure, one might merely disclose more. Likewise, if one individual is disclosing more information than the other, the brief discloser may reveal more intimate information in order to equalize their exchange.

3. **Intimacy-Valence Reciprocity.** Valence, as noted above, refers to the positive or negative nature of the disclosure. Although the research is not entirely consistent, it appears that negative revelations are considered inappropriate in initial interactions (Gilbert & Horenstein, 1975). On the other hand, Hecht (1979) found that responses to a high intimacy message were more positive than ones to moderate or low intimacy messages. Thus, one might be able to respond to a high intimacy message with a positively valenced message rather than with another high intimacy message.

4. **Amount-Amount Reciprocity.** Another commonly discussed aspect of disclosure is amount. A study by Jourard and Jaffe (1970) indicated that dyadic interactants matched disclosures in terms of length and frequency.
Similar results were obtained by Levin and Gergen (1969). Hence, it might be expected that the amount of disclosure would be reciprocated.

5. Amount-Valence Reciprocity. Positive disclosures by one individual in a dyad may focus the conversation on that person. Rather than minimizing the importance of these statements by matching the valence, an individual might respond merely by talking more about one's self. Or, one may find that negative disclosures by one individual make the other less willing to become involved in the relationship, and hence disclose less information. No studies to our knowledge have dealt with this sequence of disclosures.

6. Valence-Valence Reciprocity. The revelation of positive information about one's self may make it more difficult for the other to disclose negatively. Dalto et al. (1979) found that subjects were more attracted to individuals who made positive or desirable revelations about themselves. If one is attracted to another, then an acceptable way of reciprocating this attraction is to make positively valenced disclosures.

This study attempts to assess these patterns of disclosure. Do they constitute appropriate forms of reciprocity? What are their interpersonal consequences?

Evaluative Consequences of Reciprocity.

Self-disclosure and the reciprocity of self-disclosure have been hypothesized to have important consequences. Jourard (1971) claimed that self-disclosure is a means to achieve a healthy personality while others (Altman & Taylor, 1973; Berger & Calabrese, 1975) contended that reciprocity of self-disclosure is one factor closely related to the development
of personal relationships. In this study three types of evaluational consequences are investigated.

The first consequence is assessment of another's personality. Several studies (Chaikin & Derlega, 1974; Bradac, Hosman, & Tardy, 1978) have demonstrated that self-disclosure reciprocity is related to personality evaluations. Chaikin and Derlega found, for example, that an individual who responds to an initial low-intimacy disclosure with a high-intimacy disclosure is perceived to be "madadjusted." An individual's low-intimacy response to an initial high disclosure is perceived to be "cold" or "aloof." Such evaluational consequences may have important effects on relationship development.

Most of the previous work exploring these evaluational consequences have employed a unidimensional conceptualization of disclosure. These studies have looked only at reciprocity of intimate messages. One issue which remains unaddressed is whether these personality evaluations arise with other types of reciprocity. Does failure to reciprocate the valence of another's disclosure, for example, produce severe evaluations of one's personality?

A second consequence of self-disclosure reciprocity is evaluation of communicative competence. Communicative competence may be defined as the extent to which one is perceived to be rewarding and enjoyable (Wiemann, 1977). Duck (1973) has argued that such evaluations may be important to the development of interpersonal relationships. Previous research indicates that self-disclosure reciprocity is related to perceptions of communicative competence (Hosman & Tardy, 1980). Whether one reciprocates or fails to
reciprocate another's disclosure may influence others' perceptions of the satisfactions derived from current or future interactions. This issue has not been extensively examined. It is unclear whether reciprocation of different dimensions of disclosure would produce differing evaluations of communicative competence.

A third consequence is uncertainty reduction. This concept refers to the process of gaining information about another individual and improving one's ability to make predictions about the other's attitudes, beliefs, and values. Berger and Calabrese claim the reciprocity of self-disclosure serves to reduce the uncertainty between two communicators. This claim has been directly investigated only in simulated interactions (e.g., Berger, Gardner, Parks, Schulman, & Miller, 1976). In addition, Berger and Calabrese employ a unidimensional conceptualization of self-disclosure reciprocity. More specifically, uncertainty reduction occurs through the process of reciprocating intimate information. Given the multidimensional nature of self-disclosure, though, an important issue seems to be whether reciprocity of other dimensions are equally effective in reducing uncertainty.

