This study explored whether an interaction analysis of ongoing communication can be useful in describing the process of self-disclosure. Eight women were assigned to dyads: two acquaintance dyads (subjects were acquainted through a small class in communication and had known each other for two months), and two friendship dyads (subjects had been friends for about a year, and had participated in one session of a sensitivity group together). The four dyads engaged in free, unstructured discussion for 30 minutes on four separate days. They were instructed to talk about themselves, so they might know more about each other. A unit was defined as the introduction of a new topic or an interruption by another participant. Possible units consisted of the following: question about the other; reinforcement of the other; religion; marriage and children; dating, sex, love; parental family; physical condition and appearance; money and property; politics and social issues; general emotions; interests, hobbies, and habits; relations with others; personal values; school and work; and demographic and biographical characteristics. The results indicate that self-disclosure can be studied in ongoing communication through interaction analysis. (WR)
An Interaction Analysis
of Self-Disclosure

by

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Self-disclosure is, as Sidney Jourard (1964, p. 5) suggests, an important bit of behavior to understand. Yet Jourard and many other students of self-disclosure have not focused on communication behavior, but upon subjects' reports of their behavior or an observer's impression of their total self-disclosure. Such measures are clearly designed to measure personality differences rather than patterns of interaction. If we are to develop theoretical explanations of self-disclosure, we must begin with descriptions of ongoing communication. If we view communication as a process, we must consider how self-disclosure changes over time—both within an interaction sequence and within the length of a relationship. If we view self-disclosure as social interaction, we must begin to examine it in social situations. It is with these theoretical goals that the present study is concerned. This analysis is an exploratory study to determine the methodology and the kinds of questions we might use in explaining the process of self-disclosure.

The first research question is whether patterns of self-disclosure change over time in a relationship. What are the differences in such communication between acquaintances and friends? Taylor (1968), measuring disclosure with questionnaires, found changes over time in disclosures between
roommates. Taylor, Altman, and their associates (cf. Taylor, 1968; Taylor, Altman & Sorrentino, 1969; Altman & Taylor, in press) posit various dimensions of interpersonal development or "social penetration": breadth (amount of information exchanged--number of topics discussed), breadth frequency (number of items within each topic), depth (degree of intimacy), and time. These dimensions will be investigated in the present study.

A second question is whether there are patterns of self-disclosure within a given interaction sequence. Recent studies in small group communication (cf., Scheidel & Crowell, 1964; Fisher, 1970; Gouran & Baird, 1972) underline the importance of studying communication processes over time. Taylor, Altman & Sorrentino (1969), and Ehrlich & Graeven (1971) studied some changes in self-disclosure in time segments as a response to experimental reward manipulations, which does not help establish consistent expectations or understand phasic development within a discussion.

The nature of reciprocity in self-disclosure is a third research question. Usually referring to Gouldner's (1960) formulation of a norm of reciprocity, a matching phenomenon has been fairly consistently demonstrated (cf., Jourard, 1959; Jourard & Friedman, 1970; Worthy, Gary & Kahn, 1969; Tognoli, 1969). Reciprocity has been established through self reports and in experimental settings involving talking with an interviewer, passing notes, or announcing a topic to be elaborated on later, but not in naturally occurring interaction.
The above questions were the impetus for the present study. No formal hypotheses will be advanced, since the goal is to explore whether an interaction analysis of on-going communication can be useful in describing the process of self-disclosure.

**Previous Measurement.** Jourard's Self-Disclosure Inventory (Jourard & Lasakow, 1958) was the first instrument widely used to measure self-disclosure. The inventory is a *post hoc* questionnaire, rather than a measure of actual communication behavior, and seems better adapted to personality theory than to communication theory. Individuals, not behaviors, are measured. Nor are varying levels of intimacy measured. There have been some (generally unsuccessful) attempts to correlate the inventory with "behavior" as measured by a rater's total impression of the individual (cf., Pedersen & Breglio, 1968; Lubin & Harrison, 1964; Vondracek, 1969).

Suchman (1965) and Greene (1964) attempted to measure intimacy of self-disclosure, but their approaches are oriented toward therapy and do not deal with interaction.

Taylor & Altman (1966) developed intimacy scaled stimuli, using statements similar to Jourard's, but rated according to intimacy (on an eleven-point scale) and categorized according to topic. These statements tap both breadth and depth of self-disclosure.

Ehrlich & Graeven (1971) applied the Taylor & Altman stimuli to content analysis. Their approach is the closest
found to the present study. A confederate with a pre-rated (for intimacy and topic) script, and a subject, who could not see each other, talked about themselves. The thirteen topical categories from Taylor & Altman were the categories for analysis. Two intimacy levels were coded. It is unclear whether intimacy was rated according to what was actually said or what topical statements were discussed; the latter appears more likely, despite the possibility of discussing a potentially intimate topic, such as "Things I dislike about my mother," at a low level of intimacy. Judges listened to tapes of the subjects only, and thus the study did not deal with interaction.

