SELF-DISCLOSURE AS A CONSTRUCT

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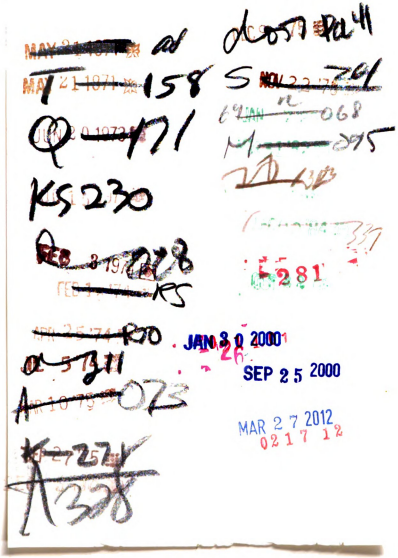
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ABSTRACT

SELF-DISCLOSURE AS A CONSTRUCT

by Harold John Benner

The purpose of the study was to conduct a theoretical and empirical inquiry into the nature of self-disclosure as a construct. Specifically, within the study an attempt was made to: (1) present an analysis of the theory and research of three major authors writing on self-disclosure; namely, Sidney M. Jourard, O. H. Mowrer, and C. R. Rogers, (2) conduct a factor analysis of a number of self-disclosure measures, (3) re-examine the theory of self-disclosure in light of the empirical findings, and (4) propose a modified theory of the self-disclosure concept.

The Criteria

To undertake an analysis of the theorists it was necessary to define the nature of a construct, and suggest criteria for evaluating theoretical structures. The criteria involved an understanding of such concepts as: the nature and function of theories, laws, concepts; and the meaning of such terms as hypothetical constructs, intervening variables, the nomological network of constructs, and the "C" plane and the "P" plane of the theoretical network of science.

The Theoretical Analysis

The major ideas concerning personality, neurosis, treatment, and the self-disclosure construct of Sidney M. Jourard, O. H. Mowrer, and Carl R. Rogers were reviewed and analyzed according to the above philosophy of science criteria. Generally, Jourard suggested that the content of self-disclosure referred to cognitive (topic-target) aspects, while Mowrer emphasized its behavioral content (confession of "misdeeds"). Rogers

stressed the affective dimension of self-disclosure (the "core" conditions). The self-disclosure construct has a fertile nomological network of constructs, but that the analysis of the theorists' ideas concerning the specific content of self-disclosure yielded only limited understanding of its dimensions. From the analysis of the theorists seven general, group, and specific elements involved in the content of the self-disclosure construct were summarised, and a theoretical structure involving the network of internal and external contingencies of self-disclosure was proposed.

Design of Empirical Analysis

The empirical section of the study consisted of a factor analysis of 68 variables including 7 self-disclosure instruments, 5 group demographic items, 7 subject demographic variables, and 40 target-topic self-disclosure items taken from the self-report instruments. The intimacy level of the items was controlled.

Thirteen counseling groups involving 96 male and female, married and single subjects were used as the sample in the study. Seven professional group leaders conducted a total of 833 hours of group interaction. The instruments used were the Jourard Self-Disclosure Questionnaire, the Plog Willingness to Discuss Questionnaire, the Taylor and Altman Interaction Stimuli item pool, the Hurley Self-Disclosure Rating Scale, the "K" Scale of the MMPI, the Manner of Problem Expression, and the Confiding-In Peer Nomination Technique.

The principal axis solution for factoring a correlational matrix was used, followed by varimax rotation. The Kiel-Wrigley criterion was set at three, and only those factors which had a sum of squares (Eigen value) in excess of one were rotated. Rotation was stopped at the six

factor level.

Three hypotheses stated that the factoral analysis would produce one general factor (hypothesis I), 3 group factors (hypothesis II), and 3 specific factors (hypothesis III). The hypotheses were stated as follows:

General Factor

Hypothesis I: The factor analysis of the correlational matrix using the principal axis solution will yield one general (G) factor that will tend to correlate with all factors. This general factor can be labeled "uncovering," or "revealing" that which is hidden from others.

Group Factors

Hypothesis II: The factor analysis of the correlational matrix using the principal axis solution will yeild three group factors as follows:

a. One group factor will include both a behavioral and cognitive aspect of self-disclosure, and can be labeled the rational-social factor.
b. One group factor will include both a behavioral and affective aspect of self-disclosure, and can be labeled the impulsive-social factor.
c. One group factor will include both an affective and cognitive aspect of self-disclosure, and can be labeled the rational-subjective factor.

Specific Factors

Hypothesis III: The factor analysis of the correlational matrix using the principal axis solution will yield three specific factors as follows:

a. One unique factor will include the cognitive aspect of self-disclosure, and can be labeled the topic factor.
b. One unique factor will include the behavioral aspect of self-disclosure, and can be labeled the behavioral factor.
c. One unique factor will include the affective aspect of self-disclosure, and can be labeled the emotional or experiencing factor.

Results of Empirical and Theoretical Analysis

Six factors were identified. Factor I was labeled Target-Topic Intimacy, Factor II was labeled Uncovering to Parents, Factor III was called Uncovering to Spouse, Factor IV was labeled Subject Demographic Convergence, Factor V was called Uncovering Performance Rating, and

Factor VI was labeled Subject-Group Maturation Opportunities. On the basis of the statistical data hypotheses I and II (a) were accepted, and hypothesis III (b) was not clearly rejected. Hypotheses II (b) and II (c), and III (a) and III (c) were rejected. From synthesis of the theoretical and empirical analysis a definition of the self-disclosure construct was suggested which led to a modified model of the interpersonal process of self-disclosure.

Conclusions

The major conclusions of the study were:

1. Self-disclosure was an interpersonal construct which involved consideration of the demographic characteristics of the discloser, the topic of communication, the target of disclosure, and the relationship between the sender and receiver.
2. The nomological network of self-disclosure constructs consisted of more hypothetical constructs than intervening variables.
3. The content of self-disclosure was found to have a cognitive, affective, and behavioral dimension. Jourard's ideas about the cognitive domain were theoretically sound and given empirical support. Mowrer's ideas and Rogers' concepts, while theoretically sound, were not verified, most likely because of limitations in operational measures of their theoretical constructs.
4. Generally, operational definitions were limited, and measures were found to be in a rudimentary stage of development. The Jourard, Plog, Taylor, and Hurley instruments hold promise in building other constructs to explain the content of self-disclosure.

VITA

Harold John Benner

Candidate for the degree of
Doctor of Philosophy
Michigan State University

Final Examination: August 16, 1968, College of Education

Thesis Title: Self-Disclosure As a Construct

Thesis Content: The study was an empirical and theoretical investigation of the concept of self-disclosure. An analysis of the ideas of Sidney M. Jourard, O. H. Mowrer, and Carl R. Rogers was made using criteria from philosophy of science and theoretical psychology. A factor analysis of a number of self-disclosure instruments was conducted. The empirical analysis was followed by the presentation of a tentative model of self-disclosure as an interpersonal phenomena.

Areas of Study: Major Subject: Counseling Psychology

Minor Subject: Foundations of Education

Cognate Area: Psychology--Personality Theory and Group Processes.

Biographical Data:

Born: September 1, 1928, Ridgeway, Ontario, Canada.

Undergraduate Studies: University of Buffalo, 1948-1950; Miami University, Oxford, Ohio, 1953-1955, B.Sc. Degree, June 1955.

Graduate Studies: McCormick Theological Seminary, Chicago, B.C. Degree, June 1959; Michigan State University, 1963-1964, M.A. Degree, August 1964; Michigan State University, 1964-1968, Ph.D. Degree, August 1968.

Experience: Cost Analyst, Trico Products Corporation, Buffalo, New York, 1948-1950; Non-Commissioned Officer, U. S. Army, 1950-1952; Factory Employee, Ford Motor Co., 1955; Camp Counselor, Whispering Pines Camp, Wisc., 1956; employee, Union Station, Chicago, Ill., 1957; Student Minister, Pochwahee, Buffalo and Greenwood Presbyterian Churches, Wisc., 1958. Clergyman, Market Street Presbyterian Church, Lima, Ohio, 1959-1963; Graduate Assistant, Guidance and Counseling, 1967; Assistant Instructor, Educational Psychology, 1965-1966.

Professional Memberships:

American Personnel and Guidance Association (ACES) (ACPA)

Phi Delta Kappa

Maumee Presbytery, United Presbyterian Church, U.S.A.

American Psychological Association (Pending October, 1968)

Vocational Objectives and Occupation:

Assistant Professor and Counseling Psychologist, Bradley University, Peoria, Ill.

Counseling students; Leading groups (as trainer); Teaching Counseling and Psychology; Consulting, Writing, Research.

SELF-DISCLOSURE AS A CONSTRUCT

By

Harold John Benner

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CHAPTER I

THE PROBLEM

The need for exposing one's problems, conflicts, and feelings, in therapy has long been viewed as an important aspect of growth and personality change.

Toward the end of the nineteenth century, Joseph Breuer, a Viennese physician, noticed that when his hysterical patients talked about themselves, disclosing memories, suppressed feelings and past traumatic experiences, their symptoms disappeared. At about the same time Freud learned that when his patients were given the opportunity to free associate they would disclose that they had all manner of threatening thoughts and feelings which they did not even dare disclose to themselves, let alone to another person. Freud noticed the patient's "resistance" in free association and hypothesized that the source of personality disorder was connected with repressed content.[1] Davis and Malmo's[2] work with polygraphic measures (electromyogram) taken on patients during therapeutic interviews and Dittes' work[3] with the

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[1]Ruth L. Monroe, Schools of Psychoanalytic Thought (New York: Dryden, 1955), 320-322.

[2]F. H. Davis and R. B. Malmo, "Electromyographic Recording During Interview," American Journal of Psychiatry, CVII (1951), 908-916.

[3]J. E. Dittes, "Extinction During Psychotherapy of G. S. R. Accompanying 'Embarrassing' Statements," Journal of Abnormal and Social Psychology, LIV (1957), 187-191.

Galvanic Skin Response demonstrates the operation of such resistance to self-disclosure. Clinicians now know that clients will more readily disclose some kinds of personal data and will show resistance with respect to others.

In terms of psychoanalytic theory, then, the process of self-disclosure can be described as the client becoming more aware of unconscious material. However, the early emphasis on abreaction considered important for working through the client's problem, was replaced by dream analysis and interpretation.[4] Freud viewed self-disclosing statements primarily as data to be used in making interpretations about client behavior and feeling. He said little about the value of self-disclosure in continuing meaningful (normal) interpersonal behavior.

From the time of Freud and his associates to the present, clients have been asked to talk about their problems and feelings in order to discover causes of mental disorder (diagnosis) and stimulate change in client behavior through catharsis.

The recent work of Rogers in client-centered therapy focuses on helping the client explore and disclose strange, unknown, and dangerous feelings in himself which have been denied to awareness because of threat to the self-concept.[5]

Early clinical observations and current research data strongly suggest that in successful psychotherapy the client is involved in a process of self-disclosure--a process of coming to verbalize one's own

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[4]Monroe, Schools of Psychoanalytic Thought, 316.

[5]Carl Rogers, "The Fully Functioning Person," In On Becoming A Person (Boston: Houghton Mifflin, 1961), 34-37.

values, motives, feelings, and fears. The role of the therapist in traditional analytic therapy and in contemporary counseling has been based upon attempts to facilitate the process of self-disclosure.

Importance of Self-Disclosure

Although social scientists and mental health professionals have for many years encouraged the use of self-disclosure, little attempt has been made to construct and test a comprehensive theory of self-disclosure. In fact, the term "self-disclosure" does not appear in the literature before 1958. Since 1958, the conceptualization and research that has taken place has been based on promotion of personal interests and issues rather than on each theorist building on what has preceded him. No one has considered "self-disclosure" as a construct of science. However, the theory and research that has been generated since 1958 has emphasized the importance of the concept for counseling theory and practice.

