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Self-disclosure strategy and personal space proximity in intimacy development.

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SELF-DISCLOSURE STRATEGY AND PERSONAL SPACE PROXIMITY

IN INTIMACY DEVELOPMENT

A dissertation Presented

By

Victor Earl Savicki

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Clinical Psychology

SELF-DISCLOSURE STRATEGY AND ....

IN INTIMACY DEVELOPMENT

. Dissertation

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TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

The search for interpersonal closeness starts with the infant's gauzey-eyed groping for mother and her breast; it continues in other forms for most humans until death. In lower animals such a search remains primarily on a physical level (Harlow and Zimmerman, 1969). Humans, with the capacities for self-consciousness and symbolization, are able to carry this search into the psychological realm of feelings, attitudes, and ideas. The psychological version of closeness has often been labeled "intimacy."

Intimacy and the conditions under which it develops are the focus of the present study. Specifically, the purpose of this study is to explore factors related to the development of closeness and intimacy in an interpersonal relationship. Phrased as a question: "What factors facilitate or inhibit the development of intimacy?"

Psychologists, as well as other investigators, have posed this question before. For the psychotherapist the question has immediate relevance to his role of "helper" in a treatment situation. The building of rapport and the development of a "relationship" in therapy are seen by many as the _sine qua non_ of treatment. Indeed, using the client's feelings toward the therapist may constitute an integral part of therapy, _e.g._ transference. In treatment of groups, marital couples, and families, the intimacy among individual members provides the context for development of more desirable interpersonal relationships.

Apart from its importance in treatment, the question of how intimacy develops contains implications for interpersonal satisfaction in other situations. As the industrial revolution progressed, it effected a change

in the life style of most of the world; i.e. ascribed roles and relationships became less prevalent and less potent. The safety of static, predetermined relationships was exchanged for increased individual freedom, and at the same time, increased alienation. A high value was placed on acquired relationships as a means of satisfying individual needs. Likewise, the continuance and growth of such relationships depended in part on mutual satisfaction of the participants. For example, marriage became less an economic or religious contract than a means through which personal satisfaction could be achieved.

The growing divorce rate combined with a tendency for those who divorce to remarry seems to index the importance of finding intimacy in contrast to maintaining societal conventions. The uncertainty and tentativeness characterizing acquired relationships may result in feelings of alienation and isolation. Hopefully an investigation of intimacy development can contribute to reduction of the alienation which characterizes modern life.

In order to study intimacy, it is necessary to define the construct more clearly. Intimacy may be defined subjectively via reference to the reader's experiences of feeling "close," "warm," "open," and "friendly" toward another person. Such feelings are in contrast to experiencing the other as "distant," "cold," "closed," or "antagonistic." Although not exclusively limited to the adjectives used above, an experiential yardstick could function as an internal standard by which interpersonal relationships might be measured.

In terms of empirical measures, the phenomenon may be indexed by overt behaviors. Indeed, behavioral manifestations may be the most reliable and powerful measures of intimacy. In the present study, intimacy

is defined as the quantity and quality of verbal self-disclosure. Later a more detailed explanation will be presented.

The preceding effort at clarifying the concept of intimacy has admittedly not produced a precise definition. Instead some rather broad parameters have been sketched to help focus on the general area in which the psychological concept of intimacy exists.

Throughout the following sections of this paper the development of intimacy will be considered for a two person interaction - a dyad. More specifically, the prototypical relationship is characterized as a friend-ship or courtship relation in which members hold equal status, participation is voluntary, and termination or stabilization may occur at any point. The rationale for this approach lies in its amenability to study. Also, it depicts a number of real-life interactions fairly accurately. This focus on the friendship dyad will continue through a brief sampling of theories concerning intimacy growth, through a review of selected literature, and through the experiment itself.

THEORETICAL APPROACHES

Theories concerning intimacy development may be separated into two groups: trait theories and process theories. In the former group, growth of intimacy is explained via static qualities of individuals. In the latter, explanations derive from the ongoing interaction between individuals.

The trait approach predicts that if dyad members have specific characteristics, they will become intimate. For example, some findings indicate that persons become intimate if they hold similar attitudes, if their personalities complement each other (e.g. a sado-masochistic pair), or if they live near one another (propinquity).

Although such findings are generally upheld, they do not answer the question of how intimacy develops. Such theories conceptualize intimacy as simply a function of suitable pairing of individuals. Such explanations underestimate the importance of what occurs between the initiation and termination of relationships. The process approach attempts to complement the trait explanations.

According to the process approach, intimacy develops if the behavior exchanged by individuals is mutually reinforcing. This approach focuses on interaction rather than individual characteristics. That is, each dyad will have a unique set of reinforcing contingencies. Within this framework it is readily seen that proximity of dyad members may lead to intimacy because reinforcements are more frequent and less difficult to obtain. Likewise, attitude similarity may lead to intimacy via exchanges of reinforcing agreement and esteem. Personality complementarity may lead to intimacy because of positive feelings toward the individual who satisfies personality needs. Thus a learning paradigm attempts to explain how intimacy develops as a function

of various reinforcements.

Life, however, is not always so simple. Satisfactions and reinforcements in life are never that clear-cut. With every reward there is often the possibility of negative outcomes. Human beings therefore tend to maximize their satisfactions while minimizing current or potential aversive outcomes. Research on "mixed-motive" games and "risk taking" has focused on the more complicated aspects of interpersonal process. Thus a process approach has the potential to provide a more detailed explanation of "how" intimacy develops under complex circumstances.

The present paper assumes that the most important contributors to intimacy development are interpersonal processes, not intrapersonal traits. Consistent with this interpretation, constructs often viewed as static internal entities (e.g. social accessibility) are here viewed as processes. Thus a measure of such a construct reflects a point in an ongoing process, rather than a fixed internal condition. This interpretation may seem largely semantic; however, it embodies the point of view assumed in the following sections. At this point several process theories of intimacy development will be reviewed.

Cognitive Balance Theory

The first general theory considered has been called "dissonance" theory (Festinger, 1957), "balance" theory (Heider, 1946), or "cognitive consistency" theory (McGuire, 1967)(cf. Newcomb, 1961). Essentially the locus of intimacy growth in these theories resides in the perceptions of each of the members of the dyad. That is, growth of positive attitude is a result of the congruence perceived in the ideas and attitudes displayed and attended to by dyad members. Internal cognitive processes operate on information received.

Within this theory are several assumptions. First, it is assumed that "cognitive strain" or tension occurs if two ideas or attitudes differ. Thus if dyad members hold differing ideas or attitudes, there will be tension between

them. Secondly, it is assumed that effort will be expended to eliminate or
reduce the strain. Tension reduction may be accomplished in several ways:
a) The dyad may cease to exist; thus each member would retain his idea intact,
but strain would be reduced through rejecting the other person. b) Dyad
members may try to change the other's idea to coincide with their own. c) Dyad
members may shift their own ideas towards the position of the other. d) One
dyad member may deny that the other really holds a differing idea, i.e. he
would reject the information. e) Dyad members may agree to tolerate the strain
while remaining engaged with each other; i.e. they "agree to disagree."

Research indicates that the salience and importance of an idea for each
of the dyad members determines to some degree how tolerant they can be of
existing strain. Differences over very important and very salient ideas
create more strain than differences over less salient and important ideas.

Also, the intensity to which each dyad member is committed to an idea
or attitude determines how flexible he can be in shifting that attitude.
Increased committment to the idea yields decreased flexibility.

In process terms, two people display attitudes, beliefs and behaviors vis
a vis one another and subsequently attempt to match their positions accordingly.
Similarity leads to "balance" which is a reinforcing consequence. Difference
leads to strain and an effort to reduce the strain. Growth of intimacy would
appear in this theory to depend on a) initial similarity, and b) willingness
and skill of dyad members to achieve congruence of ideas and attitudes.

Social Exchange Theory

Another general theoretical process approach that focuses more on observable
events is sometimes called "social exchange" theory (Blau, 1964; Homans, 1950;
Thibaut and Kelley, 1959). For purposes of illustration, the specific formul-
ations of Thibaut and Kelley are used to represent the social exchange theories.

According to Thibaut and Kelley, "The essence of any interpersonal

relationship is interaction (p. 10, 1959)." Dyadic interaction, in turn, consists of behaviors each member emits in the presence of the other. Each behavior emitted has reinforcing consequences in the dyad for both members. Reinforcements can be either positive or negative, i.e. rewarding or costly. The rewards and costs of behaviors determine the satisfactions gained from the interaction.

Theoretically, the level of rewards and costs incurred in each dyad can be calculated from an "outcome" or "payoff" matrix. That is, a matrix of possible interactions can be formed by comparing the behavior repertories of the members. If each member has four possible behaviors available to him, the dyad outcome matrix will consist of sixteen cells. Each cell contains the rewards or costs incurred by each member as a result of his performing a specific behavior vis a vis the behavior of his counterpart. If dyad members emit behaviors that conjointly increase rewards and reduce costs, that interaction will tend to be repeated. In early acquaintance the values in the outcome matrix remain unknown until the specific interactions occur.

Two broad groups of determinants contribute to the reward and cost values within the outcome matrix. These are exogenous factors, which exist external to the relationship, and endogenous factors, which are intrinsic to the interaction itself. Some examples of exogenous determinants are needs, values, attitudes, abilities, and predispositions that each individual brings to the relationship. Endogenous factors can be classified as either interference or facilitation. Interference with one member's behavior as the result of behavior of the other increases costs. For example, a conversation in which both members talk at the same time creates tension for both. Both interfere and are interfered with. In contrast, facilitation occurs if behaviors of each member heighten the

rewards gained by the other. For example, a conversation between a "talker"
and a "listener" increases satisfactions for both by mutual gratification
of each's wishes. Thus payoffs may vary as a function of member attributes
that exist independently of the interaction; and as a function of the
interaction itself.

The development of intimacy depends on the degree to which the
relationship offers outcomes above a psychologically defined level. Thibaut
and Kelley identify two comparison levels: one for all relationships,
available or unavailable, real or imagined (CL - comparison level). The
other comparison level applies only to real alternative relationships
available (CL_{alt} - comparison level for alternatives). Whether or not a
dyad remains intact and moves towards intimacy depends on the degree to
which the relationship in the dyad yields adequate rewards for each
member. The adequacy of rewards is judged via comparison levels. "In
short, a prerequisite for the existance of the dyad is a dependence of the
rewards of each upon the other's behavior, that is, a condition of inter-
dependence. (p. 22, Thibaut and Kelley, 1959)."

In process terms two people develop intimacy via learning a mutual
accomodation of behavior which maximizes gains and minimizes costs. It is
the committment to and the attraction toward the other expressed through
production of mutually satisfying interactions that seems to define
intimacy according to this theory. Whether or not the satisfactions
gained in any relationship are high enough for each member to remain within
the dyad or to induce each to modify his behavior seeking greater intimacy
depends on some combination of his expectations of the rewards he deserves
(CL) and his expectations of the rewards he feels are available elsewhere
(CL_{alt}). When absolute freedom to terminate a relationship exists, the
level of satisfactions sampled in early interactions is crucial in this

process.

Naturalistic-Humanistic Theories

A more naturalistic, humanistic approach to growth of intimacy has been forwarded by writers such as Jourard (1964), Goffman (1959, 1967), and Rogers (1959). An integration of the above views by Culbert (1968) is drawn upon in discussing the humanistic theory of the development of intimacy.

According to these theories, intimacy grows with openness, honesty, and self-disclosure on the part of dyad members. Disclosure of private parts of one's personality or history fosters intimacy. That is, access to information about one's "private self" makes the other more of an intimate than does information about one's "public self." In fact, efforts to uphold the public self through impression management and role performance seem antithetical to development of intimacy (for examples cf. Presentation of Self in Everyday Life, Goffman, 1959).

Although the source of an individual's self-concept has often been thought to reside within the individual himself, the naturalistic, humanistic theories suggest a circularity between impression forwarded by the individual and the feedback he receives from those with whom he interacts.

> The performed self was seen as some kind of image, usually creditable, which the individual on stage and in character effectively attempts to induce others to hold in regard to him. While this image is entertained concerning the individual, so that a self is imputed to him, this self itself does not derive from its possessor, but from the whole scene of his action, being generated by that attribute of local events which renders them interpretable by witnesses. A correctly staged and performed scene leads the audience to impute a self to a performed character, but this imputation--this self--is a product of a scene that comes off, and is not a cause of it. The self, then, as a performed character, is not an organic thing that has a specific location, whose fundamental fate is to be born, to mature, and to die; it is a dramatic effect arising diffusely from a scene that is presented, and the characteristic issue, the crucial concern, is whether it will be credited or discredited (pp. 252-253, Goffman, 1959).

Jourard (1964) postulates that the process of disclosure is the process by which a man comes to know himself. Thus an individual gains an identity via social interaction, so that honest disclosure of self to others leads to true knowledge of one's self.

Self-disclosure, however, does not always lead to positive outcomes. Indeed, allowing another person access to one's "dark secrets" (Goffman, 1959) gives him the power to make those secrets public, thus inflicting embarrassment. It also yields the opportunity and probable cause to reject the discloser as unworthy of friendship. Although honest disclosure to another may lead to "reality testing" and a healthy mental state, it may also open the discloser to threat of exposure, coercion, rejection, and psychological hurt.

Therefore openness and honesty in interpersonal interaction involves ambivalence and psychological risk. Each time a person discloses himself to another, he makes an assessment of the risk involved. First he must weigh the probability that the receiver will understand what he is about to say. Secondly, he must consider the possible range of responses that he expects from the receiver. Each of these assessments becomes more crucial as the disclosure increases in intensity. Factors that contribute to variations in intensity may be a) nature of content, b) whether the content has been previously denied or hidden, c) timing of the disclosure, d) other contextual considerations. Culbert (1968) has forwarded the following descriptive formula to account for variations in risk.

$$\text{Risk} = f \frac{\text{Intensity}}{\text{Pr(receiver will understand)} \times \text{Pr(expected reaction will occur)}}$$

Unexpected entries in either variable in the denominator of the equation will increase risk. Since no person is 100% predictable, risk always exists.