Perceived and Actual Reciprocity

Two concepts help clarify the ways in which reciprocity relates to the members of a dyad. These are actual reciprocity and perceived reciprocity (Pearce, Sharp, Wright, & Slama, 1974). Actual reciprocity refers to the similarity between two persons' reported levels of disclosure, and perceived reciprocity refers to the similarity between an individual's reported level of disclosure and his or her perceptions of another's disclosures to him or her.
These two perspectives have been overlooked in most research on self-disclosure reciprocity. Many recent studies (Archer & Burleson, 1980; Brewer & Mittelman, 1980; Brooks, 1974; Dalto, Ajzen, & Kaplan, 1979; Davis, 1976, 1978; Davis & Skinner, 1974; Derlega, Harrie, & Chaikin, 1973; Kohën, 1975; Lynn, 1978; Won-Doornick, 1979) investigated only actual reciprocity. Typically, these studies determine reciprocity on the basis of the similarity between participants' selections from a list of intimacy-scaled topics. They do not assess whether the participants perceive the topics to be intimate or whether they perceive the disclosures of their partners to be as intimate as the scaled values would indicate. Furthermore, these studies do not assess the extent to which the participants perceive any similarity between their own disclosure and that of the other. Only one study (Pearce et al., 1974) used these two perspectives in research on self-disclosure reciprocity. Using Jourard's Self-Disclosure Questionnaire, they found that perceived reciprocity was greater than actual reciprocity. This study indicates that the distinction between these two perspectives on reciprocity should be recognized. Unfortunately, the Pearce et al. study is limited in that the Jourard questionnaire is a unidimensional measure of self-disclosure. It does not reflect the multidimensional nature of reciprocity as previously discussed. Thus, it would also be interesting to examine the extent to which these two perspectives on reciprocity are related to the various dimensions of self-disclosure and to their consequences. Similarity or dissimilarity within particular perspectives may have different evaluation consequences.
METHOD

Subjects

The subjects were 126 volunteer students enrolled in communication classes at a southern university. Ages ranged from 17 to 50 with a median of 19.85.

Procedure

On the first day of class, students were instructed to introduce themselves to an assigned partner and interview one another so that each student could introduce his or her partner to the class. They were instructed to become acquainted by talking about their relationships with two other people. In addition they were informed that their conversations would be tape-recorded. The probability of future contact with their partner was emphasized by the experimenters.

Measures

Following the conversation, volunteers completed a booklet containing instruments designed to assess their own self-disclosure, perceptions of the partner's self-disclosure, evaluation of the partner's communicative competence and personality, and a self-report personality scale. All scales were randomly ordered except for the personality scale which always came last. Each of the self-disclosure instruments consisted of 15 items drawn from Wheeless (1976), three for each of the five dimensions: intent, valence, intimacy, amount, and honesty-accuracy. Items were modified so that they assessed disclosure in the immediate conversation. Communicative competence evaluation scales were drawn from Wiemann (1977) while the personality scales were drawn from Hosman and Tardy (1980). Clatterbuck's CLUE-7 was
used to operationalize the uncertainty construct (Clatterbuck, 1979). All of the scales have shown high degrees of reliability as well as discriminant validity.

The reciprocity index was formulated by averaging the standard scores for the items constituting each dimension of disclosure and then taking the absolute value of the difference between the scores for two dimensions. A low score indicates a high degree of agreement in the two disclosures while a high score indicates a lack of reciprocity.

This procedure yields nine different reciprocity scores, one for every combination of the intimacy, valence, and amount of one member of the dyad with the intimacy, valence, and amount scores of the second one. Since three of these scores are redundant, e.g. intimacy of person A with valence of person B on one hand and valence of person A with intimacy of person B on the other, an average score was computed for the conceptually identical pairings.

The reciprocity indices for the perceived perspective were based on each subject's report of his and the partner's disclosure. The index for the actual reciprocity perspective utilized the separate self-reports of each member of the dyad. In other words, the dyad rather than the individual was the unit of analysis.

In those analyses requiring the use of the dyad as the basic unit, a dyadic measure of outcome was also required. Hence, an average uncertainty, communicative competence evaluation, and personality evaluation was computed by averaging the scores of the two members of each dyad.