This review of previous measurement of self-disclosure suggests the need for actually observing communication as interaction, for observing behaviors rather than describing personalities.

Method

Subjects. Eight women who volunteered to take part in a communication research program were assigned to dyads: two acquaintance dyads (subjects were acquainted through a small class in communication and had known each other for two months), and two friendship dyads (subjects had been friends for about a year, and had participated in one session of a sensitivity group together).

Procedure. The four dyads engaged in free, unstructured discussion for thirty minutes. Discussions were held on four separate days at noon in the communication laboratory, and were
videotaped. All subjects reported they quickly became unaware of the taping, and all appeared at ease. They were instructed to talk about themselves, so they might know more about each other. Subjects had little difficulty talking about themselves or maintaining the interaction for this length of time.

**Interaction Analysis System.** A unit was indicated by the introduction of a new topic or an interruption by the other participant. After an interruption a new unit was recorded whether it was a new topic or not.

Each unit was labeled according to the following code:

- **Q** Question about the other
- **R** Reinforcement of the other—not about the self
- **1** Religion
- **2** Marriage and children
- **3** Dating, sex, love
- **4** Parental family
- **5** Physical condition and appearance
- **6** Money and property
- **7** Politics and social issues
- **8** General emotions
- **9** Interests, hobbies and habits
- **10** Relations with other people (not in 2, 3 or 4)
- **11** Personal values and self-evaluation
- **12** School and work
- **13** Demographic and biographical characteristics

For each unit, an intimacy rating was also assigned, according to the following five-point scale: L (low), M, H.
(moderately low), M (moderately intimate), MH (moderately high), H (high). Judges were given more complete descriptions of intimacy levels and categories.

A typical rating might indicate 12-ML as a statement of moderately low intimacy about school or work.

The primary investigator's ratings are reported in the results of this study. However, three independent judges coded samples of the dialogues (145 units) to test for reliability. Written transcripts were used for coding, since judges expressed difficulty observing videotapes. Two judges received written instructions only; their percentages of agreement with the investigator on category assignment were 72% and 64%, and correlations on intimacy ratings were .74 and .81. The third judge received written and oral instructions, as well as practice sessions, resulting in 90% category agreement and $r = 0.86$ for intimacy ratings. This suggests that training of judges may significantly increase reliability. It appears that further discrimination among categories 2, 3 and 10 would also increase agreement.

**Results**

The results discussed here are primarily important for their heuristic potential; the tendencies observed with these dyads suggest the kinds of comparisons which can be made with interaction analysis of self-disclosure and indicate the usefulness of this methodology for further study of an important kind of communication behavior.
Comparison of Categories. Altman & Taylor (in press) hypothesize that friends open a greater breadth of information to each other, that is, they discuss more topics. The results of this study indicate no absolute differences in the number of categories used by friends and acquaintances. One acquaintance dyad chose twelve of the categories (not category 5), while the other discussed eight (not 1, 3, 5, 8 or 13). Neither group discussed category 5 (physical condition and appearance), while both dyads of friends discussed this topic briefly. In the friendship dyads, one group chose eight topics (not 1, 4, 6, 12, or 13), while the other chose 11 (not 6 or 9); the common topic eliminated was 6 (money and property). Thus one dyad in each group discussed most of the topics; one dyad in each group discussed only eight of the categories.

Differences existed not in breadth but in breadth frequency (the number of units discussed within a category). These differences were analyzed, using $\chi^2$, by combining the friendship dyads and the acquaintance dyads. Table 1 indicates clear differences in units for at least 10 of the 13 topics.