Obviously, under conditions of Rogerian therapy - unconditional positive regard, accurate empathy - risk should diminish (Rogers, 1959). If the above formula is correct, longer acquaintance should lead to better predictability of receiver behavior, thus lowering risk. At high levels of intensity, risk also becomes higher since such information holds greater potential harm if misused. Intimacy cannot occur if risk remains high or if there is a certainty of negative reaction by the receiver.

Because disclosing one's self to another involves risk, most people adopt a conservative strategy of self-revelation in order to protect themselves. This strategy involves taking risks only to the extent that the other risks his psychological safety. In other words, dyad members who seek growth of intimacy trade risky disclosures. Each member's disclosure would become more and more intense as he felt he could damage the other as much as he himself could be damaged; and/or as he felt that the other had committed himself to the relationship via risky disclosing. Such a strategy of disclosing becomes institutionalized as a norm of reciprocity. Jourard (1964) has, in fact, hypothesized that self-disclosure correlates in a curvilinear fashion to healthy adjustment; i.e. violations of reciprocity through too little or too much disclosure seem symptomatic of disturbance. Thus adherence to a norm of reciprocity within the process of intimacy development has become a standard by which some investigators measure psychological adjustment.

In process terms, two individuals develop intimacy via exchanging information about themselves in a particular way. This information may issue from many modalities: words, gestures, overt actions, etc. Reciprocity in risking each's psychological safety gradually leads to a committment to the relationship illustrated by taking increased risks, by

trusting the other not to misuse information offered, and by depending
on the relationship for security. The trust, committment, and feeling of
security identify the presence of higher intimacy levels.

REVIEW OF SELECTED LITERATURE

Relatively little research has focused on development of intimacy.
Although there is a small body of knowledge on intimacy growth in psycho-
therapy, this review is limited to studies pertinent to friendship
development in the dyad. Since one purpose of the present investigation
is to examine the relationship between constructs of psychological
closeness and physical closeness (proximity), research on both constructs
will be included in this review. Specific areas covered are the social
penetration process (i.e. intimacy development), self-disclosure (a verbal
index of intimacy), and personal space (a non-verbal index of intimacy).

Social Penetration Process

According to Altman and Taylor,

> Social penetration refers to the dynamic, temporal changing
> complex of interpersonal events which occur in the course of
> development of an interpersonal relationship. These events involve
> overt interactions of a cognitive, affective and behavioral type
> which vary in properties of reciprocity, quantity (breadth) and
> quality (depth). (Altman and Taylor, 1968, p. 2)

The most frequently studied aspect of social penetration seems to be
information exchange (i.e. mutual self-disclosure). Within this exchange,
the breadth and depth variables mentioned above function as measures of
actual disclosure. Depth or intensity of self-disclosure refers to the
degree of exposure of core or intimate areas of the personality. Breadth
or extensity of self-disclosure may be measured in several ways (Altman and
Taylor, 1968): 1) number of topics about self disclosed, 2) amount of self
disclosed within topic area, and 3) amount of time devoted to disclosing.
Both intensity and extensity of disclosure operate in self-disclosure.
Reciprocal self-disclosure appears to be one of the most important parameters
in the social penetration process.

Taylor's (1968) naturalistic study of the social penetration process among college roommates indicated that:

> Mutual activities and self-disclosure both increased over time, and nonintimate or superficial exchanges of activities and information about the self occurred to a greater extent than intimate ones. Furthermore, dyads composed of high-revealers engaged in a significantly greater amount of exchange than dyads composed of low revealers. This latter difference was greater in intimate areas of exchange than in nonintimate ones. (Taylor, 1968, p. 89.)

Thus both breadth and depth of self-disclosure increased over time for all dyads; and depth increased most markedly for high self-revealers.

This naturalistic process has been found to be affected by variables of situation, individual difference, and reward/cost balance (Altman and Taylor, 1968). Situations of increasing intimacy may or may not elicit increasing amounts of self-disclosure, depending on the compatability of the actors. For example, incompatable dyads may reduce their self-disclosure (Frankfurt, 1965) or they may grow to dislike each other while continuing to disclose (Altman and Haythorn, 1965). Situational variables, as studied thus far, seem less potent than other variables.

Individual differences in tendency to disclose seem to affect the parameters of the social penetration process. As Taylor (1968) found, dyads with high scores on the Jourard Self-Disclosure Questionnaire revealed at more intimate levels than did dyads with low scores. A re-analysis of data from a previous study (Taylor, Altman and Sorrentino, 1969) (cited in Altman and Taylor, 1968) showed that although reward/cost contingencies (i.e. programmed approval or disapproval) affected the overall outcome of self-disclosure, differing individual styles of disclosure still were evident. Thus individual differences in tendency toward self-disclosure and in styles of actual disclosure seem to affect the social penetration process.

The reward/cost balance seems to be the most potent factor in the social penetration process. A norm of reciprocity seems to exist in social exchanges. That is, people expect others to reciprocate their actions. However, this norm may be ignored, thereby increasing the costs for a person who risks taking the initial step. In a naturalistic observation Truax et.al (1968) found that therapy group members responded to differential levels of therapist warmth, empathy and genuineness (rewards) by corresponding degrees of self-exploration (self-disclosure). Such results have also been found in lab studies of the social penetration process. For example, self-disclosure increased as rewards were forth-coming and decreased when rewards stopped (Frankfurt, 1965; Taylor, Altman, and Sorrentino,1969).

In addition, increased self-disclosure by one dyad member seems to increase disclosure by the other. In experiments both with two naive subjects (Jourard and Resnick, 1970) and with one naive subject and one or more experimenters (Chittick and Himelstein, 1967; Powell, 1968; Jourard and Jaffe, 1970), dyads achieved higher levels of disclosure when one member revealed himself. Even persons with low revealing tendencies responded with increased disclosure (Jourard and Jaffe, 1970). Self-disclosure by one dyad member seemingly reduces the costs involved for the other member's disclosure.

To summarize, the social penetration process is the gradual development of an interpersonal relationship through reciprocal behaviors - the most important of which seems to be self-disclosure. The reward/cost balance seems to be a strong factor influencing behavior exchange. Situational factors and personality characteristics also play a part. The social penetration process is a more specific formulation of how, and under what conditions, interpersonal relationships become more intimate.

Self-Disclosure

Self-disclosure and social accessibility have usually been defined as similar constructs; the difference between the two is that social accessability is a personal attribute (i.e. willingness to enter into relationships), while self-disclosure is a behavioral index of that attribute. A person may be extremely open to development of relationships but may not self-disclose because of inappropriateness of setting or negative payoffs for disclosing.

Two studies on social accessibility (Rickers-Ovsianskina, 1956; Rickers-Ovsianskina and Kusmin, 1958) have helped to clarify the conceptual orientation underlying this construct.However, most empirical research has been done on self-disclosure as operationalized by Jourard (Jourard and Laskow, 1958). Thus the following paragraphs will use Rickers-Ovsianskina as a conceptual base for self-disclosure and then examine existing research using this construct.

Using the Lewin topological approach, Rickers-Ovsianskina (1956) cast social accessibility into a personal space model. Social accessibility was defined as "a person's readiness to enter into communication with his environment (Rickers-Ovsianskina and Kusmin, 1958, p. 391)." However, the terms "person" and "environment" assume a subjective character. As Lewin (1951) states: "The greater distance between the central layers of the ego and the psychological environment involves a greater independence, or at least a less direct interdependence between these areas of life space, namely the psychological person and the psychological environment (p. 107, italics mine)." Analogous to physical space, psychological space processes involve a balance between protective forces - "the contractive need to protect vulnerable areas of the personality (Rickers-Ovsianskina and Kusmin, 1958, p. 403)." Thus disclosing details about

one's self may be thought of as "yielding ground" or letting another person penetrate to a deeper area of self.

Although self-disclosure as measured by the Jourard Self-Disclosure Questionnaire (JSDQ) (Jourard and Laskow, 1958) achieves adequate split-half and test-retest reliability, its validity has sometimes been questioned. Amount of disclosure on the self-disclosure questionnaires did not correlate with peer nominations of disclosure in groups (Hurley and Hurley, 1969; Himelstein and Lubin, 1965; Weigel and Warnath, 1968), nor with group trainer ratings of disclosure (Hurley and Hurley, 1969; Lubin and Harrison, 1964; Weigel and Warnath, 1968). In addition, it did not correlate with disclosure during classroom introductions (Himelstein and Kimbrough, 1968), or with defensiveness as measured by the MMPI K scale (Himelstein and Lubin, 1966). Some positive validity studies found JSDQ revelation related to amount of Rorschach disclosure (Jourard, 1961c), to staff ratings of student nurses' ability to relate to others (Jourard, 1961d), and to actual elicited disclosure of college students (Pedersen and Breglio, 1968).

Using the multi-trait, multi-method matrix approach to construct validity, Pederson and Higbee (1968a) demonstrated both convergent and discriminate validity for self-disclosure using the social accessability scale and the 60 item and 25 item JSDQ scales (Jourard and Laskow, 1958; Jourard, 1961a). Although validation research has yielded mixed results, the balance seems to favor positive validity on the basis of more sophisticated research efforts (Pedersen and Breglio, 1968a; Pedersen and Higbee, 1968a).

Self-disclosure appears to be on a continuum from peripheral, non-intimate facts about self to central, deeply intimate items. The JSDQ

scale reflects a relatively stable hierarchy of areas of self which differ in accessibility to others (Jourard and Laskow, 1958). Taylor and Altman (1966) have scaled a pool of items from JSDQ and other sources according to an eleven point equal-appearing-interval method. Thus the continuum of intimacy has an operational base.

Sex and age seem to affect levels and patterns of self-disclosure. An integration of findings from several studies indicates that disclosure increases with age up to about the fifties and then drops off (Jourard, 1961a; Rickers-Ovsianskina, 1956; Rivenbark, 1967). Same sex friends usually receive more disclosure than opposite sex friends until marriage, at which point spouse receives much more than either parents or friends (Jourard and Laskow, 1958; Shapiro and Swensen, 1969). Overall, females seem to disclose more than males (Himelstein and Lubin, 1966; Jourard, 1958; Jourard and Laskow, 1958; Jourard and Richman, 1963; Pedersen and Higbee, 1968b; Pedersen and Breglio, 1968b). However, Rickers-Ovsianskina and Kusmin (1958) found males slightly more socially accessible than females, and Plog (1965) found no differences between the sexes on his questionnaire. Thus age seems to be a relatively uncomplicated factor, while sex is a less clearly defined factor affecting levels and patterns of self-disclosure.

Self-disclosure patterns seem to vary according to cultural differences. Americans self-disclose more than Germans (Plog, 1956), and American females self-disclose more than British females (Jourard, 1961c). Melikian (1962) found different patterns of self-disclosure among students from nine different Middle East countries. In a study of religious differences (Jourard, 1961b), Jews, a subculture as well as a religious denomination, disclosed more than several undifferentiated

Christian denominations. Levels and patterns of self-disclosure appear to be learned via socialization and acculturation.

Research on personality and attitude correlates of self-disclosure has started to appear only recently. High self-disclosers as opposed to low self-disclosers seem to be less authoritarian, more integratively complex, and more selectively attentive to "person-oriented" cues of the environment(Tuckman, 1966; Halverson and Shore, 1969; Taylor and Oberlander, 1969). Social extroverts, as might be expected, disclose more than do introverts (Mullaney, 1964; Shapiro, 1968). Self-esteem or self-concept seems to be linearly related to amount of self-disclosure (Vosen, 1966; Thomas, 1968; Shapiro, 1968).

The relationship of self-disclosure to mental illness remains unclear. Stanley and Bownes (1966) found no relationship between self-disclosure and neuroticism. Shapiro (1968) and Mayo (1968) linked low self-disclosure with neuroticism. Pedersen and Breglio (1968b) found emotionally unstable males to be higher self-disclosers. Further research in this area must also focus on age, sex, and setting differences as they relate to the personality of self-disclosers.

The final, but most important, variable in self-disclosure is "social distance" (Fitzgerald, 1963); that is, the relationship of the discloser to the target person. Amount of self-disclosure relates directly to the target person's social distance. However, social distance may be a deceptive construct. For some it means attraction (Query, 1964); for others, degree of liking (Jourard, 1959; Fitzgerald, 1963); perceived nurturance (Doster and Strickland, 1969); or amount of knowledge of the other (Jourard, 1959; Jourard and Landsman, 1960; Jourard and Richman, 1963). Because social distance as it has been used implies an intrapersonal state

of affairs that reflects the perception of an _interpersonal_ relationship, the more accurate term "psychological distance" will be used in place of "social distance." Just as all persons are not equally close, self-disclosure does not occur equally to all target persons. "There is a functional relationship between extent of accessibility and position of the inquirer in the respondent's life space (Rickers-Ovsianskina, 1956, p. 292)." As previously mentioned, patterns of differential self-disclosure to a series of target persons differ between sexes, change with maturity, and relate to cultural factors. When aspects of target persons are considered, "closeness" seems to be the one indispensible factor in the relationship between persons and targets to whom they self-disclose much (Pedersen and Higbee, 1968b). In spacial terms, a person lets another come close through self-disclosing only when he judges that the other can be counted on to maintain an acceptable level of gratification in relation to possible hurt (Rickers-Ovsianskina and Kusmin, 1958).

Reciprocal self-disclosure has been suggested as the process by which people gradually reduce the social distance between them. Several studies (Jourard and Landsman, 1960; Jourard and Richman, 1963) indicate that input and output of self-disclosure correlate highly. That is, a person discloses himself to another to the extent that the other reciprocates disclosure. Since relationships can and do continue at virtually all levels of intimacy, stabilization of a relationship may therefore occur at any level through mutual agreement.

Some observational data seem to support the hypothesis that violation of the normative rate of exchange (_i.e._ disclosing of self too quickly or too slowly) results in termination or distantiation (Jourard, 1959, 1964; Fitzgerald, 1963). Thus it seems that a shared rate in reducing psychological

distance must be maintained in order to insure further development of the relationship.