Analysis

The questions addressed in this study required that we assess the
relationship between several indices of reciprocity and outcome variables. Canonical correlation, a statistical technique for detecting and measuring the relationship among variables in one set with those in another was employed. Two separate canonical correlations, one for each of the two perspectives, were conducted.

Interpretation of significant functions will be made by observation of the canonical structure matrix (Levine, 1977). This matrix reports the correlations of the original variables with the canonical variates. False interpretation of suppressed coefficients due to intercorrelated items, which is possible when examining the canonical coefficient matrix, is thus avoided.

RESULTS

Measure Reliability

Alpha reliability coefficients (Cronbach, 1951) were computed to assess the reliability of the scales comprising the reciprocity measures. These were computed for subjects' own reported self-disclosure and their perceptions of the other's disclosure. The reliabilities for the amount, valence, and intimacy of subjects' reported self-disclosure were .50, .70, and .80, respectively. The reliabilities for the amount, valence, and intimacy of subjects' perceptions of the other's disclosure were .38, .69, and .83, respectively. In both cases, the amount scale fell below acceptable standards. Omitting one of the three items would not have improved the reliability of the remaining two-item scale. Since the concept of amount was crucial to our assessment of the multiple dimensions of reciprocity, we decided to utilize the three-item scales even
though their reliabilities were less than desirable.

The same coefficients were computed to assess the reliability of the personality evaluation, communicative competence, and CLUES-7 instruments. The reliabilities for these three instruments were quite adequate, .80, .86, and .92 respectively.

**Canonical Correlation Analyses**

The canonical correlation analysis between the perceived reciprocity scores and the outcome measures produced no significant relationships ($R_c = 0.32; W_{ilk} = 0.82; \chi^2 = 23.00; df = 18; p < .23; power (medium effect size) = 0.44$). The canonical correlation analysis between the actual reciprocity scores and the outcome measures revealed one significant function ($R_c = 0.55; W_{ilk} = 0.56; \chi^2 = 29.90; df = 18; p < .04; \phi' = 0.26$).

The structure loading matrix (Table 1) indicated that amount-intimacy reciprocity (.65) and valence-intimacy reciprocity (.75) were most highly associated with perceived communicative competence (.90). This relationship indicates that reciprocation of high-intimacy disclosures with high amount or reciprocation of low-intimacy disclosures with low amount is related to perceptions of communicative competence. Likewise, reciprocation of low-intimacy disclosures with positive disclosures or reciprocation of high-intimacy disclosures with negative disclosures is related to perceptions of communicative competence.
DISCUSSION

The results of this study revealed two important conclusions. First, the norm of reciprocity is much more complex than originally conceived. It appears that the matching of different dimensions of disclosure results in positive outcomes. It is important, though difficult, to assess the overall pattern of our results. We found that some forms of reciprocity affect outcome measures while others do not. Specifically, low-intimacy/low amount, high-intimacy/high amount, negative valence/high intimacy, and positive valence/low intimacy combinations were characterized by attributions of communicative competence. Recognizing that there are general norms against negative and intimate disclosures in initial interactions, two of the above combinations should be common occurrences (low amount/low intimacy; positive valence/low intimacy). Hence, their manifestation should not result in attributions of incompetence.

The other two forms of disclosure reciprocity (high-intimacy/high amount; negative valence/high-intimacy) appear to involve a process of stabilization. When intimate or negative information is revealed in the dyad, tension may result. The normal sequencing of information has been violated (Berger, Gardner, Clatterbuck, & Schulman, 1976). This violation may make a subsequent violation through reciprocation of high intimacy or negative valence all the more inappropriate. At the same time, to leave one individual speaking intimately or negatively about himself without reciprocating the trust indicated by those disclosures could result in negative evaluations. One might stabilize the intimate disclosure by giving more information and the negative one by becoming more intimate.
Hence, attributions of communicative competence result when a dyad confronts an unexpected behavior and responds not by increasing the inappropriate behavior, but by subtly offsetting it.

Somewhat surprising is our failure to find any relationship between reciprocation of intimacy and the evaluational outcomes. This failure to find such a relationship could be accounted for in several ways. It may be as Cozy (1973) suggests: experimental settings artificially influence the perceived appropriateness of intimate disclosures. Hence, the use of a more naturalistic setting may constrain communicative behaviors less. Or, when engaged in an initial interaction, reciprocation of intimacy may be a less salient strategy than others. Reciprocation of intimacy requires some mutual trust, and this condition is not likely to be present in initial interactions. Furthermore, in initial interactions the appropriate behavior is to exchange low-intimacy messages, but a conversation composed of these types of messages may become boring. Speakers could therefore select alternative strategies in order to keep the conversation interesting.