Theoretical Formulations: Jourard, Mowrer, Rogers

The major impetus for interest in the specific concept of self-disclosure has been contributed by Sidney Jourard and his associates. Even though Freud advocated freer expression of id impulses, psychologists, Jourard believes, have generally failed to encourage people to reveal themselves to others. Jourard sees self-disclosure as the norm of mental health and as central in personality change.[6]

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[6]Sidney M. Jourard, "I-Thou Relationship Versus Manipulation in Counseling and Psychotherapy," Journal of Individual Psychology, XV (1959), 174-179.

Jourard[7] states that people can only become less alienated from themselves and others by disclosing themselves to others. One may exchange one's mask for authentic being by becoming self-disclosing to significant others. He says, "... it seems to be another empirical fact that no man can come to know himself except as an outcome of disclosing."[8] The conventional mode of normal interpersonal relationships encourages people to conceal their real feelings and being. Self-concealment is viewed by Jourard as both a symptom and a cause of unhealthy adjustment, and "at the same time it is also a means of ultimately achieving healthy personality."[9] Thus, self-concealment causes alienation from one's real self, arrests one's growth as a person, and makes relationships with others less meaningful and less productive. Taylor, Altman, and Frankfurt's[10] study, reported in Chapter Two, provides partial support for Jourard's thesis that openness is correlated with mental health and adjustment.

Jourard defined self-disclosure generally as the process of making self known to other persons or "my communication of my private world to you, in language which you clearly understand."[11] He constructed and employed a self-report questionnaire for measuring the amount of six content areas disclosed to selected "target-persons." To date, at

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[7]Sidney M. Jourard, The Transparent Self: Self-Disclosure and Well-Being, (Princeton, New Jersey: D. Van Nostrand Co., Inc., 1964).

[8]Ibid., 5.

[9]Ibid., 24.

[10]D. A. Taylor, I. Altman, and L. P. Frankfurt, "Personality Correlates of Self-Disclosure." Unpublished manuscript. (In press) 1968.

[11]Jourard, 1964, op. cit., 5.

least twenty-three research studies have used this instrument. (The results of these studies will be reviewed in Chapter Two.)

Mowrer, like Jourard, believed that the central concern in mental health is the degree of openness that a person has with his fellow men. Mowrer[12] states that Freud and his followers were wrong in feeling that psychopathology was due to the fear of an eruption of repressed instinctual (libidinal) forces.

In a recent manuscript Mowrer says:

> Gradually, during the first half of his century, the Freudian conception of psychopathology as a product of too intense, over-extended socialization achieved almost universal acceptance. But therapeutic and prophylactic efforts which were predicated on this theory did not lead to the hoped-for and promised results. On the basis of continued clinical experience and common observation, an alternative hypothesis has emerged to the effect that psychopathology actually reflects under-socialization: in extreme form in the sociopath, in more moderate form in the so-called neurotic.[13]

Mowrer presents empirical evidence from the last five years to support his view that pathology is social in origin. Illness is caused by the failure to disclose to others one's immoral acts and secrets. Basically, it is fear of really becoming known to others. Neurotic suffering is based on a realistic and justified fear of the consequence of being really known to others, not on dread of the unleashing of repressed materials as Freud contends. Both Jourard and Mowrer, then, emphasize the social cause of pathology rather than Freud's instinctual hypothesis. This is why Mowrer gives strong support to such

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[12] O. H. Mowrer, The New Group Therapy (Princeton, New Jersey: D. Van Nostrand, 1964).

[13] O. H. Mowrer, "New Evidence Concerning Psychopathology" (Unpublished manuscript, 1966).

organizations as Alcoholics Anonymous, Synanon, Recovery, Inc., and church groups where open confession is practiced. Self-disclosure to others, then, is viewed by both Jourard and Mowrer as having considerable therapeutic worth.

Carl Rogers also considers the client's progressive self-disclosure or self-exploration as one of the central events in the patient's encounter in the process of therapy. Rogers[14] looks at the function of the therapist in counseling as having three common facilitative elements: empathy, non-possessive warmth, and self-congruence (genuineness). A number of Rogers' colleagues have explored in depth the third element, genuineness or self-congruence, which they consider of most basic significance. Gendlin[15] studied subverbal communication, experiencing, and therapist expressivity trends in therapy. Truax and Carkhuff[16] investigated two major clinical hypotheses

> 1. The greater the degree of transparency, self-disclosure, or self-exploration by the patient in the therapeutic encounter, the greater will be the evidence of constructive personality change in the patient's total sphere of living.
>
> 2. The greater the degree of transparency, or self-congruence in the therapist, the greater the degree of transparency, self-disclosure or self-exploration in the patient.

(The results of this research study will be presented in Chapter Two.)

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[14]Carl R. Rogers, "The Necessary and Sufficient Conditions of Therapeutic Personality Change," Journal of Consulting Psychology, XXI (1957), 95-103.

[15]Eugene T. Gendlin, "Subverbal Communication and Therapist Expressivity Trends in Client-Centered Therapy with Schizophrenics," Journal of Existential Psychiatry, IV (1963), 105-120.

[16]C. Truax and R. Carkhuff, "Client and Therapist Transparency in the Psychotherapeutic Encounter," Journal of Counseling Psychology, XII (1965), 3-9.

The theoretical ideas of Fromm,[17] Riesman,[18] and Horney[19] also support the contention that self-disclosure is an important factor in personality functioning and interpersonal behavior. They have called attention to the tendency in our society to misrepresent the self to others. This behavior is central to the "marketing personality," the "other-directed character," and the "self-alienated" individual.

Just playing a role in society may contribute to alienation. But it is a person who is playing the role. This person has a self. But his real self can become a stranger, even a feared and distrusted stranger. This estrangement is at the root of the "neurotic personality of our time" so well described by Horney.[20] Fromm has referred to the same phenomenon as a culturally conditioned defect. Self-alienation is an illness so widely shared that no one recognizes it.[21] We may become part of the lonely crowd, or be concerned about conformity.

Goffman's[22] analysis of social functioning describes the model of the theatrical performance. He states that the social roles an individual plays can be likened to performances before an audience. The question can be raised regarding the degree to which an individual just

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[17]E. Fromm, Man for Himself (New York: Rinehart, 1947).

[18]D. Riesman, The Lonely Crowd (New Haven: Yale University Press, 1950).

[19]Karen Horney, Neurosis and Human Growth (New York: Norton, 1950).

[20]Karen Horney, The Neurotic Personality of Our Time (New York: Norton, 1936).

[21]E. Fromm, The Art of Loving (New York: Harper Bros., 1956).

[22]E. Goffman, The Presentation of Self in Everyday Life (New York: Doubleday, 1959).

"plays a role" or is being himself. Sometimes it is difficult to know when individuals are playing roles and when they are being themselves. Thus, sociologists also point to the presence and importance of self-disclosure.

Research: Empirical Studies

In the area of individual psychotherapy, Steele[23] as early as 1948, showed that more successful clients increasingly explore their problems as therapy proceeds, while unsuccessful clients explore their problems less as therapy progresses. Similar supporting evidence was reported by Goodman,[24] and Truax, Tomlinson, and van der Veen.[25] In addition, Braaten[26] in studying individual therapy found that more successful cases showed a greater increase in self-references, especially in terms of references to the private self.

In a study of group therapy Peres[27] found that successful and unsuccessful group therapy differed in that successful clients in the group made significantly more (almost twice as many) personal references

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[23]B. L. Steele, "The Amount of Exploration into Causes, Means, Goals, and Agent: A Comparison of Successful and Unsuccessful Cases in Client-Centered Therapy" (unpublished Master's thesis, University of Chicago, 1948).

[24]Gerald M. Goodman, "Emotional Disclosure of Therapists and Clients over the Course of Psychotherapy" (unpublished doctoral dissertation, University of Chicago, 1962).

[25]C. Truax, T. Tomlinson, and F. vander Veen, Symposium: A Program in Psychotherapy and Psychotherapy Research (C. R. Rogers, Chairman), American Psychological Association, September, 1961.

[26]L. J. Braaten, "The Movement from Non-Self to Self in Client-Centered Psychotherapy" (unpublished doctoral dissertation, University of Chicago, 1958).

[27]H. Peres, "An Investigation of Nondirective Group Therapy," Journal of Consulting Psychology, XI (1947), 159-172.

over the course of therapy when compared to unsuccessful clients. Yalom, Moos, and Grosz,[28] after using group methods in teaching psychiatry to medical residents, found that self-disclosure was related to self-awareness in medical students. Query,[29] treating self-disclosure as an independent variable, predicted a relationship between disclosure of personal problems and feeling about the group and attraction to the group. There was partial support of his prediction in that high disclosures liked their groups better than members who were low disclosures.

Related Terms and Concepts

A review of the literature reveals at least twelve different terms that appear close in meaning to the concept of "self-disclosure." Jourard[30] uses "self-exposure," "transparency," and "authentic being." Mowrer[31] talks about "honesty" and "confession." Rogers[32] refers to "congruence," "openness," and "genuineness." Allen[33] prefers

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[28] I. D. Yalom, R. Moos, and M. B. Grosz, "The Use of Small Interactional Groups in the Teaching of Psychiatry," International Journal of Group Psychotherapy, XV (1965), 242-246.

[29] W. T. Query, "Self-Disclosure as a Variable in Group Psychotherapy," The International Journal of Group Psychotherapy, XIV (1964), 107-116.

[30] Sidney M. Jourard, The Transparent Self: Self-Disclosure and Well Being (Princeton, New Jersey: D. Van Nostrand, Inc., 1964).

[31] O. H. Mowrer, The New Group Therapy (Princeton, New Jersey: D. Van Nostrand, Inc., 1964).

[32] Carl R. Rogers, On Becoming a Person (Boston: Houghton Mifflin, 1961), 34-37.

[33] T. W. Allen, "Effectiveness of Counselor Trainees as a Function of Psychological Openness," Journal of Counseling Psychology, XIV (1967), 35-40.

"psychological openness." Truax and Carkhuff[34] use "transparency," while Barrett-Lennard[35] uses the term "willingness to be known." Gergen,[36] Gergen and Wishnov,[37] and Schneider[38] have coined the term "self-presentation," while Gendlin[39] speaks of "therapist expressivity," "subverbal communication," and "experiencing." Richers-Ovsiankina[40] has found the concept "social accessibility" meaningful.

Because such concepts as social accessibility, psychological openness, self-presentation, and self-exploration are general references to the concept of self-disclosure and are not included in the major research analysis of Chapter Two, the findings of studies mentioned above will now be reviewed. This is done with the express purpose of providing additional support for the contention that the general

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[34] C. Truax and R. Carkhuff, "Client and Therapist Transparency in the Psychotherapeutic Encounter," Journal of Counseling Psychology, XII (1965), 3-9.

[35] G. Barrett-Lennard, "Dimensions of Therapist Response as a Causal Factor in Therapeutic Change," Psychological Monographs, LXXII (1962).

[36] K. J. Gergen, "Interaction Goals and Personalistic Feedback as Factors Affecting the Self-Presentation Behavior" (unpublished doctoral dissertation, Duke University, 1963).

[37] K. J. Gergen and B. Wishnov, "Others' Self-Evaluations and Interaction Anticipation as Determinants of Self-Presentation," Journal of Personality and Social Psychology, II (1965), 348-358.

[38] David J. Schneider, "Self-Presentation as a Function of Prior Success or Failure and Expectation of Feedback of Created Impression" (unpublished doctoral dissertation, Stanford University, 1966).