Friends were much more likely than acquaintances to discuss sex and dating (category 3). Both dyads of friends discussed not only their relationships with men, but actual sexual practices. The only two units mentioned by acquaintances were references to casual dates in one group. Friends were also more likely to discuss interpersonal relationships in general (10).
<table>
<thead>
<tr>
<th>Category</th>
<th>Acquaintances units</th>
<th>Friends units</th>
<th>Total units</th>
<th>$\chi^2$</th>
<th>1 df</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>4.16</td>
<td>p &lt; .05*</td>
</tr>
<tr>
<td>2</td>
<td>19</td>
<td>35</td>
<td>54</td>
<td>17.92</td>
<td>p &lt; .001*</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>25</td>
<td>27</td>
<td>7.50</td>
<td>p &lt; .01*</td>
</tr>
<tr>
<td>4</td>
<td>23</td>
<td>7</td>
<td>30</td>
<td>10.00</td>
<td>p &lt; .005*</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>11</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>10</td>
<td>15</td>
<td>25</td>
<td>.30</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>4.08</td>
<td>p &lt; .05*</td>
</tr>
<tr>
<td>9</td>
<td>35</td>
<td>6</td>
<td>41</td>
<td>19.12</td>
<td>p &lt; .001*</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td>35</td>
<td>44</td>
<td>14.20</td>
<td>p &lt; .001*</td>
</tr>
<tr>
<td>11</td>
<td>6</td>
<td>15</td>
<td>21</td>
<td>3.05</td>
<td>p &lt; .10</td>
</tr>
<tr>
<td>12</td>
<td>31</td>
<td>2</td>
<td>33</td>
<td>11.88</td>
<td>p &lt; .001*</td>
</tr>
<tr>
<td>13</td>
<td>19</td>
<td>2</td>
<td>21</td>
<td>12.19</td>
<td>p &lt; .001*</td>
</tr>
</tbody>
</table>

*Significant at or beyond the .05 level.

Items with expected frequency under five were not analyzed. Expected frequency was determined by assuming the units would be equally distributed between the two groups.

Results for categories 5 and 8 should be interpreted with care, since expected frequency is under 10.

Corrected for continuity.
Though the frequency of discussion of general emotions (8) and values and self-evaluation (11) was low, a tendency was observed for these units to occur in self-disclosure between friends more than acquaintances. Friends not only discussed such general feelings as hostility and such evaluations as their "hang-ups," but attached more statements of feeling and more relation to the self in other categories, which is reflected in intimacy ratings rather than category units.

Acquaintances ignored body and appearance (5). Experience suggests this as a very intimate topic for women; this suggestion needs further study.

Acquaintances were more likely than friends to discuss parental families (4). This should be interpreted with caution, since acquaintances were somewhat younger and may have been more attached to their parental families. While among friends the most intimate disclosures were about sex, among acquaintances parental family was the most intimate topic. In one dyad a woman discussed the impact on her of her parents' divorce; in the other a woman discussed mental retardation in her family.

Only acquaintances discussed money and property (6). Further investigation is needed to determine why the total frequency in this category is low and why friends ignored the topic. Differences might reflect differing intimacy levels or merely different interests. A rank ordering by subjects of intimacy levels of the topics, subsequent to discussion, might provide insight here and in other categories.
Acquaintances were much more likely than friends to discuss school and work (12), hobbies and interests (9) and demographic factors (13). These may be safe topics to explore, to assess compatibility.

An interesting comparison is category 2 (marriage and children). Although friends discussed within this category more than acquaintances, one dyad of acquaintances spent a good deal of time on this topic. In the acquaintance dyad, discussion focused on ideals about raising children, with a mean intimacy rating of 1.61. The dyad of friends which emphasized discussion of children was much more intimate, dealing with hostility and anger the women felt toward their children. In this dyad the women also discussed their marriages and the possibility of divorcing their husbands. The mean intimacy rating was 2.91, but this was lowered by several units in a more general discussion of child-rearing.

The only substantial (in terms of units) category agreement was politics and social issues (7). Most of the women seemed concerned about social issues and willing to express their ideas.

This discussion of breadth and breadth frequency reveals substantive differences in topics emphasized by dyads of friends and of acquaintances. Acquaintances were more likely to discuss fairly safe or superficial topics, while friends devoted more of their discussion to topics generally considered more private and central to the individual.
Intimacy. Differences in intimacy levels were apparent in dyads of friends and of acquaintances. To facilitate analysis of these differences, units were classified according to three levels of intimacy by collapsing L and ML (L), MH and H (H), and retaining M. The small number of units rated H (high) originally was prohibitive of statistical analysis, but this procedure would not be necessary with a larger number.

The following table indicates differences so obvious as to hardly need further analysis; however $\chi^2$ values are given.

Table 2

<table>
<thead>
<tr>
<th>Intimacy Level</th>
<th>Friends Units</th>
<th>Acquaintances Units</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>74</td>
<td>137</td>
<td>62*</td>
</tr>
<tr>
<td>Moderate</td>
<td>46</td>
<td>26</td>
<td>19*</td>
</tr>
<tr>
<td>High</td>
<td>46</td>
<td>3</td>
<td>42*</td>
</tr>
</tbody>
</table>

$^*p < .001$

Friends obviously revealed more about themselves at high levels of intimacy, and their discussions included fewer units rated low in intimacy than the acquaintance dyads.