To summarize, social accessibility and self-disclosure appear to be important factors in human relations. Aside from some methodological problems in operationalizing these concepts, the concepts themselves seem to have adequate construct validity, and seem to fit well into a broader nomological net (Halverson and Shore, 1969). Patterns and levels of self-disclosure seem to be learned via socialization in a given culture. Within-culture differences in individual tendencies toward self-disclosure appear to be sensitive to personality differences. Within-culture differences in disclosure also occur as a function of age and sex. However, psychological distance or felt relationship between the discloser and the target person appears to be the most powerful influence on self-disclosure.

Psychological distance seems also to determine(and be determined by) mutual self-disclosure (Jourard and Landsman, 1960). According to a Levinian topological model, psychological distance is reduced only when each member can maintain an acceptable reward/cost level. Some non-experimental evidence indicates that violations of social distance norms because of too great or too little self-disclosure produce termination of the relationship. Thus one human's accessibility to another's psychological being depends on the other's self-disclosure. Whether or not the other self-discloses depends to a large degree upon the existing psychological distance between them. Self-disclosure, however, may reduce the existing psychological distance. Therefore, self-disclosure can serve as an index of psychological distance and as a medium through which the distance may be reduced.

Personal Space

In recent years there has been an increasing interest in space as an organizing construct in perception and action. Animal studies by Hediger (1955) document specific spacial boundaries beyond which animals cannot let another organism pass without taking action. Specifically these boundary distances are: flight distance - the point at which the animal flees; social distance - the average distance maintained between same species animals; and individual distance - an attack distance within which even same species animals receive active rejection. Hall (1959, 1963, 1965), noting somewhat similar spacial behavior in humans, outlined a series of distances in human interaction within which specific non-verbal cues tended to differentially predominate. Hall lists these regions: the public region (beyond 12 feet) with vision and voice loudness the primary cues; social-consultative region (48-144 inches) with posture, sex identifiers, and body orientation coming into play; casual-personal region (18-48 inches) with body heat, odor and kinesthetic cues becoming more important; and finally the intimate region (0-18 inches) where vision cues decrease and touch, olfaction, and heat reception predominate. A recent article by Mehrabian (1969) reviews much of the research on proxemic cues. Thus proxemic cues are of critical importance throughout the phylogenetic scale.

In addition to research focusing on proxemic cues, two types of human experimentation have been conducted with distance as a variable. The first type utilized stimuli that were arranged by the subject as observer. Subjects' arrangements of various combinations of cloth figures - men, women, children, animals and inanimate objects - followed reliable "social schemata" based on distance (Kuethe, 1962a, 1962b, 1964). Little's (1965) subjects responded to both a projective, figure-placement task and a task

which required arrangement of live models in different imagined settings
with different imagined relationships between the figures and models. In
both tasks, the interaction distances subjects arranged for their
respective cardboard or live figures were strikingly similar. Distances
were strongly affected by degree of acquaintance and moderately affected
by the setting of the imaginary interaction. Moreover, placement of figures
in varying degrees of acquaintance (Stranger, Acquaintance, and Best
Friend) showed a direct correspondence to increasingly close proxemic
regions defined by Hall (1965). Finally, a projective study acts as a
precursor of "real interaction" studies which will be described in a moment.
Using a projective magnet board, Gottheil, Corey, and Paredes (1968) asked
their subjects to "show how close" they felt to a representation of certain
significant others. The distance to the last significant other, "the
interviewer," on the board was significantly correlated with the actual
nose-to-nose distance between subject and interviewer. The above studies
indicate a strong tendency for humans to use physical distance as a way of
organizing their perceptions about social interaction. That is, they
tended to perceive a personal space surrounding people that determines how
interaction shall be spacially organized.

, The second type of personal space experimentation utilizes real
interaction in lab or field situations. Sommer conducted a series of
studies (1959, 1961, 1962) concerned with the effect of distance on seating
arrangements. After an initial naturalistic observation, Sommer manipulated
two variables: the availability of specific seating arrangements, and
the side-to-side and face-to-face distances within those arrangements. His
findings indicate a preference for face-to-face interaction, a specific
minimal distance for a comfortable conversation, typical spacial arrangements

of group members vis a vis group leaders, and a distortion of normal
personal space relations by schizophrenics. A study of men in isolated
dyads indicated the development of territorial behaviors whose intensity
varied with personality trait compatability (Altman and Haythorn, 1967).
Willis (1966) found that the initial speaking distance one person assumed
in relation to another varied according to the speaker's sex and his
relationship to the other. Specifically, speakers stood closer to women
than to men, friends stood closer than acquaintances, and acquaintances
closer than strangers.

Mehrabian's (1969) review of the literature suggests that distance
between communicators indicates attitude and status relationships. Studies
by Argyle and Dean (1965) and Fischer (1968) indicate a possible inter-
action between physical proximity and eye contact. Psychologically close
dyads retained more eye contact when physically close than did psychologically
distant dyads. In studies by Horowitz, Duff and Stratton (1964) and
Kinzel (1969), exact representations of personal space were mapped by
having normals and schizophrenics, or violent and non-violent prison
convicts assume a comfortable distance from a given object or person. The
area into which a person could not intrude or be intruded upon without
feeling discomfort was labeled the body buffer zone - a direct analog of
Hediger's "individual" distance and of Hall's "intimate" distance. It
was found that schizophrenics had a larger buffer zone than did normals,
and violent, as opposed to non-violent, prisoners had larger total buffer
zones that were also significantly larger in the back. Therefore personal
space seems to be a powerful, pervasive, and well documented concept.

Because it has relevance to the design of the present study, special
attention must be given to a study by Felipe and Sommer (1966) which

experimentally tested Hall's (1959, 1965) observations about invasions of intimate personal space. Using mental patients in one case and college students in another, experimenters varied the distance at which they sat from another person in a natural setting. Their results confirmed the hypothesis that humans too will flee if intruded upon too closely. In dealing with the tension in the situation, subjects used various devices to cope with the experimenter's proximity. Ways of accomodation included hallucinations by mental patients, and construction of barriers using either materials (e.g. books) or the body (e.g. turning of the back.) These body barriers were similar to barriers described by Birdwhistle (1952). When these barriers proved insufficient, flight occurred.

To summarize, it seems as though human feelings regarding personal space influence social interaction. Although homo sapiens' personal space behavior closely resembles that of lower animals, it is overlayed by cultural learning (Watson, 1968). The setting in which an interaction occurs, for example, seems to change the parameters of acceptable distance behaviors. However, the most powerful influence seems to be the relationship between the persons involved. That is, a person who fills a certain essential role or is known to dispense positive reinforcements may approach closer than a person whose reinforcement capacity is unknown or largely negative. An interaction may cause discomfort or be terminated completely if persons move too close or stay too far away. Thus it seems that distance behavior determines and is determined by the relationship between the actors. Both perception and behavior seem to be automatically organized according to distance parameters. As Hall states: "We treat space somewhat as we treat sex. It is there but we don't talk about it (1959)." Personal space, then, appears to be a very basic variable which has almost been taken for granted; yet it is a tangible, easily manipulated aspect of

interaction that suggests fruitful avenues for research.

Hypotheses

A major purpose of this investigation is to chart strategies of self-disclosure empirically. A second major purpose is to ascertain whether penetration in psychological space has correlates in physical space. To accomplish the above, several social penetration situations, based on personal space encounters, will be constructed to represent different strategies of self-disclosure. To each of these situations will be appended a situation allowing for physical penetration. The combination of the above leads to certain derivable hypotheses:

A. Invasion of one dyad member's psychological space via the other's excessively deep self-disclosure will increase psychological distance; furthermore this distantiation will also be reflected in the personal space measure.

B. Consistent, excessively shallow depth of self-disclosure by one dyad member will result in virtual non-contact between the dyad members; thus the psychological distance will increase; and therefore the personal space measure will also increase over the control situation.

C. A consistent but moderate disparity in the direction of deeper self-disclosure by one dyad member will cause the other member to reciprocate, thereby reducing the psychological distance and also reducing the personal space measure in comparison with the control situation.

D. Levels of self-disclosure of one member that consistently correspond to the disclosure level of the other will result in movement to different disclosure depths only via the other's initiation; therefore physical distance will be a reflection of other's previous tendencies toward self-disclosure.

One expectation not cast into specific hypothesis form is that subjects will feel tension in the Intrusion and Non-contact situations. Therefore they will take action to accomodate themselves to the other's distance. Observation of developmental tendencies over trials should give some indication of such accomodative attempts.

METHOD

<u>Subjects</u> - The subjects were 60 male undergraduates enrolled in Psychology
101 at the University of Massachusetts whose participation fullfiled a
course requirement.

<u>Instruments</u> - The Jourard Self-Disclosure Questionnaire (25 item version -
JSDQ-25) was administered to all subjects in order to monitor tendencies
for self-revealing (see Appendix I).

Controlled Disclosure Stimuli (CDS) were based on self-disclosure items
scaled for level of intimacy by Taylor and Altman (1966). Two forms of
this instrument were compiled:

CDS-I.- Controlled Disclosure Stimuli-Items consisted of 20 lists of 10
items per list (see Appendix II). Level of intimacy of self-disclosure
items is indicated via a 100 point scale (100=extremely intimate, 0.0=
extremely non-intimate). The 100 point scale is an integer, percentage
conversion of an 11 point equal-appearing-interval intimacy scale used by
Taylor and Altman (1966). The intimacy level of these items were originally
judged by male college students. Therefore levels given in Altman and
Taylor seemed applicable to the present sample as well. Only items with
interquartile ranges (Q values) of less than 4.00 were included in the
pool from which the CDS-I lists were constructed. Thus variation of
judged level for each item was small. All topic areas except Biographical
Characteristics were included in the pool. Topic areas included were
Religion; Own Marriage and Family; Love, Dating, Sex; Parental Family;
Physical Condition and Appearance; Money and Property; Government and Poli-
tics; Emotions and Feelings; Interests, Hobbies, Habits; Relationships with
Other People; Personal Attitudes; School and Work.

Ten levels of intimacy were defined. These were zero's (0-9), 10's (10-19), 20's (20-29), 30's (30-39), 40's (40-49), 50's (50-59), 60's (60-69), 70's (70-79), 80's (80-89), and 90's (90-99). One item from each of the 10 levels was included on each list. For each level, inclusion of any item on a list was determined randomly from items available in the pool. The order of levels on each list was arranged so that over all lists no particular level of item appeared at any ordinal position (i.e. 1 to 10) more than twice. This was done to eliminate position bias. Each item's level of intimacy appeared immediately before it.

For each subject, the lists were presented in one of three random orders. The orders were counterbalanced over groups. Appendix III contains a list of the three different orders. This was done in order to avoid artifactual changes in disclosure due to list positioning.

CDS-D – Controlled Disclosure Stimuli-Disclosures consisted of an actual disclosure for each of the CDS-I items (see Appendix IV for samples of this instrument). The actual disclosures averaged 27.2 seconds in duration and 4.0 seconds in latency. Appendix V shows that mean durations for all levels were not significantly different. The set of 200 disclosures, based on the experimenter's experiences, were representative of a college sophomore at the University of Massachusetts. The appropriate CDS-D was read for each trial complete with pauses and verbal miscues.

Apparatus – Appendix VI shows a schematic representation of the apparatus used. This apparatus eliminated non-verbal interaction, thus keeping self-disclosure and proxemic tasks from becoming confounded. Also, the communication system (signal lights and tones) facilitated alternation of disclosure rather than simultaneous conversation.

The CDS-I were placed in proper order face down in a shallow open

box. Each list was numbered on the back to preserve the sequence. The
sample list was also in this box, face up.

Procedure - A subject and the confederate were escorted from a nearby
waiting room into the cubicles. They were then instructed to put on a
set of headphones and to listen to the following instructions:

> Both of you have been asked to come here today to participate
> in a session that is concerned with how people get acquainted.
> There are two parts to this session. During the first part each
> of you will remain in a separate cubicle and communicate by means of
> a microphone and headset.
> This might be considered a conversation between two people who
> would like to get to know each other. When people get acquainted,
> they swap information about themselves. Both of you will use a
> series of lists like the sample on your left. On each list will be
> a number of items which have to do with some part of living or of
> your personality. As you can see, some items deal with more
> personal areas of life than do others. The numbers in parentheses
> in front of the items indicate how "personal" or "intimate" the
> items have been judged to be by other students. Zero indicates the
> least personal topic, 100 the most personal. From each list, first
> one, then the other of you will choose one item you feel that you
> would like to elaborate on for your partner. Then you will actually
> tell your partner about that aspect of yourself.
> The communication system is set up so that only one of you at
> a time can speak. The bell and light in front of you will go on like
> this (pause for light and bell, operated by confederate) when you
> can be heard by your partner. The switch below the light is an off
> switch which you should press to signal when you have completed your
> part of an exchange. Push it now to turn off the circuit. When
> you make your statements, take as much time as you feel is necessary.
> Signal when you have finished by pushing the switch below the light,
> as you have just done. Please do not take a new list until your
> partner finishes telling something about himself from the old list.
> Now, as a warm-up, let's go through the procedure that will be
> used while the two of you become acquainted. The paper on the
> light box gives a sequence to be followed and the letter identifying
> you as partner A or partner B (see Appendix VII). First, take the
> sample list off the top of the pile in the box on your left. Second,
> choose one item from the list you feel that you would like to talk to
> your partner about. Third, when your light goes on read the number of
> the item, the level of the item, and the item itself. For instance,
> you would read, "number 1, 8, size of clothing." In actual trials
> you will then tell your partner about that part of yourself indicated
> in the item. For this time, when your light goes on please just read
> the 4 digit code number in the upper right hand corner of your sample
> list. Depress the switch after you are done, just as you will during
> the actual experiment. Will partner A please read his number first
> (partner A is confederate). Now partner B (subject). Remember to

talk only when the light is on, and then to listen to the statement
your partner makes about himself. Fourth, circle the item on the sample
list that you would have talked about. Fifth, after both you and
your partner have used a list, place that list on the top of your
cubicle. Finally, repeat the above sequence.

This procedure will be repeated a number of times. Although
limited to the listed topics, please try to behave naturally; that
is, behave as you would in such a conversation with a fellow student
you have just met on campus.

I will explain the second part of the session more fully later.
For now you should know that you will meet each other in a face-to-face
interaction in the second part.