[39] E. T. Gendlin, "Subverbal Communication and Therapist Expressivity Trends in Client-Centered Therapy with Schizophrenics," Journal of Existential Psychiatry, IV (1963), 105-120.

[40] Maris Richers-Ovsiankina, "Social Accessibility in Three Age Groups," Psychological Reports, II (1956), 283-294.

concept of self-disclosure is important for understanding interpersonal relations, mental health, and the process of psychotherapy.

Self-Presentation Schneider[41] designed an experiment using 108 Stanford male undergraduates to test self-presentation reactions to failure and success under conditions where the subject either would or would not receive feedback from an interviewer on the impression his self-presentation had created. Measures of the positivity of self-description yielded a single self-presentation score. It was found that high self-concept people employ rather conservative, non-risky self-presentation strategies, while low self-concept subjects use more positive self-presentation. Gergen and Wishnov[42] studying others' self-evaluations and interaction anticipation as determinants of self-presentation found that subjects rating themselves for a self-centered partner became more positive in their self-ratings, while the self-derogatory partner caused subjects to emphasize more negative self-characteristics. In an earlier study, Gergen[43] also found that positivity of self-valuation (self-presentation) would be greater for subjects receiving positive feedback than for subjects not receiving positive feedback.

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[41]David J. Schneider, "Self-Presentation as a Function of Prior Success or Failure. . . ," op. cit.,

[42]K. J. Gergen and B. Wishnov, "Others' Self-Evaluations and Interaction Anticipation as Determinants of Self-Presentation," op. cit.

[43]K. J. Gergen, "Interaction Goals and Personalistic Feedback As Factors Affecting the Self-Presentation Behavior," op. cit.

Self-Exploration and Self-Reference The studies by Peres,[44] Braatin,[45] and Truax, Tomlinson, and van der Veen[46] mentioned earlier found that more successful individual and group therapy cases showed a greater increase in self-references and self-exploration. Carkhuff and Alexik[47] found that counselors who had been functioning at low levels of empathy, respect, genuineness, and concreteness were manipulated by a client's lowering of self-exploration and could not reestablish the levels of facilitative conditions. The lightest level counselors even increased the level of conditions when the client lowered self-exploration.

Psychological Openness Allen[48] tested the notion that we can anticipate counselor effectiveness by means of psychological openness. Twenty-six graduate students in counseling at Harvard University acted as subjects in this experiment. Allen found that effectiveness in counseling is related to counselor's openness to his own feelings concerning the therapeutic process and is a precondition to understanding others and creating the proper therapeutic atmosphere. Even though Allen's study did not clearly define openness or distinguish between openness to one's own feelings and the expression of one's self, the study does add additional support to the idea of self-disclosure as an important variable

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[44] H. Peres, "An Investigation of Nondirective Group Therapy," op. cit.

[45] L. J. Braaten, "The Movement from Non-Self to Self in Client-Centered Psychotherapy," op. cit.

[46] C. Truax, T. Tomlinson, and F. van der Veen, Symposium: A Program in Psychotherapy and Psychotherapy Research, op. cit.

[47] R. R. Carkhuff and M. Alexile, "Effect of Client Depth of Self-Exploration upon High and Low-Functioning Counselors," Journal of Counseling Psychology, XIV (1967), 350-355.

[48] T. W. Allen, "Effectiveness of Counselor Trainees as a Function of Psychological Openness," Journal of Counseling Psychology, XIV (1967), 35-40.

in counseling theory and practice.

Social Accessibility Richers-Ovsiankina[49] undertook a study of the Lewinian notion of the stratification among the inner personal regions. Using three groups of college students and alumnae she found that on the basis of degree of accessibility inner regions can be viewed as organized along a continuous scale of high stability, and that over-all accessibility increases from freshman to senior standing, but changes in few areas from senior to alumna. These findings generally support some of Jourard's theoretical notions concerning the aspects of self-disclosure.

Ambiguity and Self-Disclosure Therapist self-disclosure is directly related to other dimensions in counseling. Therapist disclosure may held facilitate client disclosure by removing much of the ambiguity in therapy and lessen client anxieties and fears in the counseling session (Bordin[50] and Dibner[51]).

The terms "self-disclosure," "self-exploration," "psychological openness," "social accessibility," and "self-presentation" do not appear in the standard social psychology texts. Kretch, Crutchfield and Ballachey[52] discuss situational factors governing conformity, but their

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[49]Maria Richers-Ovsiankina, "Social Accessibility in Three Age Groups," op. cit.

[50]E. S. Bordin, "Ambiguity as a Therapeutic Variable," Journal of Consulting Psychology, XIX (1955), 9-15.

[51]A. S. Dibner, "Ambiguity and Anxiety," Journal of Abnormal Psychology, LVI (1958), 165-174.

[52]D. Krech, R. S. Crutchfield and E. L. Ballachey, Individual in Society (New York: McGraw-Hill Book Co., 1962), 513-520.

discussion does not relate to self-disclosure as a psychological construct. Newcomb, Turner, and Converse[53] present a chapter on communication behavior which conveys information about the giving and receiving of messages in interpersonal interaction.

Since the study focuses on self-disclosure as a psychological construct, the social psychologist's material on attitudes and attitude change, role position and conflict and behavior, conformity, self-conceit and group and social structure is only indirectly related to self-disclosure and will not be included in the current study.

Studies relating to self-presentation, self-exploration, psychological openness, social accessibility and ambiguity which describe phenomena related to self-disclosure add further support to the notion that self-disclosure is crucial to interpersonal reactions and therapy and needs further theoretical and research attention.

The Need for the Study

The theoretical and empirical studies cited above have established the importance of self-disclosure in the field of mental health and psychotherapy. Research and theory focus on the need for both the therapist and client to be self-disclosing.

The literature sometimes considers self-disclosure a process. Often it is viewed as outcome behavior. The general review of the literature on self-disclosure reveals at least twelve different terms

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[53]T. M. Newcomb, R. H. Turner and P. E. Converse, Social Psychology (New York: Holt, Rinehart and Winston, 1965), 185-220.

used for self-disclosure.

With respect to content, self-disclosure is seen in both broad and narrow terms. Rogers and his associates[54] regard self-disclosure as consisting of "empathy," "positive regard," "congruence," and verbal expression of feelings regarding client behavior, attitudes, and values. Jourard[55] sees the self-disclosing person as telling certain target persons (significant others) about such aspects of self as personal attitudes and opinions, tastes, and interests, feelings about work or studies, and attitudes toward money, personality and body. On the other hand, Mowrer[56] sees self-disclosure as the specific activity of confessing immoral acts done that violate internalized social customs and cause guilt and suffering within the individual. Some authors consider non-verbal communication (gestures, tone of voice, dress) and verbal expressions of therapist expectations of clients as aspects of self-disclosure.

Jourard[57] and Hurley[58] have constructed instruments designed to

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[54]C. Rogers, On Becoming a Person; Truax and Carkhuff, "Client and Therapist Transparency in the Psychotherapeutic Encounter"; and Gendlin, "Subverbal Communication and Therapist Expressivity Trends . . .," op. cit.

[55]Jourard, The Transparent Self: Self-Disclosure and Well-Being, op. cit., 159.

[56]Mowrer, The New Group Therapy, op. cit.

[57]Jourard, The Transparent Self: Self-Disclosure and Well-Being, op. cit., 160.

[58]S. J. Hurley, "Self-Disclosure in Counseling Group as Influenced by Structured Confrontation and Interpersonal Process Recall" (unpublished doctoral dissertation, Michigan State University, 1967), 38.

measure individual and group motivated self-disclosure. Jourard claims his test has considerable validity and reliability. However, Hurley[59] found that the Jourard instrument correlated negatively with her measures (except a leader "most closed nomination") and she judged it highly unreliable. While the Hurley measure did prove to have some concurrent validity and high reliability after the second administration, it was felt that it needed further validation. All other instruments remain unvalidated.

These findings regarding the use of the term self-disclosure, its content, and its measurement raise several problems that need investigation.

1. There are <u>many terms</u> used for self-disclosure supposedly all talking about the same entity, but in reality they are vague, broad, undefined, and unrelated. There is a need for a more comprehensive definition of self-disclosure.

2. There are different ideas about the <u>content</u> of self-disclosure. Some see it as a narrow concept (Mowrer). Others (Rogers and Jourard) view it broadly but do not agree on its dimensions. There is a need for a more comprehensive view of the content of self-disclosure.

3. Some see self-disclosure as a <u>process</u>, others as a <u>determinant</u>. Can it be viewed as both a process and outcome. How does it operate? When is it a function? What are the crucial independent variables when it acts as a dependent variable?

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[59] S. J. Hurley, "Self-Disclosure in Counseling Group as Influenced by Structured Confrontation and Interpersonal Process Recall," 38.

There is a need for further analysis of self-disclosure as process, outcome, and independent or dependent variable.

4. There is no exposition regarding the relationship of the two separate functions of giving and receiving self-disclosure. How does an individual use self-disclosure directed at him? There is a need for clarification of these two functions of self-disclosure.

5. There is a need for a more comprehensive theory or model of social-interpersonal model of self-disclosure that would include all the known crucial factors influencing the concept. The need is for a model that will predict certain relationships relating to self-disclosure in a social context.

6. There is a need for study of self-disclosure as a construct in the network of other known variables that would produce guidelines for further theory construction and research programs.

7. Besides the need for a clarification of the description of self-disclosure and a summary of the knowledge regarding this concept, there is a need for mediating applications of knowledge to new situations that might lead to fruitful lines of new predictive experimental inquiry.

Statement of the Problem and Approach

This study is a theoretical and empirical inquiry into the nature of self-disclosure as a construct. Specifically, within the study an attempt will be made to (1) conduct an analysis and synthesis of theory and research of three major authors writing on self-disclosure;

namely, Sidney Jourard, O. H. Mowrer, and C. Rogers; (2) conduct a factor analysis of a number of self-disclosure measures; (3) re-examine the theory in light of the empirical findings.

The study will be conducted in three steps. First, the general research on self-disclosure and the three theoretical positions will be analyzed according to certain selected evaluation criteria taken from contemporary theoretical psychology (see Chapter Three). Each author's position relating to the self-disclosure construct will be analyzed and then all the findings will be present in the form of a comprehensive nomological net.

The second step includes a factor analysis of a number of selected self-disclosure measures. The analysis is designed to provide some empirically derived factors or dimensions that will be used to re-examine the theory and develop an outline of a social-interaction model of self-disclosure.

The third step involves the presentation of a tentative definition of the construct and its major content dimensions, and the development of an outline that can be used in the construction of a theoretical self-disclosing model.

Delimitation and Generic Definition

The study does not include analysis of theory and research in such areas as anthropology, communication theory, social psychology, or religion. The review focuses on self-disclosure as a psychological phenomena. The study is concerned with self-disclosure as an important factor to be considered in the therapeutic task.

One of the purposes of the study is to elaborate on the definition of self-disclosure. The following preliminary tentative generic definition is offered as a means of promoting more effective initial communication and establishing a common framework for analysis.

> Self-disclosure is the ability to express or describe in a specific direct, and personal verbal statement or in non-verbal behavior to another or to others in a group feelings of affection, anxiety, confusion, conflict, anticipation, anger, fear, hope, doubt or any emotion, value or attitude being personally experienced as a result of past or current interpersonal interactions.
>
> Self-disclosure is the opposite of denying, distorting or ignoring feelings, and the opposite of playing games, wearing masks, or rationalizing. It can include comments critical of others whether or not these statements are accompanied by hostility or value judgments.

Criteria for Critical Evaluation of Structure

One of the purposes of the study is to develop a set of criteria for evaluation of each author's approach to self-disclosure as a construct. The criteria model will consist of several notions relating to philosophy of science and contemporary theoretical psychology. It will include an investigation of the function and activity of science in general, and a definition of "theory," "model," "concept," and "construct." Within Chapter Three, which deals with the evaluation criteria, the distinction between intervening variable and hypothetical construct will be presented along with the idea of a well-developed science--the nomological net.