That the uncertainty measure failed to relate to any form of self-disclosure reciprocity is consistent with a study by Hosman and Tardy (1980). This experimental study found that attributions of a person's predictability were not affected by their failure to reciprocate the intimacy of a previous speaker. It may be the case that reduction of uncertainty is more a function of the amount and type of information revealed rather than of the pattern of its revealment.

This failure to find a stronger relationship between reciprocity of
self-disclosure and uncertainty reduction points to a potential problem with Berger and Calabrese's (1975) theory. This problem revolves around Berger and Calabrese's use of a unidimensional conception of self-disclosure. Their assumption that self-disclosure only involves the sharing of intimate information is questionable. Given the multidimensional nature of self-disclosure, and speakers' abilities to reciprocate disclosure along these various dimensions, it becomes increasingly unclear how these various patterns of reciprocity are related to uncertainty reduction. Uncertainty theory needs to be reformulated within the framework of a multidimensional picture of self-disclosure reciprocity.

The second major conclusion revealed by this study was that the actual reciprocity in a dyad had a greater relationship with the evaluational consequences than did perceived reciprocity. This may indicate that subjects are not good judges of others' behaviors. Perhaps more time than was available is required for accurately assessing another's disclosures. This finding is consistent with Cappella's (1976) observation that actual consensus precedes coordination of perspectives. As he indicated, successful attempts at coordination of actual behavior are precursors to perceived similarities between one's own behavior and perceptions of the other's behavior. In this study a similar circumstance could have arisen. People were presumably attempting to coordinate their actual levels of reciprocity, and this success or lack of it was related to the evaluational outcomes. Perceived reciprocity may not have developed, and hence was not related to the evaluational outcomes. At a more theoretical level, however, these results indicate that reciprocity is more than merely
an intrapersonal phenomenon. Rather, it is a function of two interacting individuals.

Two limitations of this study should be noted. First, the alpha reliability coefficients for the amount measures were unacceptably low. This could account for the failure to find amount and amount reciprocity being related to the evaluational consequences. Second, the failure to find a significant canonical relationship between the perceived reciprocity measures and the evaluational consequences may be due to the low power of the analysis. Thus, any conclusions drawn from this analysis should be interpreted with caution.

Since many of our explanations of these results are speculative, one should recognize the necessity of further research. Our findings do indicate that this problem is an important and complex one. We are currently addressing these same questions by using content analytic rather than self-report measures of disclosure. Subsequent studies might assess the relative effectiveness of these strategies through experimental means. Instead of utilizing disclosure topics scaled for intimacy, ones scaled for amount and valence should also be utilized. The use of these strategies by individuals might also be investigated. Are there systematic variations among individuals in their reactions to disclosure? In other words, are there identifiable strategies for reacting to self-disclosure? These questions are important for understanding the nature and function of disclosure reciprocity.
1If in dyad n, person A has a score of 1 on the amount scale and person B has a score of 1 on the intimacy scale, the reciprocity score will be 0. Or, if person A and person B have scores of 0, the reciprocity score will be 0. If person A has a score of 1 and person B has a score of 0, the reciprocity score will be 1. Or, if person A has a score of 0 and person B has a score of 1, reciprocity equals 1. Since low scores indicate reciprocity, one might think this scale actually measures nonreciprocity. This term was rejected because we think it is unnecessarily confusing.

2Factor analysis of the disclosure measures for the dimensions of interest revealed that the items loaded as expected.
TABLE 1
THE CANONICAL CORRELATION ANALYSIS
FOR ACTUAL RECIPROCITY

<table>
<thead>
<tr>
<th>SET ONE</th>
<th>First Canonical Variate</th>
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<tr>
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<tr>
<td>Valence-Valence</td>
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<td>Amount-Valence</td>
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<tr>
<td>Valence-Intimacy</td>
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</table>

<table>
<thead>
<tr>
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</thead>
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<tr>
<td>Communicative Competence</td>
</tr>
<tr>
<td>CLUE-7</td>
</tr>
</tbody>
</table>
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