Now I will leave the room. I will be controlling the communication
system, that is the lights and the bells, from the other room. I
will not be able to hear what you say to each other. Your statements
will be tape recorded for later reference. They will be identified
only by the code number you just read into the recorder. Thus
whatever you say will be confidential and anonymous to everyone
except your partner?

Do you have any questions?

Okay. Put the sample list that you have already marked on top
of your cubicle, and begin the sequence with list one. The starting
partner will be alternated for each list, so will partner B please
start as soon as his light goes on. (Experimenter leaves the room).

The temporal sequence of events in the procedure were as follows:

1) short tone, speak light goes on for subject (confederate controls the
lights and bells), 2) subject discloses, 3) subject pushes off button
(short tone, light goes off), 4) 3 to 4 second delay to choose appropriate
CDS-D, 5) CDS-D given with tone before and after, 6) 5 to 7 second delay
to switch lists, 7) sequence is repeated with confederate disclosing first
on even numbered lists, subject disclosing first on odd numbered lists.

Level of item, time per disclosure and latency (i.e. time between
onset of light and tone and start of disclosure) were recorded for each
exchange.

The depth of CDS-D subjects received depended on their placement
into one of four groups. Order of subject placement was counterbalanced.

The group treatments are described below:

A. Intrusive situation group - Except for exchanges 1 to 3 (levels
60, 70, 70), CDS-D consistently in the upper 20% of the range of intimacy;
that is, items scaled 80 to 100.

B. Non-contact situation group - CDS-D consistently in the lower 20% of the range of intimacy; that is, items scaled 0 to 20.

C. Step-up situation group - CDS-D consistently at two levels above subject's own level of disclosure (i.e. approximately 20 points higher). The ceiling level was the Intrusive item on each list.

D. Congruent situation group (active control group) - On trials in which subject disclosed first, CDS-D was alternately either one level above or one level below subject's disclosure. When confederate disclosed first, he disclosed on the new list at the level identical to subject's disclosure on the previous list. In other words, the confederate's strategy of disclosure followed the subject's strategy.

Only in Intrusive and Non-contact (and rarely in Step-up) did the confederate choose the same item as did the subject. In these conditions extreme levels chosen by subjects forced even more extreme levels by the confederate until the limiting item was reached (i.e. level 90 or zero, respectively).

Finally, a fifth group - Non-active control group - was run. This group did not go through the first part of the experiment, but took the JSDQ-25 and served as a control group for body buffer zone measurements in male college students.

After 20 exchanges in the disclosure strategy groups, the experimenter re-entered the room and gave the following instructions. A slightly modified version was also read for the Non-active control group.

Okay. Now we're ready to start the second part of the experiment. Soon we will go into the other room. Once there, one of you will be asked to stand stationary on a designated line. The other will walk slowly toward him. We are interested in finding the distance between you which seems most comfortable. During this part of the experiment, please do not talk to each other unless you are asked to do so.

At this point subject and confederate were escorted into a large

room (15 feet by 18 feet). The following instructions were given to all
groups:

>   (to confederate) Will you please stand here (at zero end of tape
>   measure)?
>   (to subject) Now you stand here (12 feet away). When I say "begin"
>   I want you to walk slowly toward him, keeping your eyes on his
>   face. Stop when you feel that you're at a comfortable
>   conversational distance.

The experimenter stepped out of the room, gave the signal to begin, and
recorded the toe-to-toe distance between subject and confederate. Then
instructions were given for a second trial, this time with the confederate
approaching the subject from the rear.

>   (to both) Please change places (confederate moves to zero end of
>   tape measure; subject moves into position 12 feet away).
>   (to subject) This time turn your back to him.
>   (to confederate) This time I want you to walk slowly toward him.
>   Since he cannot see you coming, please stop and ask, "Okay?"
>   after each step. (Confederate says, "You mean like, 'Okay?'",
>   to give subject auditory baseline from 12 feet away.)
>   (to subject) I want you to tell him to stop when he reaches a
>   distance which is comfortable to you.

As in first trial, experimenter stepped out of the room and gave the
signal to begin. When the subject signaled that an acceptable distance
had been reached, confederate halted and the distance between subject's
heel and confederate's toe was recorded.

Subjects were then taken to separate rooms where they filled out the
JSDQ-25 and were debriefed.

RESULTS AND DISCUSSION

Pilot work indicated that the strategy treatments were credible and effective. Although some subjects could verbalize the confederate's strategy, very few guessed that it was part of the experiment. Subjects' responses, therefore, may be considered "natural."

Initial Disclosing Tendencies

All four strategy treatment groups were alike at the beginning of the procedure. Trial one of the disclosure exchange was considered a baseline measure. On this trial subjects disclosed without having been exposed to experimental strategies. Latency, level, and duration measures were collected for this exchange, as for all others. Latency measures did not discriminate among groups or across time. Therefore only level and duration will be considered.

Baseline level is assumed to be the level at which a subject would start disclosing to an unknown student on campus. Baseline duration is assumed to be the duration of a typical first disclosure to an unknown student. Both level and duration showed a significant positive skew. Median baseline level was 35; median baseline duration was 63 seconds. Comparisons of the four strategy groups via Mann-Whitney U tests (Ferguson, 1966) indicated no significant differences among the groups on either baseline level or baseline duration. Thus all groups are assumed to have similar initial tendencies to disclose to a strange college student.

Strategy Responses

The 20 exchanges were divided into three time periods for simplicity of comparison. Figure 1 shows effects of strategies on levels of subject response. Period 1 level equals the mean of subject's disclosure level
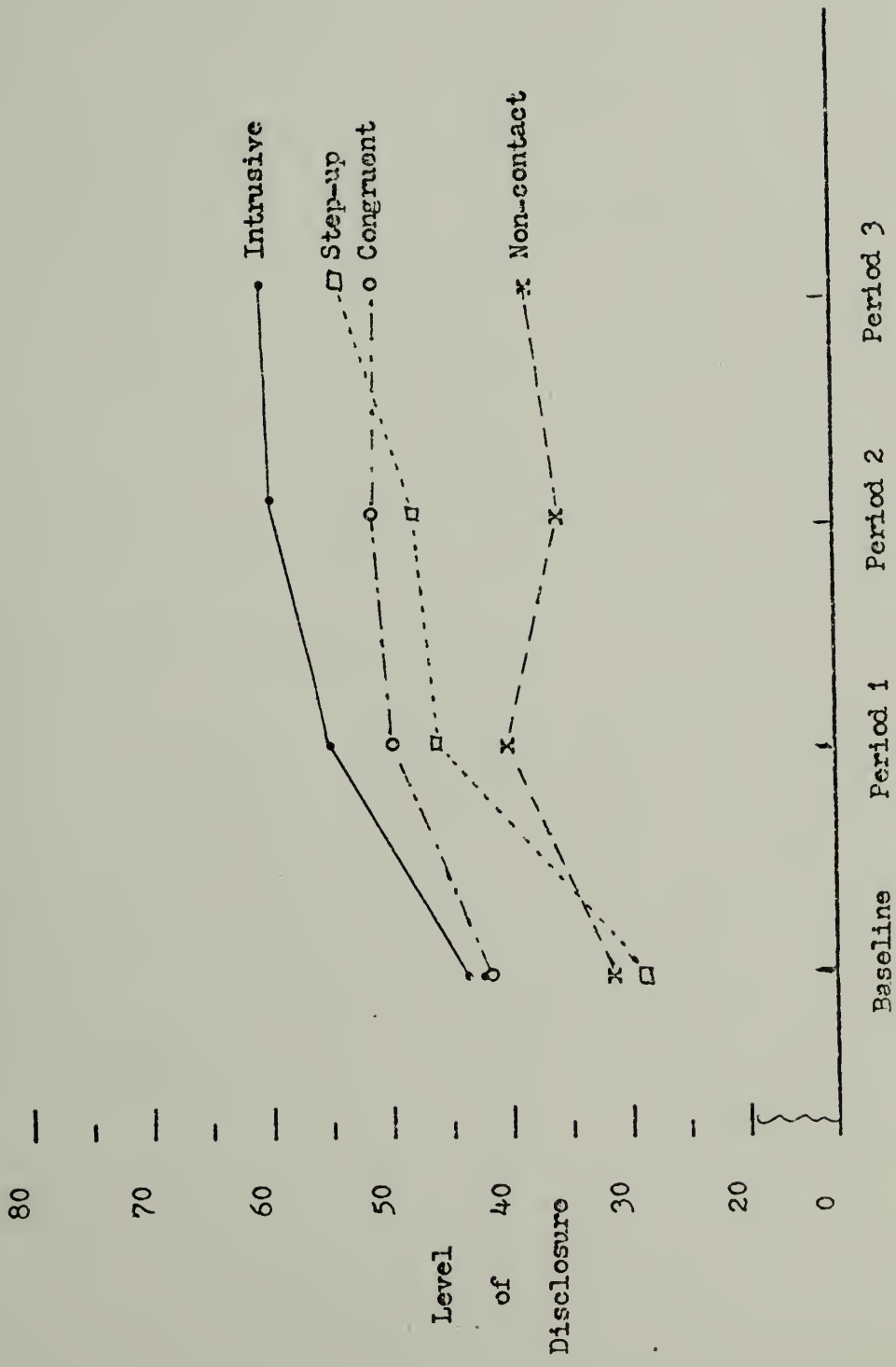
Figure 1. Mean Level for each group on Baseline measure, and on each of three time periods.

from exchanges 2 to 7; Period 2 level, mean of exchanges 8 to 14; Period 3, mean of exchanges 15 to 20. Period 3 mean served as the measure of final disclosing tendencies evoked by the experimental strategies.

Level - Subjects responded to the disclosure strategies in the hypothesized manner, except for the Intrusive condition. Comparison of change in level of disclosure from baseline to Period 3 (Table 1) indicates that the Step-up strategy elicited significantly more increase in level than either Congruent (p < .025) or Non-contact (p < .01). Thus, in terms of relative increase, there is support for the hypothesis that a gradual increase of disclosure intensity yields a response of increased intensity.

In terms of absolute levels evoked by the strategies, Table 2 reports means, standard deviations and t-test comparisons. The Non-contact strategy yielded shallower levels of response from subjects than did the Congruent (p < .05) or Step-up (p < .01). Because the Intrusive mean fell in an unpredicted direction, comparisons of other groups with it were tested against two-tailed significance levels. With this restriction, the Intrusive group still disclosed at levels significantly deeper than the Non-contact group (p < .01) and marginally deeper than the Congruent group (p < .06).

It therefore seems that a particular strategy of self-disclosure elicits a disclosure response which is similar. That is, extremely high or low self-disclosure calls forth high or low response, respectively. Gradual increase in level elicits most increase in response. Therefore the hypotheses concerning Step-up, Congruent, and Non-contact strategies are supported. The hypothesis that the Intrusive strategy would cause subjects to lower their levels of disclosure was disconfirmed.

In fact, the Intrusive strategy elicited a response just opposite to

Table 1

MEANS, STANDARD DEVIATIONS AND MANN-WHITNEY U

COMPARISONS AMONG FOUR STRATEGY GROUPS ON CHANGE

OF LEVEL FROM BASELINE TO PERIOD 3[#]

Groups	Step-up	Intrusive	Congruent	Non-contact
Means	75.68	70.71	60.01	55.19
Standard deviation	21.02	22.84	21.15	16.57
Mann-Whitney U Values Intrusive	56.00			
Congruent	36.00**	51.00		
Non-contact	26.00***	43.00*	65.00	

$n_1 = 12, n_2 = 12$
 * $p < .06$
 ** $p < .025$
*** $p < .01$
# Change scores = (Period 3 level − Baseline level) + 50.00

Table 2

MEANS, STANDARD DEVIATIONS AND T-TEST COMPARISONS

OF PERIOD 3 LEVEL FOR FOUR STRATEGY GROUPS

	Groups	Intrusive	Step-up	Congruent	Non-Contact
	Means	63.46	55.01	51.60	38.61
	Standard deviation	12.39	12.74	15.19	12.81
	Step-up	1.57			
T-test	Congruent	2.01+	.57		
Values	Non-contact	4.64++	3.01**	2.17*	

 * p < .05(one tail)
 ** p < .01(one tail)
 + p < .06(two tail)
 ++ p < .01(two tail)

that hypothesized. Perhaps the Intrusive group contained subjects for whom the Intrusive strategy was in fact intrusive, and others for whom it was not. Subjects with high initial disclosing tendencies might view very high experimental disclosures as a mild increase, while those with low initial tendencies would experience the same disclosures as extreme. If the Intrusive hypothesis is true, subjects high on baseline disclosure would respond with very high levels. Subjects low on baseline disclosure would respond by decreasing their responding levels. Figure 2 shows a comparison of Intrusive and Non-contact groups that were split at the median of baseline level. Non-contact group is included in this comparison to give perspective. High Intrusive and High Non-contact groups (all n's = 6) were initially undifferentiated; as were Low Intrusive and Low Non-contact groups. However, the low pair was significantly different from the high pair (largest Mann-Whitney U = 6.0, p<.03). On Period 3 level the undifferentiated Intrusive pair are significantly different from the undifferentiated Non-contact pair (largest Mann-Whitney U = 7.0, p<.05). It appears that the intrusive strategy produced the largest increase with subjects whose initial disclosing levels were low. That is, rather than causing low initial disclosers to withdraw, the Intrusive strategy induced a most radical deepening of level. Thus the hypothesis concerning the Intrusive strategy is again disconfirmed.

