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ABSTRACT
                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
participants. 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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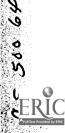Department of Communication
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Self-disclosure is, as Sidney Jourard (1964, p. 5)

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 on-going

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 th.oretical

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 question-

naires, 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 impor-
tance 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 elabo-
rated 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 sub-
jects 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), ML

(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 $r = .86$ 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 X^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 1

Comparison of Breadth Frequencies

Category	Acquaintances units	Friends units	Total units	χ^2 1 df	
1	4	2	6		
2	19	35	54	4.16	$p < .05$*
3	2	25	27	17.92	$p < .001$*
4	23	7	30	7.50	$p < .01$*
5	0	11	11	10.00	$p < .005$*
6	6	0	6		
7	10	15	25	.80	
8	2	10	12	4.08	$p < .05$*
9	35	6	41	19.12	$p < .001$*
10	9	35	44	14.20	$p < .001$*
11	6	15	21	3.05	$p < .10$
12	31	2	33	11.88	$p < .001$*
13	19	2	21	12.19	$p < .001$*
	166	165	331		

*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 tne 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 X^2 values are given.

Table 2

Amount of Intimacy

		Friends Units	Acquaintances Units	X^2 1 df.
	Low	74	137	62*
Intimacy Level	Moderate	46	26	19*
	High	46	3	42*

*$p < .001$

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.

Table 3

Friends' Phases in Intimacy

		1	2	3	x^2 2 df.
Intimacy Level	L	36	18	20	7.892*
	M	13	18	14	
	H	9	12	25	9.435*

*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

Acquaintances' Phases in Intimacy

		1	2	3
Intimacy Level	L	44	43	50
	M	8	13	5
	H	1	2	0

(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 on-going 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.

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