Organization of the Study

The general plan of the study is to present in the following chapter a review of all the research directly relating to the concept of

self-disclosure. In Chapter Three the definition of terms and evaluation criteria from contemporary psychology will be described with reference to mediational variables, the nomological net, the nature of theory, and the inductive and deductive functions of theory. In Chapter Four the analysis of the theoretical and research positions of Sidney Jourard, O. Hobart Mowrer, and Carl R. Rogers will be reviewed and analyzed. The design of the study and the results of the factor analysis of the self-disclosure measures will be reported in Chapters Five and Six. Chapter Seven will include the summary, conclusions, implications, and recommendations of the study.

CHAPTER II

GENERAL REVIEW OF RESEARCH LITERATURE

The variety of conceptions of the content of self-disclosure gives rise to the problems associated with gaining a comprehensive view of the nature of self-disclosure. In order to obtain a more comprehensive understanding of self-disclosure, a review of the research literature is needed.

This chapter will include a critical analysis of thirty-four research studies designated specifically as self-disclosure research.

Analysis of Designs, Population Data, and Instruments

In this section the analysis of the designs, population data, and instruments of the thirty-four research self-disclosure studies will be described.

Designs

Within Table 2.1 the percentage of various types of designs are summarized. It was not always easy to decide whether a study was descriptive or correlational. In some cases, the judgment was based on the intent of the author relative to self-disclosure functioning as an independent variable. When self-disclosure was used as an

independent variable and the use of correlations predominated the study, it was judged a correlational study.

Table 2.1

Designs Used in Self-Disclosure Studies by Frequency and Percentage

Nature of Design	Frequency	Percent of Total
Descriptive Survey	13	40
Correlational	8	21
Experimental	9	27
Instrument Construction (Taylor)	1	3
Instrument Validation		
Construct Validity	2	6
Predictive Validity	1	3
	34	100

The Cooke,[1] Jourard and Rickman,[2] and Jourard[3] studies can be considered both descriptive and correlational. In any case, a large

[1]T. F. Cook, "Interpersonal Correlates of Religious Behavior," (unpublished doctoral dissertation, University of Florida, 1962).

[2]S. M. Jourard and P. Richman, "Factors in the Self-Disclosure Inputs of College Students," Merrill-Palmer Quarterly, IX (1963), 141-148.

[3]S. M. Jourard, "Self-Disclosure and Other-Cathexis," Journal of Abnormal and Social Psychology, LIX (1959c), 428-431. Hereafter referred to as Jourard, 1959c.

percentage of the studies are purely descriptive and correlational. In any case, a large percentage of the studies are purely descriptive in nature. Actually five other studies involved both instrument validation and one of the other types of designs. Hurley,[4] Vosen,[5] Truax and Carkhuff,[6] used experimental design and validation, while Himelstein and Lubin[7] included description and validation, and Himelstein and Kimbrough[8] involved correlation and validation. As indicated, four studies Lubin and Harrison,[9] Taylor and Altman,[10] Himelstein and Lubin,[11] Jourard[12] focused solely on instrument

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[4]S. J. Hurley, "Self-Disclosure in Counseling Groups as Influenced by Structured Confrontation and Interpersonal Process Recall," (unpublished doctoral dissertation, Michigan State University, 1967).

[5]L. M. Vosen, "The Relationship between Self-Disclosure and Self-Esteem," (unpublished doctoral dissertation, University of California, Los Angeles, 1966).

[6]Truax and R. Carkhuff, "Client and Therapist Transparency in the Psychotherapeutic Encounter," Journal of Counseling Psychology, XII (1965), 3-9.

[7]P. Himelstein and B. Lubin, "Relationship of the M.M.P.I.-K Scale and a Measure of Self-Disclosure in a Normal Population," Psychological Reports, XIX (1966), 166.

[8]P. Himelstein and W. Kimbrough, "A Study of Self-Disclosure in the Classroom," Journal of Psychology, LIV (1963), 437-440.

[9]B. Lubin and R. L. Harrison, "Predicting Small Group Behavior," Psychological Reports, XIV (1964), 77-87.

[10]D. A. Taylor and I. Altman, "Intimacy-Scaled Stimuli for Use in Studies of Interpersonal Relations," Psychological Reports, XIX (1966), 729-730.

[11]P. Himelstein and B. Lubin, "Attempted Validation of the Self-Disclosure Inventory by the Peer-Nomination Technique," Journal of Psychology, LXI (1965), 13-16.

[12]S. M. Jourard, "Self-Disclosure and Rorschach Productivity," Perceptual and Motor Skills, XIII (1961c), 323. Hereafter referred to as Jourard, 1961c.

construction and validation.

Eighteen percent of all the studies analyzed used self-disclosure as a dependent variable, and thirty percent of those examined tested it as an independent variable. Future research, then, needs to concentrate on discovery of factors influencing self-disclosure.

Most of the descriptive studies were conducted by one family of researchers (Jourard and his associates) on one area of concern; mainly demographic variables.

From Table 2.1 we can see that more experimental designs are needed. There is also a need to spend more energy validating instruments. As a later paragraph will point out we have a number of measures of self-disclosure being used in research. But little work is being reported on developing the reliability and validity of these measures.

Population Data

Within Table 2.2 the distribution of the type of populations used in the research studies are summarized. Over three quarters of the studies utilized college students exclusively. All three of the populations designated as abnormal were schizophrenic patients. The worker samples included a group of sailors, a group of government employees, and eight nursing instructors. Samples ranged in size from the eight nursing instructors to one thousand and twenty college students. Almost no figures were available indicating social class level or family background.

Table 2.2

Populations Used in Self-Disclosure Studies Described by Frequency and Percentage

Nature of Sample	Frequency	Percent of Total
College Undergraduates	17	51
Graduate Students	8	25
Business Managers	1	2
Workers	3	10
Navy Recruits	1	2
Abnormal (Mental Illness)	3	10
	33	100

The extensive use of students, who are usually brighter, favored, and trained in verbal skills, limits the generalizability of the research findings and influences the external validity of the instruments. It may also suggest that what we really have is essentially a middle class theory of self-disclosure.

Within Table 2.3 the geographical breakdown of the samples is summarized. Almost forty percent of the samples are located in the South. It is also interesting to note that twenty percent of the studies fail to report the geographical location of their subjects. The foreign subjects included students from England, Germany, India, and ten Middle East countries.

Table 2.3

Geographical Location of Samples Used in Self-Disclosure Research by Frequency and Percentage

Location	Frequency	Percent of Total
South East U. S.	10	30
South West U. S.	2	7
South U. S.	1	3
North West U. S.	2	6
Middle West U. S.	4	11
East U. S.	2	6
West U. S.	2	6
Foreign	4	11
Unknown or Unreported	7	20
	34	100

Instruments

The most popular instrument used in the studies of self-disclosure was Jourard's Self-Disclosure Questionnaire. This is a sixty-item instrument that classifies the questions into groups of ten within each of six more general categories of information about the self, or aspects of self. The subject is to read each item and indicate the extent that he has talked about the question to each of five target persons: "Mother," "Father," "Male Friend," "Female Friend," and "Spouse."

Over fifty percent of all the studies reviewed used the Jourard instrument. Almost one quarter of all of the studies were conducted by Jourard himself.

Seven studies using the Jourard questionnaire showed non-significance. Lubin and Harrison[13] found that the Jourard Questionnaire did not predict self-disclosing behavior in a group setting. Himelstein and Kimbrough[14] discovered that the questionnaire did not predict the amount of self-disclosure in self-introductions. Plym[15] found that the Questionnaire did not correlate significantly with job satisfaction, absenteeism or "self-perceived wellness" in government workers. Even though Jourard in a number of studies finds that females disclose more than males, Zief[16] and Himelstein and Lubin[17] found no significant correlation between Jourard's Self-Disclosure Questionnaire and peer nominations of those an individual would most like to confide in and those an individual will most like to tell his

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[13]B. Lubin and R. L. Harrison, "Predicting Small Group Behavior," Psychological Reports, XIV (1964), 77-87.

[14]P. Himelstein and W. Kimbrough, "A Study of Self-Disclosure in the Classroom," Journal of Psychology, LIV (1963), 437-440.

[15]Donald L. Plym, "Employee Self-Disclosure as Related to Illness-Absenteeism, Self-Perceived Wellness and Job Satisfaction," (unpublished doctoral dissertation, University of Arizona, 1966).

[16]R. M. Zief, "Values and Self-Disclosure," (unpublished honors thesis, Harvard University, 1962).

[17]P. Himelstein and B. Lubin, "Attempted Validation of the Self-Disclosure Inventory by Peer-Nomination Technique," Journal of Psychology, LXI (1965), 13-16.

troubles to. In a study of self-disclosure in groups Hurley[18] found that the Jourard measure correlated negatively with the Hurley Self-Disclosure Rating Scale, nominations of most self-disclosing member by group leaders, and direct ratings by group members. The only positive correlation ($p < .05$) occurred between the Jourard instrument and leader "Most Closed Nomination." Himelstein and Lubin[19] administered a version of Jourard's Questionnaire and the M.M.P.I. "K" scale to a group of college students. The "K" scale is understood to measure defensiveness. The results support Jourard's previous finding that females are more self-disclosing than males, both sexes disclose more to mother than father, and both sexes disclose more to their age peers than to their parents. While 6 of the 8 correlations between Jourard's targets and the "K" scale were negative, as expected, only two correlations with male subjects were significant.

The only evidence we have that Jourard's instrument measures disclosing behavior is Jourard's correlation of his questionnaire with Rorschach inkblots.[20] In a sense, when subjects respond to the inkblots they are engaging in a form of self-disclosure or self-revelation. After giving his forty item questionnaire (adapted from

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[18] S. Hurley, "Self-Disclosure in Counseling Groups as Influenced by Structured Confrontation and Interpersonal Process Recall," (unpublished doctoral dissertation, Michigan State University, 1967), 38.

[19] P. Himelstein and B. Lubin, "Relationship of the MMPI "K" Scale and a Measure of Self-Disclosure in a Normal Population," Psychological Reports, XIX (1966), 166.

[20] S. M. Jourard, "Self-Disclosure and Rorschach Productivity," Perceptual and Motor Skills, XIII (1961c), 323.

Jourard and Lasakow[21] to twenty-five male and twenty female graduate students in an education class he administered the Rorschach test and counted the responses to mother, father, opposite sex (spouse) and same-sex friend. Results showed that productivity on the Rorschach was correlated .37 ($p<.05$) with the total disclosure score; .44 with disclosure to father ($p<.01$); and .35 with disclosure to same-sex friend. The correlations with mother and with opposite-sex friend (or spouse) were .26 and .03 respectively, neither correlation being statistically significant. The correlations are low, but may be regarded as some form of "construct validity." Test data on the Jourard Questionnaire does not appear in the latest edition of Buros' Mental Measurement Handbook.

The failure of all serious attempts to validate the most popu- law self-disclosure instrument (the Jourard Self-Disclosure Questionnaire) raises questions regarding its reliability and use as an accurate tool in self-disclosure research. Yet, even though thirteen other attempts (see Table 2.4) have been made to measure self-disclosure, no one has presented as strong a theoretical base as Jourard.

The Taylor and Altman[22] measure mentioned above (Table 2.4) may have some possibilities for further study. They used the same idea as Jourard in terms of topic areas, but scaled the questions

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[21] S. M. Jourard and P. Lasakow, "Some Factors in Self-Disclosure," Journal of Abnormal and Social Psychology, LVI (1958), 92.