Several factors may have contributed to the disconfirming results. The first factor may have been methodology. During pilot studies the Intrusive condition was toned down to make it more credible (e.g. items concerning masturbation were not used unless the subject forced the confederate to exceed the previously determined level). This proved to be more believable, but possibly less intrusive. Perhaps pilot subjects'
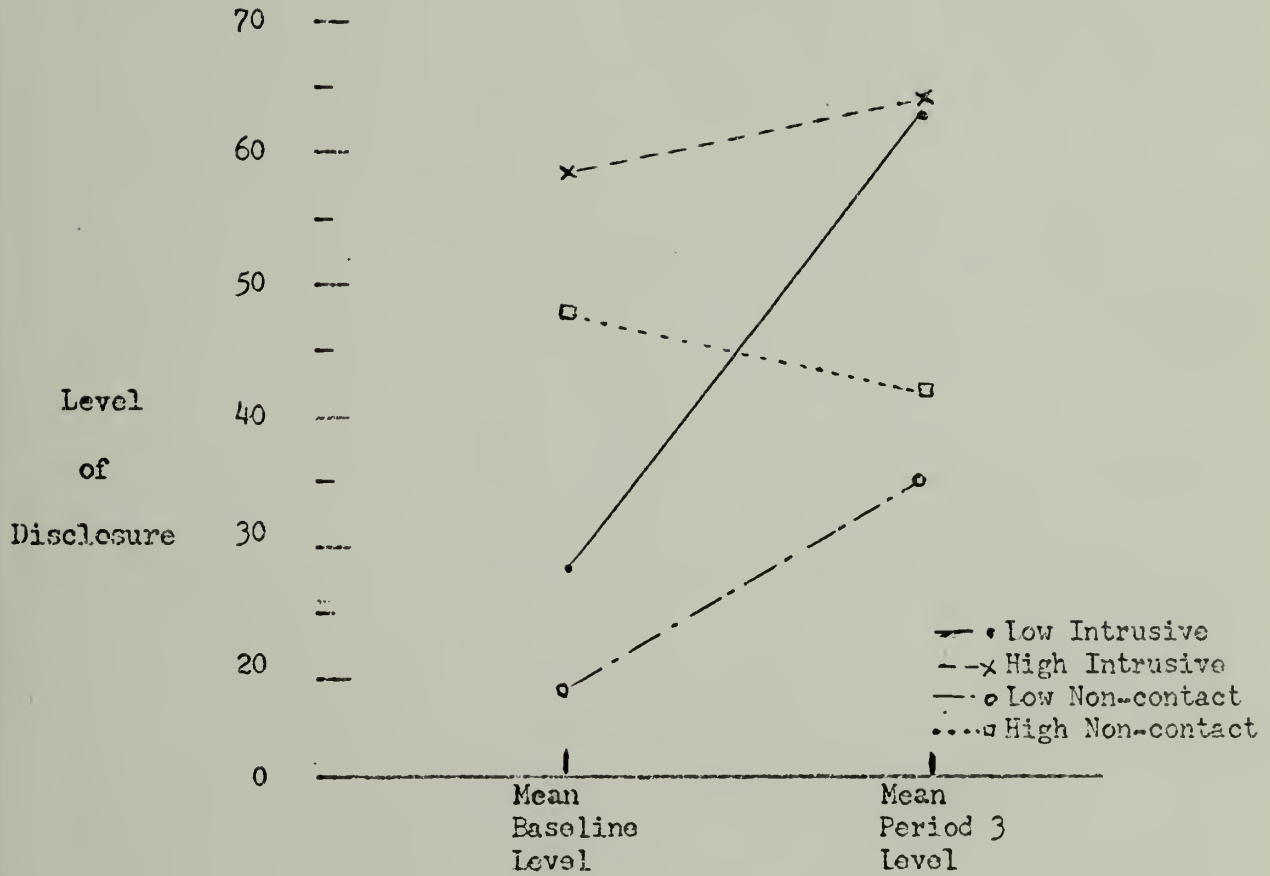
Figure 2. Period 3 level of Intrusive and Non-contact groups split

in two at median of Baseline Level.

disbelief of the original intrusive condition was a rationalization to avoid reciprocating. However, credibility of the confederate was the primary concern.

A second factor may have been the sample. Many high level items on the CDS-I list dealt with sex. College males seem to enjoy relating their experiences and opinions about sex. Actually, such discussion may be experienced as less intrusive than talking about one's feelings or mistakes. Yet it may receive a higher level rating. Possibly a different population would react differently to such items.

Finally, it is possible that not enough time or exchanges had passed to produce the hypothesized accomodation and withdrawal. Obviously, the intrusion hypothesis deserves more study. Compensation for some of the above factors should be made in future research.

Duration - The length of time spent elaborating a disclosure (duration) was considered a measure of breadth of disclosure. Seemingly breadth should parallel depth in response to disclosure strategies. Figure 3 illustrates changes in duration for the four strategy groups over time. All groups showed a decrease in duration. Such a uniform trend seems to be caused by low durations (mean = 27 seconds) by the confederate. Table 3 shows means, standard deviations, and t-test comparisons of Period 3 durations. The undifferentiated high pair of Intrusive and Step-up differ significantly from the Congruent group. Non-contact differs only from Intrusive. Thus duration does parallel level for Intrusive and Step-up strategies, but not for Non-contact. This finding deserves additional attention, since it emerged in spite of constant low durations on the confederate's part. In other words, subjects disclosing at high levels reduced their duration less in response to the confederate than did subjects disclosing at lower
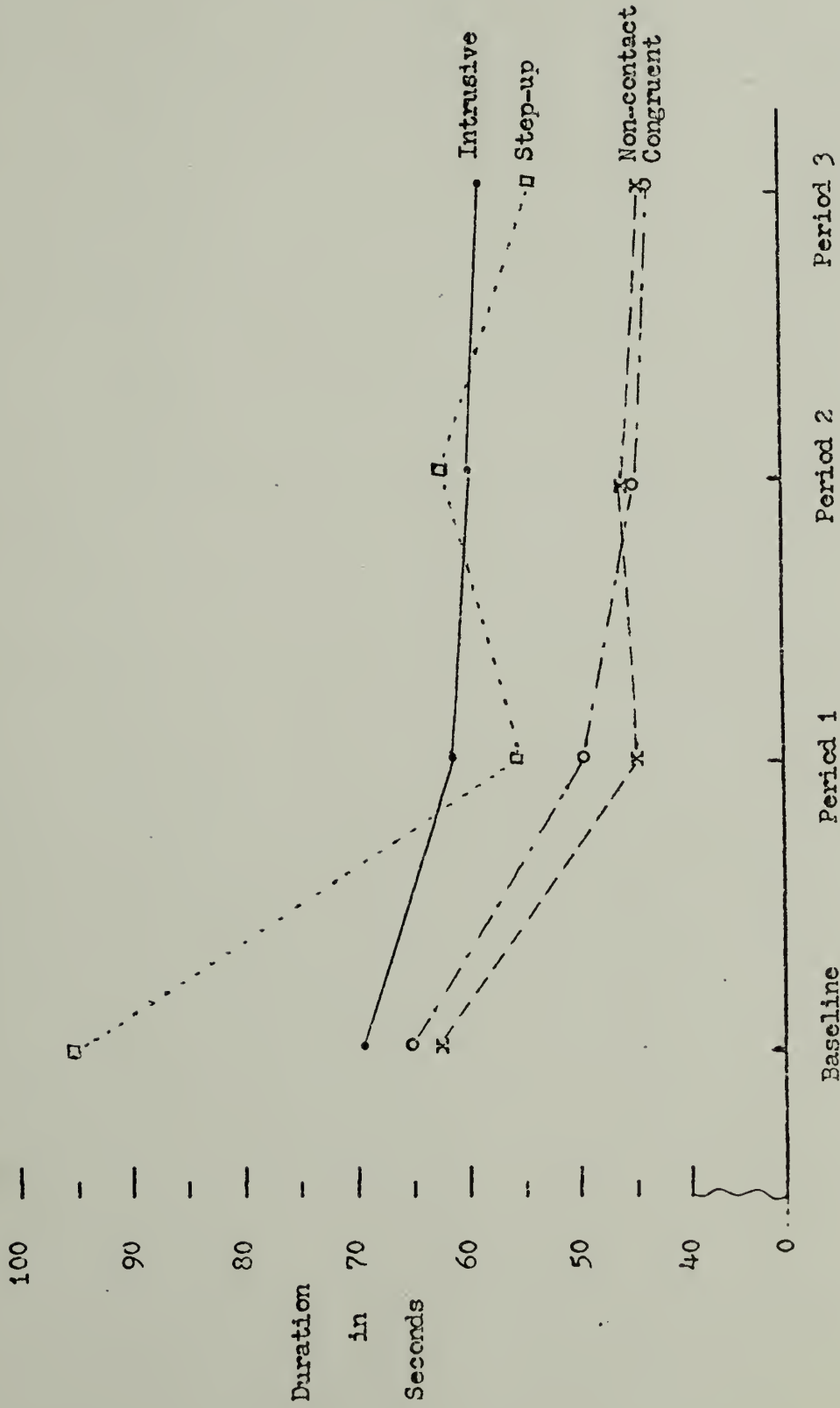
Figure 3. Mean duration in seconds for each group on Baseline measure, and on each of three time periods.

Table 3

MEANS, STANDARD DEVIATIONS AND T-TEST COMPARISONS

OF PERIOD 3 DURATION FOR THE FOUR STRATEGY GROUPS

	Groups	Intrusive	Step-up	Non-contact	Congruent
	Means	55.08	52.10	42.25	40.74
	Standard deviation	16.03	19.45	16.69	12.13
T-test	Step-up	.25			
Values	Non-contact	1.82*	1.57		
	Congruent	2.33**	2.03	.24	

* $p < .05$
** $p < .025$

levels. It appears that depth and breadth (level and duration) of disclosure respond to strategies in somewhat similar fashion.

In summary, except for the Intrusive hypothesis, all hypotheses concerning strategies of self-disclosure were confirmed. Possibly because of methodology, or sample, or limitation of interaction, the Intrusive strategy did not cause subjects to withdraw. Instead they increased depth and continued breadth of disclosure. The Step-up strategy also elicited a large increase in depth and a continuation of breadth of disclosure. On the other hand, the Non-contact strategy caused subjects to disclose at shallower levels than the active control group (Congruent), and to reduce breadth of disclosure approximately as much as did the control group. Although the relationship is far from perfect (r = .51), breadth (duration) seems to parallel depth (level) in the process of intimacy growth.

Relationship between Strategies and Personal Space Proximity

The front proxemic measure correlated .48 with the rear measure. The front measure was conceived of as a conversational distance; the rear, as an index of interpersonal trust. The sum of the two, proxemic total, is an estimate of a subject's body buffer zone.

Table 4 shows that neither Period 3 level nor duration correlated significantly with any of the proxemic measures. Degree of change in level, however, was significantly correlated with the front measure. This one significant correlation indicates moderate support for the statement that a significant number of subjects who deepened their disclosure levels stood closer to the confederate in the face-to-face encounter. Those who did not deepen level stood further away.

It is not exposure to a particular strategy that affects personal space correlates of intimacy, but rather how much the individual deepens his levels of disclosing. The correlation of level change with front

Table 4

CORRELATION COEFFICIENTS OF PERIOD 3 LEVEL,

PERIOD 3 DURATION AND LEVEL CHANGE WITH PROXEMIC MEASURES

	Front Measure	Rear Measure	Proxemic Total
Period 3 Level	.027	.075	.064
Period 3 Duration	-.095	-.180	-.166
Level Change	-.250*	-.052	-.149

* $p < .05$

proxemic measure was not significantly strengthened by the addition of any strategy to the correlation. As Figure 2 on page 40 shows, each group contains subjects who change much and others who change little. Admittedly, specific strategies influence change (e.g. Step-up), but strategies effect different amounts of change in different people depending on their initial level of disclosing. Thus relative increase in level rather than absolute level is related to personal space proximity. In short, where one "is at" depends on where he has been.

Furthermore, in terms of group differences, Table 5 indicates that the group with the largest over-all increase in level, Step-up, stood significantly closer to the confederate than did either control group (Congruent - $p < .01$; Non-active Control - $p < .06$). Thus self-disclosure level increase showed a marginal effect on personal space expression when compared to an untreated group.

As for measures of the proxemic manifestations of level change, face-to-face interaction seems most sensitive. Possibly over a longer period of time the rear measure might have tapped the phenomenon. However, building trust probably requires more time than the procedure allowed. Also, judging a person's distance while he approaches from the rear is not a well practiced task. The standard deviations for the rear measure were 50% larger than for the front measure. The estimate of body buffer zone (proxemic total) only compounded the advantages of front with the disadvantages of the rear measure. Most interactions occur in a face-to-face orientation. Therefore, such an orientation logically seems most likely to reflect the rather subtle relationship between increase of self-disclosure and personal space expression of intimacy.

In sum, it seems that relative increase in level of disclosure over time has more influence on face-to-face conversational distance than does

Table 5

MEANS, STANDARD DEVIATIONS AND T-TEST COMPARISONS

OF FRONT PROXEMIC MEASURE FOR ALL FIVE GROUPS

	Groups	Congruent	Control	Non-contact	Intrusive	Step-up
	Means	30.50	28.58	26.92	26.08	23.17
	Standard deviation	8.71	9.62	7.92	8.92	7.61
	Control	.54				
T-test	Non-con-tact	1.06	.49			
Values	Intrusive	1.16	.66	.22		
	Step-up	1.97**	1.67*	1.11	.77	

 * $p < .06$
** $p < .05$

absolute disclosure level. Neither rear distance nor an estimate of body buffer zone was sensitive enough to tap this effect. Thus the hypothesis of relation between verbal and non-verbal aspects of intimacy development must be revised to focus on relative, not absolute indices. Face-to-face interaction seems to be the most responsive medium for measuring this effect.

JSDQ-25

Some groups differed significantly on the JSDQ-25. This questionnaire was thought to monitor subjects' general disclosing tendencies. Table 6 shows means, standard deviations, and t-test comparisons of JSDQ-25 totals for all five groups. As can be seen, disclosure scores are generally the inverse of behavioral disclosure. There seem to be two possible explanations for these differences. First, the differences may be accepted as true differences in over-all tendency to disclose. In that case, the experimental methodology is proven to be extremely powerful. Since the groups' order on JSDQ-25 is virtually the reverse of level and duration outcomes, the procedure would have had to make subjects go against their original disclosing tendencies.