Discussions were divided into three approximately equal intervals to see if there were phases in intimacy levels. Among friends a consistent pattern emerged, in which comments low in intimacy were more frequent during the first phase than in later phases, and comments high in intimacy were more frequent during the third (final) phase than in earlier phases. Comments of moderate intimacy were fairly constant throughout.
Friends' Phases in Intimacy

<table>
<thead>
<tr>
<th>Intimacy Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>$\chi^2$</th>
<th>2 df</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>36</td>
<td>18</td>
<td>20</td>
<td>7.892*</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>13</td>
<td>18</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>9</td>
<td>12</td>
<td>25</td>
<td>9.435*</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

Friends thus built steadily to a high level of intimacy.

This pattern was not true for acquaintances, who maintained a constant level of low intimacy. The highest period of intimacy for acquaintances was the second phase, after which, in the final phase, the frequency of moderate and high intimacy comments was less than in other phases. Table 4 presents the data, though Moderate and High units were too few for statistically reliable comparisons.

Table 4

<table>
<thead>
<tr>
<th>Intimacy Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>44</td>
<td>43</td>
<td>50</td>
</tr>
<tr>
<td>N</td>
<td>8</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>H</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

(Note: Frequencies in Table 3 and 4 are in units.)

Among acquaintances comments of lower Intimacy in the last phase might be a kind of safety valve to maintain equilibrium after a period of fairly intimate disclosure.

The above speculation led to examination of specific
sequences in which a statement of high intimacy was predominate, to see if such a balancing mechanism operated. A tendency was found in the three groups which included units in the high intimacy rating for a segment of discussion high in intimacy to be followed by a topic change to low intimacy.

One friendship dyad involved five topic changes to low intimacy after periods of high intimacy; one topic change was to moderate, another to high intimacy. In the other friendship dyad, four topic changes were from high to low, and one from high to high. In the acquaintance dyad which included some units of moderately high intimacy regarding one woman's parents' divorce, the other woman changed the topic to majors in school at a low level of intimacy.

This data should not be interpreted as avoidance of intimate topics; when an intimate topic was brought up it was typically discussed with interest. But at some point in time, when the topic was changed, the change was to low intimacy. These tendencies suggest there may be a balancing mechanism in intimacy of self-disclosure.

**Reciprocity.** Data on reciprocity will not be fully reported here, since methods of analysis such as contingency tables are presently being amplified and require larger numbers of units. However, some general tendencies can be summarized.

In these dyads there did not seem to be a norm to follow the other's intimate comments with one's own immediately; there was more reciprocity with statements of low or moderately low intimacy than those with higher intimacy. In one dyad of
friends and one of acquaintances there was close matching on intimacy in the total discussion but not in specific interacts. Similarly, such matching as occurred in category units occurred in the total discussion rather than specific interacts.

These tendencies are suggestive for future research. It appears that reciprocity occurs not immediately but in total units or with statements of differing intimacy. It would be important to test the limits of reciprocity and examine how the phenomenon might differ in groups larger than two.

Conclusion

This exploratory study has revealed that self-disclosure can be studied in ongoing communication through interaction analysis. A category system, based on topics which subjects are willing to reveal about themselves, was used to examine breadth of self-disclosure. It was found that friends and acquaintances did not differ in breadth of topics opened to the other; however, they differed significantly in breadth frequency, or the number of units within categories. Friends discussed more in areas of personal concern, while acquaintances revealed more in safe or superficial areas.

There appeared to be a balancing pattern in intimacy of self-disclosure, with a period of higher disclosure followed by a period lower in intimacy. A tentative pattern of reciprocity appeared, with matching in total units or certain intimacy levels in the total discussion rather than immediately.
Further study is needed to see if such patterns are consistent among groups, to establish descriptive baselines for comparison of self-disclosure among groups.

Further training of judges and clarification of categories is called for, and such work is in progress. Judges might also be asked to rate other dimensions of self-disclosure, such as amount of affect attached to the unit, and positive or negative references to the self (Watson, 1968, suggests the Freudian influence on the current appropriateness of revealing negative information about the self).

Questions and reinforcing statements were not analyzed here. Previous research (cf. Silver, 1970) suggests the importance of reinforcement on self-disclosure.

This study, then, indicates that description of self-disclosure is possible and indeed necessary, if we are to explain the process. This kind of study is a necessary beginning to development of theory about self-disclosure, since we must be able to describe the process before we can explain it. The present analysis has dealt with communicative behavior--social interaction--rather than personality. Communication is viewed as a process over time. Self-disclosure is viewed as patterns of communication differing in breadth, breadth frequency, and intimacy over time within an interaction sequence and a relationship. The implications of this approach for theoretic development in communication therefore derive from its emphasis on the process of communication about the self rather than personality inputs and affective outputs emphasized in previous research.
References


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