[22] D. A. Taylor and Irwin Altman, "Intimacy-Scaled Stimuli for Use in Studies of Interpersonal Relations," Psychological Reports, XIX (1966), 729-730.

Table 2.4

Instruments Used in Measuring Self-Disclosure

Researcher	Method of Measurement
Chittich & Himelstein (1967)	Count the number of items of information about self revealed by subjects in self-introductions.
Culbert (1966)	Ratings by group members and clinicians, content analysis of tapes by judges.
Jourard (1963)	a) The Self-Disclosure Output and Input Questionnaire
(1964)	b) 15 Questions of Different Level of Personal Information
(1964)	c) The Self-Disclosure Questionnaire
(1961)	d) Response productivity to Rorschach inkblots.
Lubin & Harrison (1964)	Trainer ratings on a nine-point scale.
Himelstein & Lubin (1965)	Peer nominations of most likely to confide in others and most likely to tell my troubles to.
Himelstein & Lubin (1966)	Use of the "K" scale of the MMPI.
Hurley (1967)	An eight-point rating scale used by subjects, peers, and leaders.
Taylor & Altman (1966)	A Self-Disclosure Item Pool containing 671 statements rated for intimacy and topic.
Truax & Carkhuff (1965)	a) The Depth of Intra-personal Exploration Scale (DX), (Client Transparency), nine-point scale.
(1965)	b) Empathy Scale (Therapist Transparency), five-point scale.
Plog (1965)	Forty-item questionnaire for eight topics and targets.
Van der Veen and Tomlinson (1967)	Seven-stage rating scale for the manner of Problem Expression.
Vosen (1966)	The Vosen Self-Disclosure Questionnaire for each subject, trainer, and group consensus.

according to "intimacy" instead of target persons. They found that thirty-five to seventy items are eighty-two percent reliable. They present no reliability information and offer no study using the instrument itself. While Hurley claims high internal consistency and concurrent validity with a direct measure of self-disclosure and trainer nominations, use of her instrument as a pre-measure is limited. More research is needed on all of the other measures listed above in order to establish their status as accurate and reliable instruments. A factor analysis of some or all of the existing measures may be the next step in helping isolate the dimensions of self-disclosure and account for variance. A factor analysis may aid in resolving the empirical problems that exist regarding the independence of the self-disclosure measures.

Research Content of Self-Disclosure

In Table 2.4 sixteen different ways self-disclosure has been measured are presented. Some authors describe self-disclosure as "verbal information." Others feel self-disclosure refers to general "emotional or attitudinal expressions," or confession of personal problems. Some are concerned about the direction and the "target" of self-disclosure. Sometimes situational factors are included in the description of the term. Gendlin[23] even talks about "subverbal communication." Thus, self-disclosure can be seen as personal or impersonal, feeling or information oriented, and subjective or objective.

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[23]E. T. Gendlin, "Subverbal Communication and Therapist Expressivity Trends in Client-Centered Therapy with Schizophrenics," Journal of Existential Psychiatry, IV (1963), 105-120.

Actually, there is no easily discernible agreement about the exact content of self-disclosure, so it is difficult to assess its relationship to other constructs or concepts. Sometimes self-disclosure is the product of self-report. Often it is the result of the evaluations made by trained judges. The latter is used in most of the studies, with self-report second, and the judgments of expert clinicians and test data used least. Three researchers used a combination of self-report, judges (trained and untrained), and "experts."

In spite of the lack of specificity in conceiving of the content of self-disclosure and the great number of ways of measuring it, a sizable body of information exists regarding this factor.

Self-Disclosure and Demographic Variables

Because there are differences in the manner in which individuals disclose and in the conditions surrounding the act of self-disclosure, the generalizations drawn by the following demographic data can be misleading. It is necessary to note especially the conditions under which self-disclosure is studied.

Group-Differences Using 300 southern white and negro liberal arts college students, Jourard and Lasakow[24] and Jourard and Landsman[25] found that white students disclosed more than negro students and females disclosed more than males. In the realm of national differences,

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[24]S. M. Jourard and P. Lasakow, "Some Factors in Self-Disclosure," Journal of Abnormal and Social Psychology, LVI (1958), 91-98.

[25]S. M. Jourard and M. J. Landsman, "Cognition, Cathexis, and the 'Dyadic Effect' in Men's Self-Disclosing Behavior," Merrill-Palmer Quarterly, VI (1960), 178-186.

Jourard found that English female students disclose less to significant people than comparable American co-eds.[26] The study used a matched sample of 25 British and 25 American female college undergraduates. They were compared using Jourard's self-disclosure questionnaire. Again, Jourard[27] found that Puerto Rican male and female students have lower total disclosure scores than American male and female students. However, Jourard failed to specify the nature of the sample and circumstances surrounding self-disclosure. Plog,[28] using 180 upper division and graduate American students from 4 universities and 180 German-Austrian students from 3 universities, found that German-Austrian male and female students disclose less to significant target persons than American students. Melikian,[29] using 158 male subjects at the American University of Beirut (Lebanon), did not find differences between 9 different Middle Eastern samples in total self-disclosure output.

In a study of religious differences Jourard[30] showed that Catholic, Methodist, and Baptist college males did not differ from one another in disclosure production, but they all disclosed less, on

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[26] S. M. Jourard, "Self-Disclosure Patterns in British and American College Females," Journal of Social Psychology, LIV (1961d), 315-320.

[27] S. M. Jourard, "Self-Disclosure in the United States and Puerto Rico," (unpublisheddata, 1963a).

[28] S. C. Plog, "The Disclosure of Self in the United States and Germany," Journal of Psychology, LXV (1965), 193-203.

[29] L. Melikian, "Self-Disclosure among University Students in the Middle East," Journal of Social Psychology, LVII (1962), 259-263.

[30] S. M. Jourard, "Religious Denomination and Self-Disclosure," Psychological Reports, VIII (1961b), 446.

the average, than the Jewish male college student. Two hundred students at the University of Florida were used as subjects. Again this study showed women as more self-disclosing than men. Cooke[31] found insignificant correlation between measures of disclosure to parents and strength of manifest religious behavior of one hundred eleven male college students. It was found that religiosity is related to the degree of closeness to parents among late teenagers, but becomes more independent of the parent-child relationship as the person becomes older.[32] This finding is in agreement with Jourard's earlier research indicating that as people get older, the amount they disclose to other people, especially to parents and same-sex friend, gradually diminishes.[33] Disclosure to opposite-sex friend, or spouse, increases from age seventeen up to about the fifties and then drops off. Extreme caution should be used in interpreting the data on self-disclosure age change, because the study was cross-sectional and not longitudinal. The research did not control for maturational or developmental factors.

In the area of academic achievement, Jourard[34] found that with sophomore nurses there was a significant correlation between scores for disclosure to Mother, Female Friend, and total disclosure

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[31]T. F. Cooke, "Interpersonal Correlates of Religious Behavior," (unpublished doctoral dissertation, University of Florida, 1962).

[32]Jourard, 1964, op. cit., 183.

[33]S. M. Jourard, "Age and Self-Disclosure," Merrill-Palmer Quarterly, VII (1961a), 191-197.

[34]S. M. Jourard, "Self-Disclosure and Grades in Nursing College," Journal of Applied Psychology, XLV (1961e), 244-247.

on the one hand, and grade point averages in all nursing courses. Those least open to parents find it harder to be open to faculty. However, Powell[35] tested a group of underachieving college students at the University of Florida with the Jourard Questionnaire and a measure of personal security. It was predicted that underachievers would score lower in self-disclosure and be more insecure than a matched group of adequately achieving students. There were no differences between these groups in mean disclosure to any target-person, and there was some slight evidence that achieving males (but not females) were more independently secure than underachieving subjects.

Target-Differences Young unmarried college subjects, both white and negro, showed the highest self-disclosure to Mother, with lesser amounts to Father, Male Friend, and Female Friend.[36] Married college subjects disclosed less to Mother, Father, and Same-sex Friend than comparable unmarried students. The married college students disclosed more to their spouses than to any other target-persons.[37] Looking at the degree of liking for a target-person, it was found that liking for a target-person was correlated with the amount disclosed to him. The linking of liking to amount disclosed is more striking among women than among men. Women show the high correlation between liking and disclosure to mother and father (Jourard and

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[35]W. J. Powell "Personal Adjustment and Academic Achievement of College Students," (unpublished masters thesis, University of Florida, 1962).

[36]S. M. Jourard and P. Lasakow, "Some Factors in Self-Disclosure," Journal of Abnormal and Social Psychology, LVI (1958), 92.

[37]Ibid.

Lasakow;[38] Jourard[39]), while for men the comparable correlations were markedly lower (Jourard and Landsman[40]). However, the more the parents were liked, the more disclosures were made to them.[41]

Subject-Matter Differences Certain aspects of personal data are disclosed more fully than others. Information regarding one's work, tastes, hobbies, attitudes toward religion and politics are more disclosable than data about financial status, sex life, and feelings about one's own body and personality.[42] Tiwari and Singh[43] found that with one hundred and eight urban and one hundred and forty-eight rural Indian students concern for money, interpersonal relations and body were less disclosed than other aspects of personality. American self-disclosure targets appear to be the reverse of those in India. In India the highest self-disclosure is made to friend first, then to mother, father, and teacher. The use of small and select samples in some of these studies raises questions about their generalizability to other targets, populations, and contexts.

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[38] Ibid.

[39] S. M. Jourard, "Self-Disclosure and Other-Cathexis," Journal of Abnormal and Social Psychology, LIX (1959c), 428-341.

[40] Jourard and Landsman, op. cit.

[41] Jourard and Lasakow, op. cit.

[42] Ibid.

[43] J. G. Tiwari and S. Singh, "Self-Disclosure in Urban and Rural Students," Journal of Psychological Researches, XI (1967), 7-12.

Self-Disclosure and General Interpersonal Behavior

The Dyadic Effect The term "dyadic effect" is employed to describe the contingency between self-disclosure output and self-disclosure input in a subject's relationships with others. Specifically, it means that individuals who report they have revealed a great deal of personal information to their parents and closest friends, likewise report that those parents and friends have disclosed a lot to them. Jourard and Landsman's 1960 study and Jourard and Richman's 1963 research not only confirm this observation but show that the opposite is also true; those persons who report they have disclosed relatively little about themselves to significant others indicate that these others have not revealed much about themselves either. Jourard[44] using eight nursing faculty members also showed that the amount of personal information disclosed to each of the co-workers covaries with each person's affection for each other fellow faculty member and disclosure output to each colleague covaries with disclosure intake from each nursing colleague.

Characteristics of Self-Discloser Mullaney,[45] working with college male sophomores and juniors, found that low self-disclosers are more socially introvertive, have high discrepancy between self-approval and social ideal, and are much more oriented toward disclosing to mother than father. High self-disclosers tend to reveal to

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[44]Jourard 1959c, op. cit.

[45]A. J. Mullaney, "Relationships among Self-Disclosure Behavior, Personality, and Family Interaction," (unpublished doctoral dissertation, Fordham University, 1964).

both mother and father, talk about more personal subjects, show more affection to both parents, and find that family customs and ceremony means more than low self-disclosers. Mullaney also discovered that the amount of self-disclosure depends on both personality factors (of discloser) and on the degree to which the self is perceived to be unlike what is judged to be personally or socially desirable.