The second, more plausible, explanation is that in this experiment JSDQ-25 does not reflect true disclosing tendencies. Rather, it seems to reflect a compensation process evoked by the procedure. That is, those subjects who felt that they did not disclose as much as they should have during the disclosure exchange reduced their cognitive dissonance by reporting that they really did disclose a great deal to others. In order to keep the experimental manipulations uncontaminated by exposure to any self-disclosure items, JSDQ-25 was administered after all other procedures were completed. Comparison of all five groups (Table 6) indicates that Intrusive, Step-up, and Congruent groups did not differ significantly from the Non-active Control groups' JSDQ-25 score. Only exposure to the Non-

Table 6

MEANS, STANDARD DEVIATIONS AND T-TEST COMPARISONS OF JOURARD

SELF-DISCLOSURE QUESTIONAIRE-TOTAL SCORES FOR ALL FIVE GROUPS

	Groups	Non-contact	Congruent	Intrusive	Step-up	Control
	Means	74.25	70.25	61.25	59.00	57.50
	Standard deviation	12.79	14.56	13.36	16.43	14.43
T-test Values	Congruent	.73				
	Intrusive	2.28*	1.58			
	Step-up	2.80*	1.81	.39		
	Control	3.07**	2.05	.66	.21	

* $p < .05$ (two tail)
** $p < .01$ (two tail)

contact strategy caused subjects to boost their JSDQ-25 scores significantly

higher than the Non-active Control subjects' scores. Thus differences in

"perceived" self-disclosure to significant others seems to have been

affected by current interaction with a stranger.

Accommodative Processes

The focus in this section falls on certain processes which may

determine a subject's responses to particular strategies. Statistics are

not offered as documentation for the conclusions reached. This section

is therefore highly descriptive and somewhat speculative.

In order to isolate processes occurring in intimacy development,

individual strategies are examined. Figure 4 displays the data from which

post hoc hypotheses will be drawn. In this figure mean level for each

strategy group over each of the 20 exchanges is shown. One fact important

for interpreting the figure is that the subject and confederate alternated

first disclosures. That is, subjects disclosed first on odd numbered

exchanges; the confederate disclosed first on even numbered exchanges.

Congruent Strategy - For this strategy the confederate followed a

conservative style in which he responded reciprocally to subjects' levels

of disclosure, but did not increase or decrease them. From trials 1 to

8 there was a gradual increase in level by subjects. Then from trial 8

to 13 an interesting phenomenon occurred. Every time subjects disclosed

near the 60 level, their next disclosure fell off sharply. High levels

corresponded with disclosing second; low levels with choosing and disclosing

first. Trials 13 to 17 indicate a reduction of the broad fluctuation. But

near 60 level disclosure on trial 17 seemed to precipitate a drop and a

new build-up. Thus there seemed to be two phenomena occurring. One was

risk-taking. Disclosing at near the 60 level seemed to be risky. Subjects

did so only when they knew at what level the confederate had disclosed. They
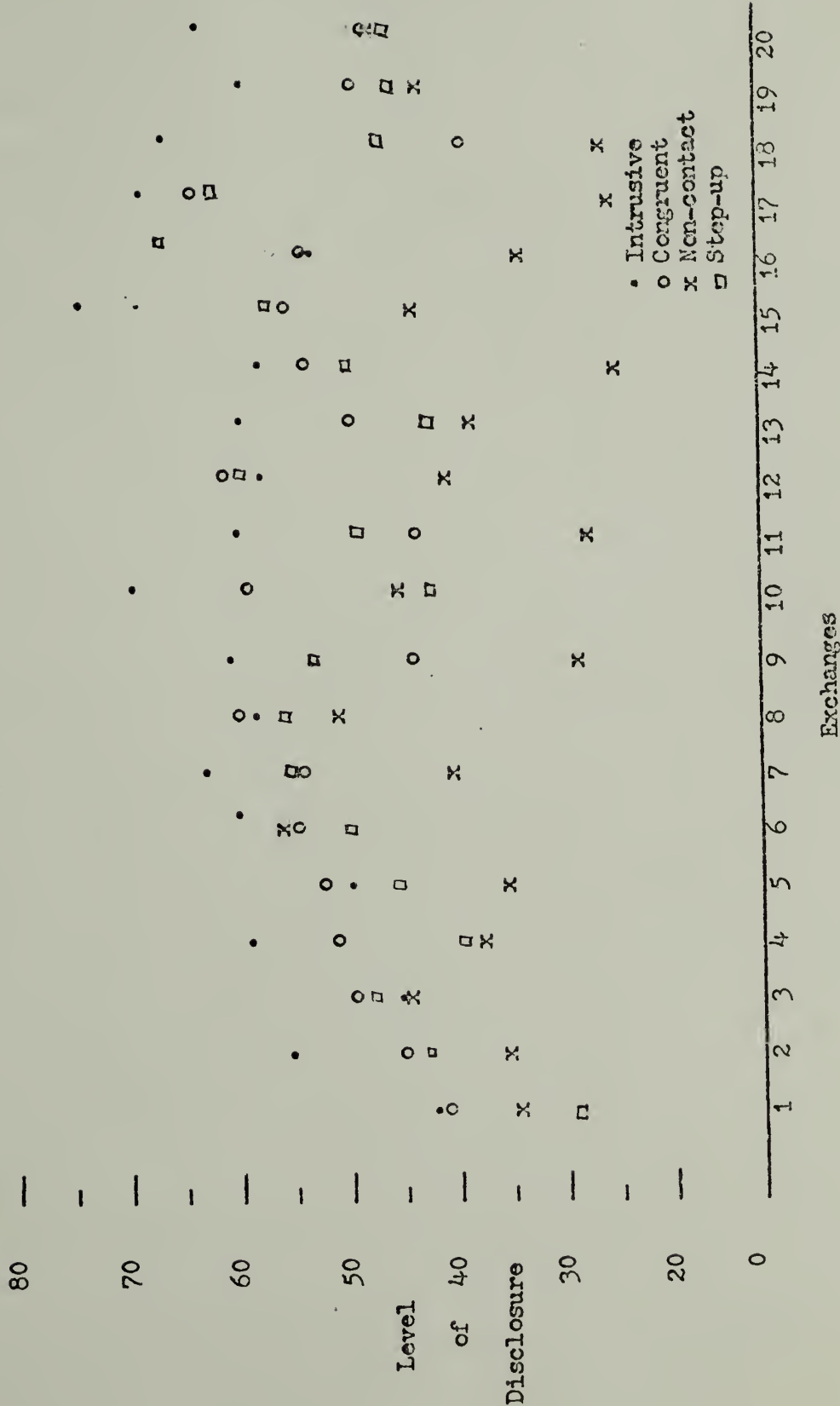
Figure 4. Mean level for each group on each of twenty exchanges

did not risk high disclosing when they had to disclose first. The second phenomenon appeared to be an alternation between "safe" periods and "risky" periods. The gradual build-ups of level between exchanges 1 and 8, and between 13 and 17 were followed by large fluctuations in level. The fluctuations may indicate an ambivalence about exposing one's self too much. Safe periods did not reflect that ambivalence. Responses of the Congruent group should reveal strategies employed by subjects, since the confederate followed their lead. Thus the risk taking and the alternation of safe and risky periods of subjects in this group may be considered a baseline against which responses to other strategies may be compared.

Intrusive Strategy - For this strategy the confederate disclosed very high level items about himself no matter what the subjects disclosed. The first 6 exchanges show evidence of modeling. That is, subjects would disclose at higher levels when they followed the confederate's high level responses than when they preceded him. With 2 exceptions, subjects showed little risk taking or ambivalence after exchange 6. Although displaying some moderate ambivalence, subjects appeared to have accepted a norm of high disclosure. The exceptions, exchanges 10 to 12 and 15 to 17, showed subjects' sharp decrease in level after an unusually high disclosure. The drop was especially sharp after exchange 15 in which subjects disclosed first. An initial period of modeling was followed by relatively constant low level variation. Only two short risky periods occurred. However, the initial period could also be considered a risky period that was terminated when subjects could depend on the confederate to respond at a high level.

Step-up Strategy - For this strategy the confederate disclosed two levels higher than did each subject on each item. The most striking factor about the response to the Step-up strategy is the relative lack of abrupt shifts in level. Instead, subjects seemed to respond with levels that fit

the form of gentle waves with increasingly high peaks. The only exchanges
that showed abruptness were 12 and 13. It appears that Period 3 (trials
15 to 20) includes both a peak and a trough. Perhaps, given more time, the
Step-up strategy would have produced higher levels than did the Intrusive.
This strategy seems to produce the least ambivalence of all.

Non-contact Strategy - For this strategy the confederate disclosed at
very low levels regardless of the subject's disclosure. Exchanges 1 to 3
appeared to be an initial period in which subjects paralleled the Congruent
group. This initial attempt to follow their own usual strategy was followed
by a period of extreme fluctuation. During exchanges 4 to 12 two processes
appeared to be functioning. First, subjects chose higher items when they
disclosed after the confederate. Thus they seemed to be protecting them-
selves on odd numbered trials, but desiring to disclose more on even trials.
The second process shows that the levels of exchanges on which subjects
risked themselves steadily decreased from exchanges 8 to 12. Thus it seems
as if subjects were trying to conform to their own norm of how much should
be disclosed, but were being steadily turned off by a partner who would risk
nothing. Exchanges 13 to 20 are difficult to account for. However, it
seems that exchanges 13 through 16 show a reversal of the previous trend.
This may signify subjects' abrupt efforts to jolt the confederate by
disclosing at a relatively high level on a new list. Exchanges 17 through
20 may indicate a short period in which the attempt to jolt the confederate
was abandoned, followed by an attempt to re-coup self-image by disclosing at
what might be considered more "normal" levels on the last two lists, regardless
of the confederate's behavior. Thus the dominant feature of responses to
the Non-contact strategy seemed to be a strong ambivalence combined with a
decreasing willingness to take risks.

Of the four strategy groups, only the Non-contact group appeared to be alienated from interaction. Level and duration measures show this. However, an anecdotal report of subjects' attempts to increase intimacy should contribute further understanding. Most subjects seemed to accept the confederate's low levels of disclosure as a sign of his not wanting to say much. They seemed to respect his choice. However, some tried to influence intimacy growth. A few chose items that the confederate had chosen, then tried to point out similarities between themselves and the confederate. Others cracked jokes and were very warm and accepting. One subject attempted to shame the confederate by pointing out rather sarcastically that he was considering discussing a low level item but would not choose it because it was really rather trivial. Another, a campus politician, disclosed highly throughout and even introduced himself and shook the confederate's hand after the disclosure exchange (the only subject to do this). Obviously, level and duration measures do not completely explain the accomodative processes attempted.

In summary, there seemed to be several processes of interaction that emerged in response to virtually all strategies. These processes were ambivalent risk-taking and an alternation between safe and risky disclosures. The Congruent group most clearly showed both processes. The Intrusive strategy seemed to produce initial modeling followed by some ambivalance about high level disclosing. The Step-up strategy yielded responses that seemed to form waves with peaks of increasingly higher level. Finally, the Non-contact strategy seemed to produce the most ambivalence, a decreasing willingness to risk disclosure, and often an informal attempt to increase intimacy. The interpretation of Figure 4 and the recounting of anecdotal evidence, of course, does not confirm the processes suggested. It does, however, relate

the results of this experiment to theoretical positions, as well as point

out avenues for further research.

SUMMARY AND CONCLUSIONS

Several aspects of intimacy growth came under investigation in the
present study. First, four different strategies of self-disclosure were
presented to male college students. The setting in which these subjects
responded deprived them of non-verbal cues and limited their topics of
disclosure. The experimental confederate, who appeared as another student,
presented the pre-determined strategies from a larger set of disclosures
that were constant in duration and content.

The hypothesis that different strategies of disclosure elicit different
self-disclosure responses was generally confirmed. More specifically,
subjects exposed to a strategy in which the confederate revealed himself
at very low levels (Non-contact), responded with low disclosure levels.
When the confederate reciprocated each subject's own strategy by matching
his levels (Congruent), subjects responded by increasing their level twice
as much as did subjects in the Non-contact situation. The most increase in
level was effected when the confederate revealed at a moderately higher
level than did the subject no matter what level they chose (Step-up).
Subjects responded in reverse of the hypothesized manner when the confederate
disclosed at very high levels regardless of subject disclosure (Intrusive).
Instead of psychologically withdrawing from the high risk situation by
disclosing very little, subjects followed the confederate to very high levels.
The last finding suggests the presence of methodological shortcomings, e.g.
inability to make the intrusive levels high enough and remain credible. On
the other hand, it may suggest that a viable road to intimacy is to self-
disclose at a high level. Evidence to support this is provided by the
reports of those who have been members of two and three day encounter groups.

The preceding descriptions of strategy outcomes refer only to level of

disclosure. Although levels (depth) of disclosure exhibited the strongest differences, duration (breadth) of disclosure also showed significant, if weaker, effects. Such effects seem more powerful than their statistical probabilities indicate because they emerged in spite of a methodology which held confederate duration constant. Thus the present study provides support for the notion that both depth and breadth of self-disclosure contribute to growth of intimacy.

Personal space proximity did relate to self-disclosure strategies, but not in a direct way. That is, physical proximity did not correlate with final level of self-disclosure. However, change in level of disclosure did correlate with physical proximity. In other words, a person who increased his level of disclosing to the confederate approached closer to the confederate than did a person who decreased his level. This relation was significant only for the face-to-face interaction. Apparently the relationship was not strong enough to overcome the extreme variability by subjects judging the confederate's distance while facing away from him.

Finally, in a post hoc, speculative manner, processes of intimacy growth were inferred from level responses of the four strategy groups over 20 exchanges. Two processes seemed evident. The first was risk-taking characterized by extreme vacillation in level. This vacillation seemed to indicate an ambivalence about disclosing too much while being unsure of how the confederate would respond. The second process was an alternation of periods of risk-taking with periods of showing very little vacillation. The Congruent group displayed both these processes very well; the Step-up strategy seemed to produce smooth waves of disclosure level whose peaks always became higher; the Intrusive group showed initial modeling or ambivalence followed by usually moderate ambivalence; finally, the Non-

contact showed the most vacillation of all. This group alone showed signs
of alienation from interaction. Anecdotal accounts indicate various ploys
used by members of the Non-contact group to increase intimacy.