Taylor, Altman, and Frankfurt[46] report correlations obtained between self-disclosure to several target persons and a number of personality and social need characteristics. These data were collected from 300 Navy recruits at the Great Lakes Navy Training Center and 96 female college students. The personality tests used were the Edwards Personal Preference Schedule, the Minnesota Multiphasic Personality Inventory, and the Guilford-Zimmerman Temperament Survey. Although these three instruments vary in their characteristics, they show relatively consistent patterns of relationship with self-disclosure. That is, they found that willingness to disclose about the self to others seems to be related to what might be termed "general social and personal adjustment." Taylor, Altman, and Frankfurt interpret this general pattern as reflecting partial support for the thesis advocated by Jourard and his associates--openness is correlated with mental health and adjustment. However, the data also indicate an interaction of self-disclosure, personality and target person, such that high disclosure to certain targets is associated with lowered social adjustment, e.g., psychopathic behavior and

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[46]D. A. Taylor, I. Altman, and L. P. Frankfurt, "Personality Correlates of Self-Disclosure." Unpublished manuscript (in press), 1968.

disclosure to casual acquaintance.

Self-Disclosure and Self-Esteem Fitzgerald[47] found that for three hundred college women self-disclosure as an index of social distance was clearly able to distinguish how close one feels to another. One discloses significantly more to a girl liked best and very little to one liked least. Although the amount of expressed self-esteem above did not significantly affect the amount disclosed, there seems to be some fairly uniform restriction about what, how much, and to whom one gives information about the self.

Judgmental Effects Moldowski[48] asked if the act of disclosing self-information affects the discloser's perception of the listener and of himself in predictable ways. Using eighty male and eighty female undergraduate students, Moldowski could find no support for his main hypothesis which predicted that judging a "listener" would be differentially affected by the subjects revealing different kinds of information about the self. The lack of significant results was attributed to failure of the experimenter to consider the motivation of the subjects and the social desirability of the test items.

Social Penetration Two studies have focused on a program of research on the social penetration process which deals with the growth

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[47]M. P. Fitzgerald, "Self-Disclosure and Expressed Self-Esteem, Social Distance, and Areas of the Self Revealed," Journal of Psychology, LVI (1963), 405-412.

[48]E. W. Moldowski, "Some Judgmental Effects of Self-Disclosure," (unpublished doctoral dissertation, State University of New York at Buffalo, 1966).

and development of interpersonal relationships. Altman and Haythorn[49] explored interpersonal exchange in isolated and non-isolated groups. Nine dyads formed at different levels on need achievement, need dominance, need affiliation and dogmatism worked and lived in a small room for ten days with no outside contact. Results showed that isolates revealed more about intimate topics to partner than controls, although less than to best friend. Altman and Haythorn integrated their results into a general theoretical model which suggests that interpersonal exchange processes have a general "wedge" shape as portrayed in Figure 2.1.

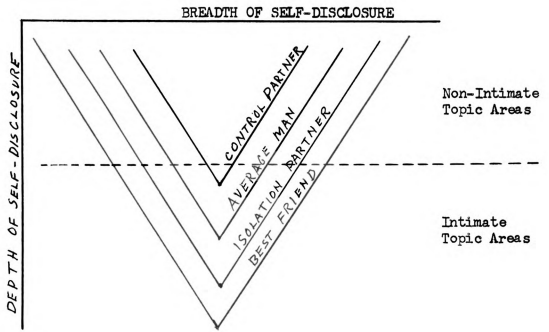

Figure 2.1. Altman and Haythorn's Integration of Results of Self-Disclosure to Various Targets[50]

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[49] I. Altman and W. Haythorn, "Interpersonal Exchange in Isolation," Sociometry, XXVIII (1965), 411-426.

[50] Ibid., 20.

The broad part represents disclosure of superficial information to others and the narrower section represents more intimate or personal information.

Taylor,[51] using 30 college roommate pairs, found that dyads composed of high-revealers engaged in a significantly greater amount of exchange than dyads composed of low revealers. This study supports the Altman and Haythorn research.

Self-Disclosure in Individual Psychotherapy

Few self-disclosure research studies have been conducted in the counseling setting. Jourard[52] speaks of the I-Thou relationship versus manipulation in counseling. He claims that we can manipulate a client by reflections and interpretations, but affection and honesty between client and therapist are the most important factors. The therapist should above all be honest, spontaneous and genuine. Gendlin[53] advocates therapist expressivity, experiencing and subverbal interaction (response to words of client that seem to represent some inward experiencing process) with schizophrenics.

Client and Therapist Transparency Truax and Carkhuff[54] looked at

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[51] D. A. Taylor, "The Development of Interpersonal Relationship: Social Penetration Processes," Journal of Social Psychology. (In press.) 1968.

[52] S. M. Jourard, "I-Thou Relationship Versus Manipulation in Counseling and Psychotherapy," Journal of Individual Psychology, XV (1959b), 174-179. Hereafter known as Jourard, 1959b.

[53] Gendlin, op. cit.

[54] C. Truax and R. Carkhuff, "Client and Therapist Transparency in the Psychotherapeutic Encounter," Journal of Counseling Psychology, XII (1965), 3-9.

the notion that the greater the degree of patient self-exploration, the greater the extent of constructive personality change. Taking four-minute samples from every fifth interview throughout the course of therapy for fourteen schizophrenic patients, Truax and Carkhuff[55] found that the greater the client's engagement in the process of deep self-disclosure, the greater the degree of constructive personality change. Change was evaluated by judges using pre- and post-test batteries, and client time spent hospitalized after start of therapy. Therapist transparency was tested on three hundred and six samples drawn from sixteen hospitalized mental patients using correlations between the averages level of therapist transparency and the average level of patient transparency. The correlation was .43($p \leq .05$), meaning that the greater the therapist transparency in the encounter, the greater the client's transparency throughout therapy. It was further shown that when the therapist appeared transparent, there was some slight tendency for the client to appear more transparent and engage in deeper self-exploration.[56]

The dyadic research supports Jourard's earlier finding on the "dyadic effect."[57,58] The dyadic effect seems to be a general phenomenon involving many types of interpersonal relationships. Even in the therapist-client dyad, clients will disclose themselves more

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[55] Ibid.

[56] Truax and Carkhuff, op. cit.

[57] Jourard, 1959b, op. cit.

[58] Jourard and Landsman, op. cit.

fully when the therapist is likewise "transparent"[59] or "congruent."[60,61] Goodman's[62] research also generally supports the dyadic effect in therapy because he found that with experienced therapists, emotional self-disclosure of the client and of the therapist increased as therapy progressed. More research on self-disclosure is needed in the therapeutic setting.

The Group Context and Self-Disclosure

The Lubin and Harrison[63] study showed that self-disclosing behavior in a group cannot be predicted by the Jourard Questionnaire. The failure of predictability may be due to lack of reliable instrumentation or failure to control the many variables operating in the group context. A number of studies have focused on the manipulation of self-disclosure in the group situation and produced conflicting evidence.

Manipulation of Self-Disclosure in the Group An early study by Mouton, Blake and Olmstead[64] looked at the relationship between frequency of yielding and the disclosure of "personal identity." They

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[59]Truax and Carkhuff, op. cit.

[60]Gendlin, op. cit.

[61]Rogers, 1961, op. cit.

[62]G. M. Goodman, "Emotional Disclosure of Therapists and Clients over the Course of Psychotherapy," (unpublished doctoral dissertation, University of Chicago, 1962).

[63]Lubin and Harrison, op. cit.

[64]J. S. Mouton, R. R. Blake, and J. A. Olmstead, "The Relationship between Frequency of Yielding and the Disclosure of Personal Identity," Journal of Personality, XXIV (1956), 339-347.

found that submissive subjects tend to be more conforming to the behavior of confederates in a group setting than are ascendent subjects. Himelstein and Kimbrough[65] followed this study up using graduate students and found that as more people precede others in introducing themselves they reveal more information and spend more time in self-disclosure. To find out if this conforming behavior is still true for both submissive and ascendent subjects, Chittick and Himelstein[66] assigned forty-eight male undergraduate students to two groups. Results showed that both ascendent and submissive subjects conform to confederates in self-disclosure, and that subjects reveal more about themselves when others are revealing more. The converse is also true. Again, this seems to be the "dyadic effect" in operation, indicating that situational variables are very important in determining amount of self disclosure.

However, the above three studies dealt with innocuous material about school and self. To what extent is highly personal data about such things as family problems, emotional problems, or sexual conflicts revealed in a group setting? Does the size of the group matter? What about the "status" or credibility of the other group members? There is need for more research in these areas.

Truax and Carkhuff[67] studied client transparency in forty hospitalized mental patients and forty institutionalized juvenile

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[65]P. Himelstein and W. Kimbrough, "A Study of Self-Disclosure in the Classroom," Journal of Psychology, LV (1963), 437-440.

[66]E. V. Chittick and P. Himelstein, "The Manipulation of Self-Disclosure," Journal of Psychology, LXV (1967), 117-121.

[67]Truax and Carkhuff, op. cit.

delinquents involved in group psychotherapy. The hypothesis was that the greater the level of patient transparency in the group, the greater would be the amount of personality change in the client. Based upon analyses of tape-recorded interactions of group members, Truax and Carkhuff found that high levels of transparency or self-exploration are associated with positive personality change in groups of mental patients, but that the exact reverse holds true for a delinquent population. For the delinquents, the less self-exploration (transparency), the more positive the change. The implication is that self-disclosure is helpful in producing change in the mentally ill individual, perhaps because his problem is internal, but the same disclosure is of no value to those whose disturbance is mainly external. Certainly a replication of this study is needed to confirm this finding.

Two studies have examined therapist self-disclosing behavior in the group setting. Culbert[68] compared the effects that "more" or "less" self-disclosing trainer behavior had upon upper-division and graduate student members of two training groups. After examining differences in inter-personal relationships and levels of self-awareness, Culbert concluded on the basis of self-awareness scores that the trainer might optimally begin his group sessions by being very self-disclosing, and then gradually backing off as the group members begin to model his disclosing behavior. Trainer self-disclosure does cause changes in member relationships and levels of self-awareness in the

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[68] S. A. Culbert, "Trainer Self-Disclosure and Member Growth in a T-Group," (unpublished doctoral dissertation, University of California, 1966).

group situation. This finding is somewhat supported by Truax and Carkhuff's[69] study of the forty mental patients and forty delinquents who had received intensive group psychotherapy. This study was based on four-minute samples drawn from group sessions. The correlation between therapist transparency and patient transparency was .79($p \leq .05$). The greater the degree to which the therapist seems open in the encounter, the greater will be the group members' self-disclosure or self-exploration.

Thus, the dyadic effect operates also in the group setting, but not with all kinds of clients. The value of self-disclosure is not universal.

Robbins[70] using the Jourard instrument examined the effects of group cohesiveness and anxiety on self-disclosure under threatening conditions. It was hypothesized that subjects would disclose more to a high cohesive group than to a low cohesive group, and that under threatening conditions the effect of cohesiveness on increasing self-disclosure is less for high anxious subjects than for low anxious subjects. The results showed that subjects were willing to disclose more to the high cohesive group than to the low cohesive group, but that the cohesiveness-disclosure relationship was not dependent upon the anxiety level of the subject. Generally, this seems to indicate that cohesiveness can be used to increase self-disclosure and that it is important to develop cohesive groups in order to foster more self-

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[69]Truax and Carkhuff, op. cit.

[70]R. B. Robbins, "The Effects of Cohesiveness and Anxiety on Self-Disclosure under Threatening Conditions," (unpublished doctoral dissertation, University of Missouri, 1965).

disclosing behavior.

Two studies using specific techniques in a group failed to manipulate self-disclosure or produce more self-disclosing behavior. Hurley[71] tried Inter-Personal Process Recall (an analysis of T.V. playback of group member behavior) and structured confrontation (each group member confronts every other member with feedback) with four groups of graduate students hoping to produce more self-disclosure. But, because the treatment period was short, and because there was dissimilar initial groupings and the instruments failed to discriminate between groups, the results of the accelerating techniques were inconclusive. Then, Branan,[72] in a surprising study of six groups of graduate students, found that counselor use of self-experience was not useful in increasing self-disclosure. In fact, the experimental groups perceived the counseling relationship as less genuine than the controls where there was no use of self-experience. Branan did not state the nature of the self-experience used so we cannot say that this study conflicts with the Truax and Carkhuff[73] group study or earlier group "dyadic effect" studies. It would be interesting to replicate Branan's self-experience study to see if this finding holds up in the individual or one-to-one setting. The fact that Branan used only five one-hour sessions may have influenced the results. Also, he says nothing about inter-judge reliability or the nature of the groups prior to therapy.