Several conclusions may be drawn from the present investigation. The
first is that the "dyadic effect" (Jourard and Landsman, 1960) is a
demonstrable phenomenon. That is, people self-disclose more to those who
disclose in return. The results of this experiment were not caused by
social reinforcement in the usual sense. Contrary to methodology employed
by Taylor, Altman, and Sorrentino (1969), the present methodology avoided
any statements of approval. In large part, even the choice of an identical
item was avoided.

It is interesting to note, however, that even the Non-contact group
shows slight but increasing levels of disclosure. Thus there may be a
more unconditional process of increasing disclosure. That is, almost
regardless of what is disclosed, levels may increase through enforced
interaction (cf. Altman and Haythorn, 1965) or, perhaps, through the
presence of something akin to exploratory motivation.

It is difficult to decide which theory best accounts for the present
data. Obviously, there are many levels of explanation. To ignore any
one of them for the sake of "proving" a theory would in itself be a
premature strategy. To say only that subjects followed a model to different
levels of response (a la learning theory) ignores the vacillation which
marked the exchanges. To say only that risks that were justified (i.e. in
Intrusive and Step-up conditions) lead to closer relations (a la humanistic
and social exchange theories), ignores both the effect of social norms and
the effects of cognitive manipulations involved in evaluating partner
behaviors. Social interaction comprises a very complex set of behaviors,

attitudes and emotions. No one theory at this point can adequately account for all of these factors. More research relating various layers of interaction must be done in order to form a unified theory spanning all levels.

Finally, the effectiveness of strategies and the use of verbal or non-verbal modes of disclosure may be different among different cultures. In cultures in which formality and psychological remoteness are the rule (e.g. Germany) even the Step-up strategy may prove intrusive, while the Non-contact would be acceptable. Within our own country, people from different subcultures may react differently. For example, the Intrusive strategy may indeed be aversive to working class members. Non-verbal modes of disclosure may be used less by North Americans than by Latin Americans; likewise, less by upperclass members than by lower class members. The college and university campus, itself, appears to be a culture somewhat distinct from the larger society. Both cross-cultural and cross-modal strategy differences are as yet largely unexplored.

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APPENDIX I

JOURARD SELF-DISCLOSURE QUESTIONAIRE

If you have disclosed the information from the questionaire to you
MOTHER*, then fill in a "2" in the appropriate space on the answer sheet.
If you have not told this information to her, or if you have only given an
incomplete version of the information, then fill in a "1" in the appropriate
space.

1. What you like to do most in your spare time at home, e.g. read, sports,
   go out, etc.

2. The kind of party or social gathering that you enjoy most.

3. Your usual and favorite spare-time reading material; e.g. novels, non-
   fiction, science fiction, poetry, etc.

4. The kind of music you most enjoy listening to; e.g. popular, classical,
   folk music, opera, etc.

5. The sports you engage in most, if any; e.g. golf, swimming, baseball,
   tennis, etc.

6. Whether or not you know and play any card games; e.g. bridge, poker,
   gin rummy, etc.

7. Whether or not you will drink alcoholic beverages; if so, your favorite
   drinks--beer, wine,gin,brandy,whiskey,etc.

8. The foods you like best, and the ways you like food prepared; e.g. rare
   steak, etc.

9. Whether or not you belong to any church; if so, which one, and the
   usual frequency of attending.

10. Whether or not you belong to any clubs, fraternity, civic organizations;
    if so, the names of these organizations.

11. Any special skills that you have learned; e.g. play a musical instrument,
    sculpture, wood-carving, weaving, etc.

12. Whether or not you have any favorite spectator sport; if so, what these
    are, e.g. boxing, wrestling, footvall, basketball, etc.

13. The places that you have travelled to, or lived in during your life--
    other countries, cities, states.

14. What your political sentiments are at present--your views on local or
    federal government policies of interest to you.

15. Whether or not you have been seriously in love during your life before this year; if so, with whom, what the details were, and the outcome.

16. The characteristics of that person which you dislike, that you wish that person would change and improve.

17. The personal deficiencies that you would most like to improve, or that you are struggling to do something about at present; e.g. appearance, lack of knowledge, loneliness, temper, etc.

18. Whether of not you presently owe money; if so, how much and to whom.

19. The kind of future you are aiming for, working for, planning for--both personally and vocationally, e.g. marriage and family, professional status, etc.

20. Your chief complaints about your work or course of studies; e.g. the things that bore you, or annoy and upset you, such as tasks, assignments, people.

21. The details of your sex life up to the present time, including whether or not you masturbate, whether or not you have had or are having sexual relations, etc.

22. Your problems and worries about your personality; that is, what you dislike most about yourself; any guilt, inferiority feelings, etc., that you might have.

23. How you feel about the appearance of your body--your looks, figure, weight--what you dislike and what you accept in your appearance, and how you wich you might change your looks or imporve them.

24. Your thoughts about your health, including any problems, worries or concerns that you might have at present.

25. An exact idea of your regulat income(if a student, of your usual combined allowance and earnings if any.)

* Same items asked about Father, Best Male Friend, and Best Female Friend. 100 items all together.

APPENDIX II

CONTROLLED DISCLOSURE STIMULI-ITEMS

WITH INTRUSIVE AND NON-CONTACT LIMITS NOTED

Sample

1. (8) Size of clothing(shoes, etc.)
2. (14) My feelings about the United Nations (U.N.)
3. (21) Whether or not I would wear a wedding ring.
4. (34) My views about borrowing money from a loan company.
5. (47) Things I liked about my home life.
6. (52) Whether or not I want to have any children when I get married.
7. (67) What I think of a girl who lets me kiss her on a first date.
8. (72) Feelings I have when I am "chewed out" or severely criticized.
9. (80) Whom I like better, my mother or father.
10. (90) My feelings about marrying a non-virgin.

List A

1. (88) Things which I would never tell my wife. (Intrusive)
2. (77) Things I worry about when I'm with a girl.
3. (67) My mother's personality.
4. (47) My feelings about borrowing someone else's clothes.
5. (16) Where my parents and grandparents came from.
6. (31) What I enjoy most, and get the most satisfaction from, in my work.
7. (4) How may aunts and uncles I have. (Non-contact)
8. (27) My most enjoyable experience in school.
9. (82) How I might (or did) feel if my mother and father were seperated or divorced.
10. (54) The kind of person I like to date.

List B

1. (87) How old I was the first time I had sexual relations.
2. (70) How long it takes me to know whether or not I am in love with someone.
3. (21) How often I wash my hair.
4. (17) What happens when I see blood.
5. (55) My feelings about being alone once in a while and thinking.
6. (33) How I feel about telling someone off when they're not fair.
7. (93) What I would do if I got a girl pregnant. (Intrusive)
8. (45) My opinions on what money is for.
9. (8) My favorite beverages, and the ones I don't like.(Non-contact)
10. (66) Relatives (aunts,uncles,etc.) I have who I dislike and why I dislike them.

List C

1. (93) Things in the past or present that I feel ashamed or guilty about. (Intrusive)
2. (61) Whom I owe money to.
3. (51) How important money is for my happiness.
4. (46) Times when I have felt like walking away from someone.
5. (14) The kinds of group activities that I usually enjoy.
6. (77) Things which I have been sorry that I have done.
7. (86) What I would do if I caught my wife playing around with some other man.
8. (4) The kinds of pets I have owned. (Non-contact)
9. (21) My opinions on what the role of the Federal Government should be in regard to pubilc education.
10. (36) Things which disgust me.

List D

1. (78) The kinds of things I don't like people watching me do.
2. (94) Guilt feelings, if any, that I have (or have had) about my sexual behavior.
3. (62) How easily my mind is changed by others.
4. (19) How tall I like women to be.
5. (48) Who should discipline the children--my wife or me.
6. (84) What it takes to hurt my feelings deeply. (Intrusive)
7. (56) The way I like others to treat me.
8. (6) The most recent trip I have taken. (Non-contact)
9. (25) My feelings bout blind dates.
10. (33) The kind of supervisor I would like to have on my job.

List E

1. (83) What birth control methods I would use in marriage. (Intrusive)
2. (94) How I feel about a girl after having had sexual relations with her.
3. (76) Times that I have lied to my girlfriend.
4. (63) How may cousins I have.
5. (38) Where I usually take a girl on a date.
6. (8) My favorite subjects in school. (Non-contact)
7. (44) My feelings about how much independance I need.
8. (14) How I feel about working with my hands.
9. (56) Which is more important to me--working on a job that I like, or working on a job that pays a lot.
10. (23) How I feel about being one to "throw a party."

List F

1. (12) Clubs and organizations to which I belong or have belonged.
2. (6) How I like my coffee (black, with cream and sugar, etc.).(Non-contact)
3. (88) Disappointments or bad experiences I have had in love affairs.
         (Intrusive)
4. (59) Times when I have been considerate.
5. (66) How I feel about using influential people I know to get ahead
         in a job.
6. (29) My political opinions.
7. (39) My political party preferences.
8. (82) The description of a person with whom I was or am in love.
9. (77) The amount of love and companionship in my family as compared
         to other families.
10. (46) My ideas about who should manage the money in my marriage.

List G

1. (46) How I would feel about marrying aperson of a different religion.
2. (31) How strongly I defend my political views.
3. (22) My feelings about political parties.
4. (71) Times I have felt lonely.
5. (83) Lies that I have told my friends. (Intrusive)
6. (11) The different kinds of play and recreation I enjoy. (Non-contact)
7. (66) How panicky I get in tight situations.
8. (97) Persons with whom I have had sexual experiences.
9. (59) Possible misfortunes that I worry about.
10. (9) What foods I feel are best for my health.

List H

1. (4) How often I eat in restaurants.
2. (56) One of the worst things that ever happened to me.
3. (72) How I feel about finacially supporting my wife's parents.
4. (82) My problems, if any, about getting favorable attention from
         the opposite sex. (Intrusive)
5. (26) The age of girls that I like to date.
6. (90) My feelings about having sexual relations with a girl with
         whom I am in love.
7. (34) My general attitude about work.
8. (16) My attitudes concerning labor unions. (Non-contact)
9. (65) Times when other people have made me feel uncomfortable.
10. (41) Jobs that I would never do.

List I

1. (32)   How I feel about going to a doctor.
2. (4)   My favorite sports. (Non-contact)
3. (90)   My love life.
4. (56)   My ups and downs in mood.
5. (64)   How I feel about telling lies to get out of an uncomfortable situation.
6. (42)   Whether I am a "listener" or a "talker" in a social conversation.
7. (85)   How I might feel (or actually felt) if I saw my father hit my mother. (Intrusive)
8. (27)   How I think the Federal Government should handle Negro-white conflicts.
9. (76)   Things I dislikes about my home life.
10. (14) Times I have been in the hospital.

List J

1. (48)   My feelings if I see a man and a woman necking in public.
2. (26)   Job skills that I have.
3. (51)   Things that anger me.
4. (39)   Superstitions that I have.
5. (80)   Instances in which I might lie to my wife. (Intrusive)
6. (67)   Things that would cause me to break up a friendship.
7. (6)   What age I think a President of the U.S. should be.
8. (90)   How often I have had sexual relations in my life.
9. (12)   What I think our government's policy toward Russia should be. (Non-contact)
10. (75) Times that I almost felt that life wasn't worth living.

List K

1. (15)   Good times I had in school. (Non-contact)
2. (68)   Times when I have wished that I could change something about my physical appearance.
3. (35)   The kinds of persons with whom I like to work.
4. (72)   Times it would be all right to go against my religious beliefs.
5. (40)   Who I think should make important family decisions.
6. (79)   What I would do if it seemed that marriage was not a success.
7. (26)   The amount of money I spend in buying sports equipment.
8. (89)   What I would do if my best friend's girl made sexual advances to me. (Intrusive)
9. (9)   The number of colds I usually have per year.
10. (59) Times when my parents have been angry with me.

List L

1. (21) Whether I would rather live in an apartment or a house after getting married.
2. (58) The kinds of things that make me just furious.
3. (44) My feelings about people who do not like the some things that I like.
4. (32) How I feel about people who are careless in picking up clothing, personal effects, etc.
5. (90) My experiences with prostitutes.
6. (71) The greatest point of disagreement that I have (or have had) with my parents.
7. (7) My favorite hobbies. (Non-contact)
8. (80) What I would do if I found that my wife had lied to me. (Intrusive)
9. (14) How much time I devote to playing sports.
10. (67) The kinds of sympathy and support I like from others.

List M

1. (27) Political policies I agree with.
2. (83) Things that I would not want people to find out about me if I ever ran for a political office.
3. (4) The schools I have attended. (Non-contact)
4. (16) What I think the U.S. should do in regard to sharing atomic-enegery information and resources.
5. (73) How I feel about giving a girl a "line" to have a sexual affair with her.
6. (51) The kind of person I like to have as a friend.
7. (40) Times when I have felt quarrelsome.
8. (64) My feelings about my responsivilities and obligations.
9. (31) My feelings about religious denominations other than my own.
10. (90) How frequently I like to engage in sexual activity. (Intrusive)

List N

1. (71) Diseases that seem to run in my family.
2. (83) Bad habits my father or mother have.
3. (3) The kind of toothpaste I use.
4. (65) How much sex education I would give my children.
5. (54) How I feel about getting old.
6. (49) The number of children I want to have after I am married.
7. (19) My feelings about gambling. (Non-contact)
8. (39) Times when I have been dissatisfied.
9. (88) How I have felt or might feel if I ever saw my mother drunck. (Intrusive)
10. (22) The kind of work I would like to do in the future.

List O

1. (53) The way I behave when I am around my parents.
2. (40) My feelings about the quality of schooling that I received.
3. (11) How much I enjoy watching athletic events. (Non-contact)
4. (23) How much I enjoy reading newspaper articles on crime.
5. (5) Sports equipment I own.
6. (93) How I would feel about having sex relations with another woman after I was married. (Intrusive)
7. (70) Times when I have "told off" a girl.
8. (35) My general attitude while in school.
9. (62) What I would want my wife's temperament to be.
10. (86) What I tell a girl when I'm no longer in love with her.