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[71]Hurley, op. cit.

[72]J. M. Branan, "Client Reaction to Counselor's Use of Self-Experience," Personnel and Guidance Journal, XLV (1967), 568-572.

[73]Truax and Carkhuff, op. cit.

Self-Disclosure, Self-Esteem, and Attraction to Group Query[74] using self-disclosure as an independent variable found that candid disclosure of personal problems is related to feelings about and attraction to a group. High self-disclosers like their groups better than members who were low self-disclosers.

Vosen[75] studied the relationship between self-disclosure and self-esteem. Three sensitivity groups were used over a five-month span of time. Results of the research showed that the relationship between amount of self-disclosure and self-esteem was linear. However, the high disclosures had no change in esteem, so the linearity is due to a reduction in esteem of the low disclosers. Vosen showed that the relationship between self-disclosure and esteem is consistent and is not fully dependent upon the type of situation in which one discloses. The Vosen relationship between self-disclosure and esteem may seem, in a way, to conflict with Fitzgerald's[76] negative finding regarding self-esteem in a one-to-one relationship. However, Fitzgerald studied expressed self-esteem while Vosen measured unexpressed self-esteem. It is hard to determine the reason for the difference between the two findings. It could be a difference in setting (individual vs. group). Is there a difference in presenting openly and not presenting socially one's self-perception? Maybe it depends

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[74]W. T. Query, "Self-Disclosure as a Variable in Group Psychotherapy," The International Journal of Group Psychotherapy, XIV (1964), 107-116.

[75]L. M. Vosen, "The Relationship between Self-Disclosure and Self-Esteem," (unpublished doctoral dissertation, University of California, Los Angeles, 1966).

[76]M. P. Fitzgerald, "Self-Disclosure and Expressed Self-Esteem, Social Distance and Areas of the Self Revealed," Journal of Psychology, LVI (1963), 405-412.

upon whether the individual is a "liberal" or "conservative" discloser, or if he is "negative" or "positive" discloser.

Summary and Conclusions

There is a large body of literature covering the concept of self-disclosure. Many demographic variables such as race, sex, nationality, religion and age have been studied. A number of studies have focused on the targets of disclosure like mother, father, spouse, opposite or same-sex friend. Some attempts have been made to classify the subject matter of self-disclosure. But in the main, little has been done to formulate a comprehensive view of what we reveal when we disclose ourselves. In the therapeutic setting it is not enough to just talk about disclosure of feelings about money, body, and food. It is necessary to be more specific.

In the area of general interpersonal relations research has established the importance of the dyadic effect and self-esteem. More is known about the characteristics of high and low disclosers, and about disclosers' judgments of others and themselves.

Surprisingly, the literature has yielded the least amount of research regarding self-disclosure and individual psychotherapy. Even though client-therapist transparency and the dyadic effect have been investigated, much more needs to be done to clarify the content of self-disclosure and its impact on general and specific personality change. The question is raised as to why more research on self-disclosure has been conducted in groups than in the one-to-one counseling relationship. It would seem that self-disclosure would be

easier to control and study in a one-to-one relationship. Do researchers feel it can be influenced more in the group setting? The number of studies dealing with manipulation of self-disclosure in groups may emphasize the importance of situational variables. The significance of conformity, dyadic effect, leader (trainer) self-disclosing activity, group cohesiveness, and self-esteem all seem to point to the importance of considering group and situational variables when studying self-disclosure.

The Future of Self-Disclosure

The direction of future research in self-disclosure should be interesting to observe. It has many roads it can follow. However, there are several roadblocks that need to be removed before more fruitful study can be undertaken.

The literature has revealed the numerous crude and unvalidated measures of self-disclosure that currently exist. Before research in this area can move forward, better instrumentation must be forthcoming. This, however, raises an even more fundamental problem. How shall we define self-disclosure? No one has yet presented a tight operational definition of the concept. This may be the result of lack of agreement as to what the content or subject-matter of self-disclosure includes. Can it consist of subverbal communication as well as verbal statements of fact? Does it just refer to "personal problems"? Is it an attitude as well as a behavior?

Besides the problems dealing with the variety of terms, with measurement, and with agreement on content, there is the question of the generalizability of the samples used. The use of narrow age and

educational level populations restrict the conclusions that can be drawn from the results presented by many of the studies. Doctoral dissertations invariably imply use of college populations. From our analysis of designs we notice that there is also a geographical limitation operating on the data. Future studies should involve use of normal adult working subjects and other categories of mental illness.

In the area of research design we note that it is about time to move into the area of serious experimental design. Yet, this can not be accomplished at this time, and probably has not been attained, because operational definitions and accurate measurement tools do not exist. In a sense, self-disclosure remains a hypothetical construct. Yet, we proceed to treat it as an intervening variable. We call it an entity, but fail to define its aspects or dimensions.

Need for Model

This leads us to the observation that what is currently needed is a solid theory or model of self-disclosure. Many point in self-disclosure's direction and proclaim its importance for interpersonal and therapeutic relations. But no one has set forth a comprehensive model that defines parameters and describes the interrelationships of constructs. Under the present circumstances predictive statements or hypotheses cannot be proposed and tested.

A model should encompass not only the personality variables related to disclosure, but also the unique therapeutic contingencies and the situational variables already produced by research. What is needed, then, is a social-interpersonal (interactional) model involving both the giving and receiving of disclosure. The model should include such factors as what kind of therapist, with what kind

of technique, with how much treatment, with what kind of client, in what kind of situation, with what kind of illness.

New research usually proceeds from one of two orientations. First, it can grow out of the directions indicated by past research or unexplored areas of previous research. Second, it can be based on some theoretical structure that seems to be logically sound. Of course, research can flow from both orientations. This review of the literature seems to be suggesting that we add the second orientation to our endeavor.

CHAPTER III

CRITERIA FOR EVALUATION OF STRUCTURE

In order to construct a comprehensive model of self-disclosure, it is necessary to analyze the body of current theory relating to the construct. But, before the status of self-disclosure as a construct of science can be evaluated, it is necessary to consider something of the nature of science and the structure of theoretical psychology.

The evaluation criteria to be used to analyze and evaluate the major theoretical ideas of each of the three authors will be presented within this chapter.

Philosophy of Science

Perhaps the best statement regarding the function of science is expressed by Braithwaite: "The function of science . . . is to establish general laws covering the behaviors of the empirical events or objects with which the science in question is concerned, and thereby to enable us to connect together our knowledge of the separately known events, and to make reliable predictions of events yet unknown."[1]

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[1]R. Braithwaite, Scientific Explanation (Cambridge: Cambridge University Press, 1955), 1.

Whitehead contends that scientific activity is concerned with the variety of sense experience.[2] Science is concerned with the formation of basic concepts (such as life, number, time, events, space) applicable to nature, and with the laws of nature which state the relations discerned between the data of nature.[3] Science, then, is the organization of thought. Whitehead remarks that the origin of science is two-fold: (a) the practical and (b) the theoretical. These phases are interrelated in that the need for theory becomes obvious because of deficiencies in practice and theory itself is developed and tested in the context of practice.[4] Science is rooted in both common-sense thought and logic. "Neither logic without observation, nor observation without logic, can move one step in the formation of science," says Whitehead.[5] Common sense gives us immediate awareness of the perceptual world, while logic is concerned not only with elaborate deductions but also with the definition of basic concepts.[6] A solid philosophy of science should, according to Whitehead, proceed with elucidating "the concept of nature considered as one complex fact for knowledge, to exhibit the fundamental entities and the fundamental relations between entities in terms of which all laws of nature have to be stated, and to secure that the entities and relations thus

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[2]Alfred North Whitehead, The Interpretation of Science (New York: The Bobbs-Merrill Co., Inc., 1961), 6-9.

[3]Ibid., 21-23.

[4]Ibid., 19-22.

[5]Ibid., 36.

[6]Ibid., 31-33, 36.

exhibited are adequate for the expression of all the relations between entities which occur in nature."[7]

While Whitehead states that "in the philosophy of science we seek the general notions which apply to nature,"[8] Brodbeck is more specific. She says that modern philosophy of science is part of analytical philosophy. The task of analytical philosophy is to analyze, clarify, describe, and explain reality.[9] She says that the philosopher of science formulates the principles by which the chain from long abstract technical words are converted into concrete ordinary words. The philosopher forms the logic of scientific concept formation, while the scientist uses the notions of lawfulness, causality, probability, deduction, and induction to find specific laws and relationships.[10] Stevens states that "science seeks to generate confirmable propositions by fitting a formal system of symbols (language, mathematics, logic) to empirical observations. The propositions of science have empirical significance only when their truth can be demonstrated by a set of concrete operations."[11] According to Stevens, science has two realms of discourse, the formal (or rational) and the empirical. The philosopher labors with the formal area and

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[7] Ibid., 53 (italics added).

[8] Whitehead, op. cit., 39.

[9] May Brodbeck, "The Nature and Function of the Philosophy of Science," in Feigel, Herbert, and Brodbeck, May (Eds) Readings in the Philosophy of Science, (New York: Appleton-Century-Crofts, Inc., 1953), 5.

[10] Ibid., 4.

[11] S. S. Stevens, "Psychology and the Science of Science," Psychological Bulletin, XXXVI (1939), 222.

perfects the rules of scientific language. The scientist applies the formal symbolic models presented to the observable world in such a way that the concepts he generates will satisfy the rules of operational criticism.[12]

In an attempt to relate these general notions regarding philosophy of science to psychology, Bergman[13] states that theoretical psychology is the logic of psychology. Theoretical psychology is a branch of philosophy of science which describes analytically (1) the nature and structure of its concepts, (2) the nature and structure of the laws in which these concepts occur, and (3) the nature and structure of the theories into which these laws combine. Bergman's conception can be viewed as a vertically hierarchical conception of the content and structure of psychology. Bergman's conception is illustrated in Figure 3.1.

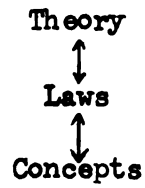

Figure 3.1. Bergman's Conception of the Structure of Theoretical Psychology.

[12] Ibid., 221-263.

[13] G. Bergman, "Theoretical Psychology," Annual Review of Psychology, IV (1953), 435.

Margenau's[14] classification of scientific discipline collapses Bergman's structure into a largely horizontal model. He conceives of science as consisting of theory on the one hand and data (empirical evidence) on the other. There is an interplay between the two. The theoretical side consists of the basic observable data.[15] Connecting the two are rules of correspondence which serve the purpose of defining certain theoretical constructs in terms of observable data.

Basically, Margenau is trying to make a distinction between the use of theoretical explanations and correlation procedures. A science that consists largely of statements describing the degree of relationship among more or less directly observable variables is correlational. A science that attempts to derive or explain these relationships from principles that lie beyond simple empirical knowledge is theoretically oriented. He admits no science is all correlational or entirely theoretical.[16] Margenau claims that the social sciences, including psychology, are largely correlational. The review of literature in Chapter II supports this contention. The largest body of research on self-disclosure is descriptive and/or correlational. A more detail description of Margenau's system will be presented in a later section of this chapter.

Science reaches three main needs; the condensation of knowledge into an understandable whole, the prediction of the future course

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[14]Henry Margenau, The Nature of Physical Reality (New York: McGraw-Hill Book Co., Inc., 1950).