List P

1. (60) Amount of personal property (land, car, house, etc.) that my parents own.
2. (17) How I feel about girls' fashion styles. (Non-contact)
3. (4) Where my aunts, uncles, cousins live.
4. (91) How often I masturbate.
5. (75) What feelings, if any, I have trouble expressing or controlling.
6. (57) Times when I have been embarrassed by a teacher or instructor.
7. (28) How I would feel about seeing my wife in rollers.
8. (41) The kind of wedding I want to have.
9. (31) My opinion on whether or not abortions whould be made legal.
10. (84) Dreams I have had about sex matters. (Intrusive)

List Q

1. (55) My favorite alcoholic beverages.
2. (29) Arguments or fights I had during my school days.
3. (83) Lies that I have told my parents. (Intrusive)
4. (92) My sex life.
5. (36) The way I behave when I am with a friend.
6. (67) How I would geel about living with my wife's parents.
7. (17) Recent changes in by weight.
8. (78) How often I have been in love.
9. (45) The amount of allowance I would be willing to give my children.
10. (6) My smoking habits. (Non-contact)

List R

1. (31) Times when I have felt enthusiastic.
2. (12) My favorite ways of spending spare time, e.g. hunting, reading, cards, sports events, dancing, parties, etc.
3. (48) The way I feel about students who are smarter than I am.
4. (80) How I might feel (or actually felt) if there were any alcoholism or drug addiction in my family. (Intrusive)
5. (27) My feelings about people who are not of the same nationality that I am.
6. (4) Whether or not I wear eyeglasses. (Non-contact)
7. (53) How I feel about meeting a girl's parents on a first date.
8. (65) My views on sexual morality--how I feel that I and others ought to behave in sexual matters.
9. (94) How frequently I would want to engage in sex with my wife.
10. (77) How much money I give to the church.

List S

1. (8) Movies that I have seen.
2. (42) How many girls I have dated.
3. (38) Subjects about which I feel I am poorly informed.
4. (23) Subjects in which I did well in school.
5. (72) Mistakes my parents made while raising me.
6. (11) The religious denomination to which I belong. (Non-contact)
7. (61) My worst experience in school.
8. (54) How much religious training or instruction I had as an adult.
9. (79) Times I have cried as an adult when I was sad. (Intrusive)
10. (91) Feelings about my adequacy in sexual behavior--my ability to perform adequately in sexual relationships.

List T

1. (68) How will-built I want my wife to be.
2. (38) The physical appearance of my brothers and sisters.
3. (80) How long I know a girl before making sexual advances. (Intrusive)
4. (7) My favorite pet.
5. (94) My feelings about my own masturbation.
6. (28) My feelings about standards of sexual behavior before marriage.
7. (76) How important I think sex will be in making my marriage a good one.
8. (55) Times when I have felt like breaking the law.
9. (40) The kinds of clothes that I feel look best on me.
10. (12) How often I wake up fresh and rested. (Non-contact)

APPENDIX III

THREE RANDOM ORDERS OF LIST PRESENTATION

Ordinal position*	Order One	Order Two	Order Three
1	P	E	P
2	R	C	D
3	N	G	S
4	A	H	L
5	G	I	B
6	E	J	J
7	B	Q	O
8	Q	K	Q
9	S	S	H
10	M	B	T
11	K	L	M
12	J	F	A
13	F	N	I
14	D	R	C
15	O	O	E
16	I	D	N
17	C	T	K
18	H	P	F
19	L	A	R
20	T	M	G

* Original order given in Appendix II

APPENDIX IV

EXAMPLES OF CONTROLLED DISCLOSURE STIMULI---DISCLOSURES

<u>LOW</u>

17 How I feel about girls' new fashion styles.

Man I like the mini...Idon't dif this masi coming up and hiding
the legs....I suppose it's nice in the winter time, but....I still prefer
the mini skirts.

4   Whether or not I wear eyeglasses.

Yes I do,for.....for seeing long didtances....like seeing the screen
when sitting at the back of a lecture...Otherwise I don't like to wear them....
they're uncomfortable....I have to wear them for driving, but...my eyes
aren't too bad...I was sort of surprized when I flunked the eye-exam for
my drivers license.

12 How often I wake up fresh and rested.

Seldom....if I can sleep late, then I wake up fresh and rested...but
I usually can't sleep late, because I have early classes...so...I wake up
fresh and rested about...two or three times a week, maybe....would you
believe two times a week....Saturday and Sunday?

<u>MIDDLE</u>

53 How I feel about meeting a girl's parents on a first date.

Depends on the girl, depends on the parents...a...I don't mind it at
all...I get along with parents pretty well...you know, I make a pretty good
impression with them...and,a...if they give me a bad time....well, so what....
it's the girl I'm interested in, not the parents.

54   How I feel about getting old.

I don't feel too bad about it....like old to me means...past 50 is getting
old...when your physical faculties start slipping away, I don't look
forward to that at all...but I've got a long ways to go before then, and....
some old people I've known....like my grandfather,for instance,....have
stayed sharp until the end.

51 How important money is for my happiness.

Well...Money is important....I guess I'm not as idealistic as I used to
be, saying that, you know, that money doesn't mean anything...Money is
important because there is a certain level of comfort at which I'd like
to live...But beyond that money isn't important. Money, and the things
I can buy with it...they aren't the places that I find real happiness.
Other than beyond, I mean, up to a certain level of confort---bodily comfort.

HIGH

83 What birth control methods I would use in marriage.

I wouldn't use anything. My wife would take the pill though...As I
understand it, that's really the only thing that's 100% effective. Of course,
depending on whether or not she could take it--she might be prone to getting
blood clots or something. A....I wouldn't use a rubber because tha....a....
sort of doesn't appeal to me in marriage, and I wouldn't use foam....that
doesn't appeal to me either, and I wouldn't use a diaphram because that
doesn't work as well. As a matter of fact none of the other ones work as
well as the pill.

84 What it takes to hurt my feelings deeply.

I guess what would hurt me the most...is having somebody...that I really
cared for, and who I though really cared for me...tell me or show me in
some way, that they didn't...you know, they were acting as though they
cared for me when they really didn't...And so that everything I said to them,
and everything that I ...a...did for them, you know...it would,a...just be
that they were laughing behind my back.I guess that's what it is--that a
person would be sort of taking advantage of me and laughing behind my back...
That would really cut.

93 Things in the past or present that I feel ashamed or guilty about.

When I was in high school--a senior I guess--I was in a college prep
course.You know, you're suppose to take all the math and science you can get.
And I detest math in the first place. But any way....I sat next to a good
guy in trigonometry class...a guy who knew his stuff. And I'd cheat on the
exams. As a matter of fact that's how I got through trig...And...that was
really the first time I did that--to any extent anyway, And I guess I'm still
a little ashamed about it.

APPENDIX V

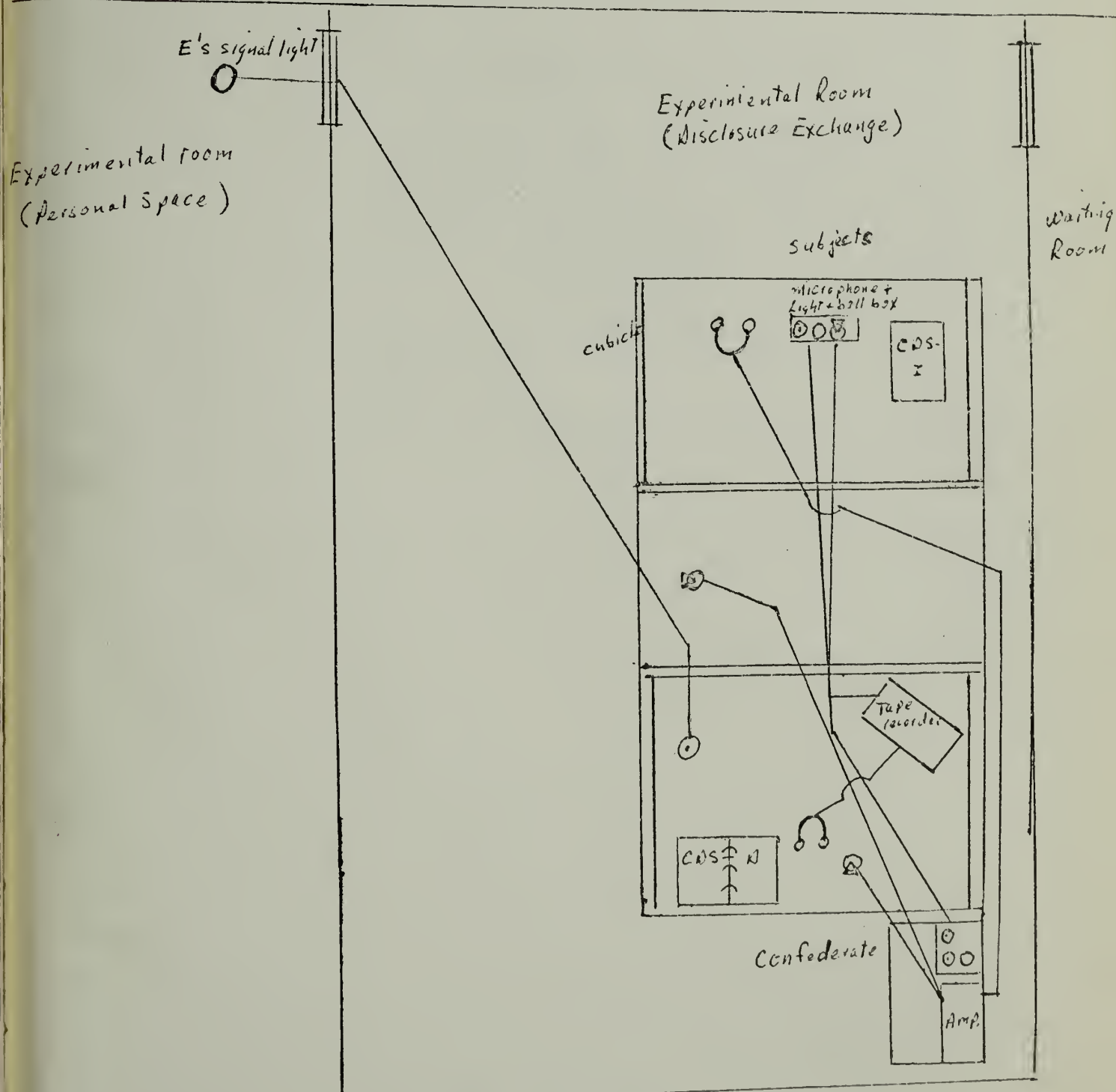AVERAGE DURATION*FOR EACH LEVEL OF INIMACY

Level	Mean Duration	Standard Deviation
0	25.2	6.2
10	25.2	6.5
20	27.1	8.1
30	26.7	6.3
40	25.4	7.7
50	27.2	7.6
60	29.0	7.9
70	28.9	6.8
80	28.8	6.9
90	28.6	5.9

* Duration in seconds

T-ratio between largest and smallest mean duration = 1.62
(not significant)

APPENDIX VI

DIAGRAM OF APPARATUS

APPENDIX VII

SUBJECT INSTRUCTIONS TAPED TO LIGHT BOX

You are Partner B

1. Take a list from the top of the pile
    on your left.

2. Choose an item you feel you would like
    to elaborate on for your partner.

3. When the light is on: read the item number,
    item level (the number in parentheses), and
    the item itself. Then tell your partner
    about that aspect of yourself. Listen to
    your partner's statement when he talks.

4. Circle the item that you talked about.

5. When both you and your partner are
    finished with the list, place it on top of
    your cubicle.

6. Go to step #1 and repeat the sequence.

Self-disclosure Strategy and Personal Space Proximity

in Intimacy Development (June 1970)

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Directed by: Sheldon Cashdan, Ph.D.

As a test of the general hypothesis that verbal and non-verbal aspects
of the acquaintance process are related, two procedures were employed. First,
subjects were exposed to verbal self-disclosure strategies which were
representative of non-verbal personal space styles of behavior. Secondly,
proxemic measures were taken to note any direct relationship between self-
disclosure and actual personal space manifestations of intimacy.

In the first procedure each of 48 introductory psychology students were
paired with an experimental confederate. After being placed in separate
cubicles, the dyads exchanged 20 self-disclosures from a set of 20 lists of
self-disclosure items. Each list contained 10 items representating 10
levels of disclosure. The confederate used one of four strategies for his
disclosure choices: Intrusive strategy - disclose only very high level items;
Non-contact strategy - disclose only very low level items; Congruent strategy -
disclose at the same level as the subject; Step-up strategy - disclose at a
level moderately higher than the subject.

After exposure to one of the strategies, subjects' front and rear body
buffer measurements were taken with the confederate acting as the target
person. For the front measure the subject approached the confederate. This
procedure was reversed for the rear measure.

Finally, subjects were given the Jourard Self-disclosure Questionnaire
(25 item version) to monitor their generalized tendency to disclose.

Subjects disclosed as the confederate did. Non-contact strategy led

to low level responding disclosures and to alienation from interaction. Step-up strategy led to the most increase in level. Congruent strategy led to a   slight increase in level. The Intrusive strategy, instead of causing alienation, led to the highest absolute levels of disclosure. Although confederate's duration of disclosure was held constant, subjects' duration of disclosure paralleled their response levels (i.e. long duration accompanied high level).

Only the front proxemic measure showed any significant relationship to disclosure outcome. Subjects who substantially increased their level of self-disclosure stood closer than those who decreased disclosure levels. There was no relationship between absolute levels of disclosure and proximity.

Self-disclosure questionnaire results were just the inverse of the interaction results. The Non-contant group, the only group whose Jourard score was significantly higher than that of a control group, reported that they really did self-disclose to significant others more than they did to the confederate. Thus they seemed to use the self-disclosure questionnaire as an accomodative tool to raise self-esteem rather than to indicate actual disclosing tendencies.

Finally, a non-statistical examination of disclosure strategy level responses over 20 exchanges revealed two processes. First, there appeared an alternation between risky and safe periods of revealing. Safe periods were marked by steady, gradual increase in level of disclosure. Risky periods showed wide vacillation of level. Risk-taking was a second process. During risk-taking periods, subjects disclosed at low levels on exchanges in which they spoke first and at higher levels when they spoke second. They risked themselves only when they were quite certain of the confederate's adequate disclosure.