[15]Ibid., 85.

[16]Ibid., 27-30.

of nature and human behavior, and the description and explanation of natural and human phenomena.

Within the next sections the meaning of "theory," "laws," "models," "concepts," and "constructs" will be expostulated.

Theory: Definition, Function, Criteria

The basic aim of science is explanation, understanding, prediction, and control.

Since the purposes for which we construct psychological theories can be summarized as (1) the unification, codification, and condensation of our isolated facts and information about human-social behavior, (2) the prediction of the character of the variables or event that will occur in a new context, and (3) the understanding or explanation of the phenomena of social-interpersonal behavior and its change, we can say that theory construction contributes to the aims of science. Harre[17] would support this view. But what is a theory?

Some authors use theory to refer to a hypothesis that has received a large amount of empirical support. Campbell[18] says that a "theory is a connected set of propositions which are divided into two groups. One group consists of statements about some collection of ideas which are characteristic of the theory; the other group consists of statements of the relation between these ideas and some other ideas

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[17]R. Harre, The Logic of the Sciences (London: Macmillan, 1960), 113.

[18]Norman R. Campbell, "The Structure of Theories," in Readings in the Philosophy of Science, Feigl, Hand, Brodbeck, May (Eds), (New York: Appleton-Century-Crafts, Inc., 1953), 290.

of a different nature. The first group will be termed collectively the 'hypothesis' of theory; the second group 'the dictionary.'"[19] The hypotheses are assumptions to be proven by experiment. The dictionary ideas are known and determined apart from the theory.

A theory, in its more general scientific usages, refers to some proposition from which a large number of empirical observations can be deduced. Bergmann[20] defined a theory as a "group of laws deductively connected." A more comprehensive definition of a theory encompassing Campbell's and Bergman's formulations is presented by Kerlinger:

> A theory is a set of interrelated constructs (concepts), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting their phenomena.[21]

Since the definition summarizes the aims of philosophy of science by stressing that a theory is (1) a set of propositions consisting of interrelated constructs, and (2) a list of statements regarding the interrelations among the constructs, and (3) an explanation of the phenomena under consideration, the definition will be accepted as part of the framework of this study.

It is necessary to say a word about the function of theories.

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[19] Ibid.

[20] G. Bergmann, Philosophy of Science (Madison: University of Wisconsin Press, 1957), 31.

[21] F. N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1965), 11.

Gage[22] states that theories can be used as either means or ends, or both. As ends, or goals, "theories are not mere pleasant adjuncts to the facts; rather, they are the raison d'etre of scientific work, the crux of the matter. Not mere prediction or control, but understanding in the light of theoretical formulation and explanation, is in this view the central aim of science."[23] As means, or tools, theories allow the researcher to clarify his thinking, to bring order into his concepts and hypotheses, to rationalize his activity, and to sharpen research objectives and suggest which variables should be added or eliminated.[24]

Farber[25] suggests that theories serve two functions, the one economic and the other integrative. The economic function was suggested by Tolman when he introduced the concept of the "intervening variable." Tolman stated that the function relating any kind of behavior to its many determinants is likely to be very complex, and that these functions differ for different sets of antecedent conditions and for different kinds of behaviors. He suggested that certain hypothetical notions be introduced to decrease the number of statements

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[22]N. L. Gage, "Paradigms for Research on Teaching," in Handbook of Research on Teaching (N. L. Gage, Ed.), (Chicago, Rand McNally and Co., 1963).

[23]Ibid., 99.

[24]Ibid.

[25]I. F. Farber, "A Framework for the Study of Personality as a Behavioral Science," in Personality Change, (P. Worchel and D. Byrne, Eds.), (New York: John Wiley and Sons, Inc., 1964), 34-35.

necessary to indicate all these relations.[26] A fuller discussion of "intervening variable" will be developed in a later section of this chapter. The second function of theory suggested by Farber is to integrate various empirical laws within a given domain, by linking the constructs used to account for one set of laws with those used to account for other sets.[27] This procedure may allow us to establish a "network of connected concepts" as suggested by Feigl.[28] The idea of the "nomological net" will also be discussed in a later section of this chapter. For now, it is enough to point out the deductive consequences possible when the theory is detailed to include statements of relations among several hypothetical variables.

Hemple and Oppenheim[29] suggest that there exists a continuum that includes, at its one end, the level of explanation that involves fairly simple accounts of immediate empirical data and develops on through laws to less complex theories and finally even to higher order constructs possessing greater generality. Stevens[30] and Margenau[31]

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[26]E. C. Tolman, "Operational Behaviorism and Current Trends in Psychology," Proceedings of Twenty-Fifth Anniversary in Celebration of the Inauguration of Graduate Studies, (Los Angeles: University of Southern California, 1936), 89-103.

[27]Farber, op. cit., 35.

[28]H. Feigl, "Operationalism and Scientific Method," Psychological Review, LII (1945), 250-259.

[29]C. G. Hemple and P. Oppenheim, "The Logic of Explanation," In H. Feigl and M. Brodbeck (Eds.), Readings in the Philosophy of Science, (New York: Appleton-Century-Crofts, 1953).

[30]S. S. Stevens, "Psychology and the Science of Science," Psychological Bulletin, XXXVI (1939), 221-263.

[31]Margenau, op. cit., 30.

state that the process can also move deductively from theory to data by the use of experiment.

If the ideas of Gage (theory as both means and end), Farber (theory having both economic and integrative function), Hemple and Oppenheim, and Stevens and Margenau are taken as a whole, it can be assumed that theory serves both an inductive and deductive function. This idea is supported by Underwood,[32] Byrne,[33] and Harre,[34] and is developed schematically by Carkhuff, Alexik, and Anderson[35] in order to evaluate current theories of vocational choice. Carkhuff et al.'s scheme is presented in Figure 3.2.

In Figure 3.2 Level A represents the place of raw data. Carkhuff et al., states that "The stability and reliability of the phenomena and the relationships which obtain between and among independent variables and these phenomena would appear to be logical determinants of theoretical readiness" at Level A.[36] From these raw data certain propositions or general laws may be established (Level B). These relationships between observed events interact with each other and result in "first order theories" which relate and interpret the

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[32]B. J. Underwood, Psychological Research (New York: Appleton-Century-Crofts, 1957), 179-182.

[33]D. Byrne, "Assessing Personality Variables and Their Alteration," in P. Worchel and D. Byrne, Personality Change (New York: John Wiley and Sons, Inc., 1964), 56.

[34]Harre, op. cit., 97.

[35]R. R. Carkhuff, M. Alexik, and S. Anderson, "Do We Have a Theory of Vocational Choice?" Personnel and Guidance Journal, XLVI (1967), 335-345.

[36]Ibid.

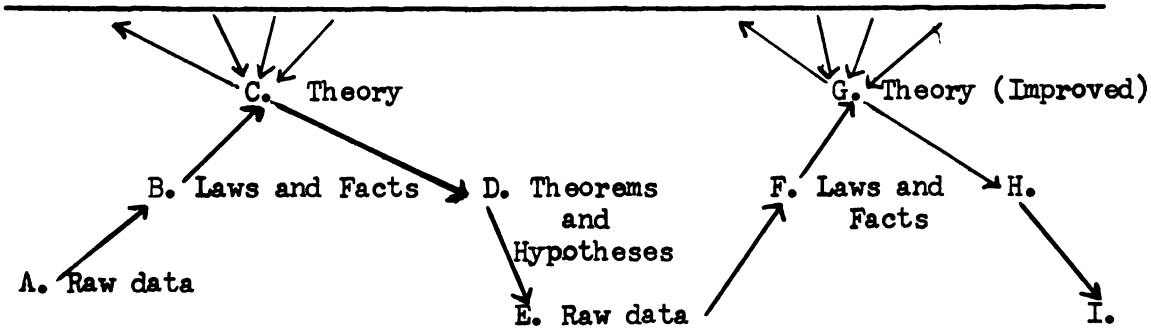

Figure 3.2. Carkhuff, et al.'s Schematic Representation of the Inductive and Deductive Functions of Theory.[37]

relationship (Level C). First-order theories may produce higher-order theories or generalizations about as yet unobserved data. Theory at Level C permits the deduction of theorems from which hypotheses may be derived and tested (Level D). And, of course, the hypotheses are confirmed, or not, by the raw data (Level E). These results either support or do not support the theory. Thus, one may move inductively or deductively, and theory-building may proceed continuously. Harre[38] also suggests that theory can follow two different but connected lines. He says that the extension may be what he calls "the '<u>formal extension</u>,' in which the logical consequences of the statements occuring in the theory are drawn out by the ordinary techniques of deduction. Extension may also be by '<u>informal means</u>,' in which we extend

[37] <u>Ibid</u>., 336.

[38] Harre, <u>op. cit</u>., 97.

the theory by extending the model on which the theory is based."[39]

Before the question of the distinction between a theory and model is discussed, it might be helpful to present some ideas regarding the criteria used to evaluate theories. Estes, et al.,[40] states that:

> We believe wide agreement would obtain among current writers in the logic of science that an adequate review of any scientific theories must include essentially the same features. . . . Scientific theories are evaluated, not on some absolute scale of "theoryness," but with respect to what we expect them to do. Some of the functions of a useful theory are: (1) clarifying the description of the world possible in ordinary language, (2) summarizing existing knowledge, (3) mediating applications of our knowledge to new situations, (4) leading to fruitful lines of experimental inquiry.

These criteria repeat almost exactly the earlier definitions and functions of theory. Estes has also offered an outline for the criticism of learning theories that may be relevant to this study. Within Appendix A Estes' outline is reproduced in full. The questions in the outline are logical and specific. He is concerned with the ability of the theory to make predictions and provide generality. He is also concerned about the language of the theory under consideration. A number of these questions will be used to evaluate the three theories under investigation.

Models

The term "model" has recently come into more frequent use by

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[39] Ibid.

[40] W. K. Estes, et al., Modern Learning Theory (New York: Appleton, Century, and Crofts, Inc., 1954), 15.

social scientists. Brodbeck[41] suggests that there are two major uses of the model. The most common general use is as a synonym for theory. A theory may be narrow or broad, quantified or nonquantified. The term "model" is used frequently for those theories which are either highly speculative or quantified, or both. Thus, model serves to emphasize the tentative, unconfirmed nature of the hypothesis under consideration.[42] Stevens[43] states that the scientist fits a formal model (language, mathematics, logic) to his observations. He defines semantical rules so that his model will describe laboratory operations, and he tries to create a model which has set rules governing the manipulation of the elements of the model to exploit the model and arrive at new, testable propositions.

The second use of model involves the idea of one thing being a replica of another. For example, a miniature train is a model of a real train in that there is a one-to-one correspondence between the elements of the model (miniature train) and the elements of the thing of which it is the model (the real train). The model train is isomorphic with real train. They are similar in that they work on the same principles. The model, then, follows the same laws as the theory. "If the laws of one theory have the same form as the laws of another theory, then one may be said to be the model of another."[44]

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[41]M. Brodbeck, "Logic and Scientific Method in Research on Teaching," in N. L. Gage (Ed.), Handbook of Research on Teaching (Chicago: Rand McNally and Co., 1963), 88.

[42]Ibid.

[43]Stevens, op. cit., 254.

[44]Brodbeck, op. cit., 89.

Concepts and Constructs

An important distinction must be made between the terms "concept" and "construct." Kerlinger states that "a concept is a word that expresses an abstraction formed by generalization from particulars."[45] Ford and Urban agree that concepts are abstractions, but add that they are "convenient, shorthand methods for thinking about, analyzing, and generally dealing with many discrete occurrences and the generalities among them."[46] Concepts, then, represent particular sets of events that have been classified according to common characteristics. Concepts like "weight," "hunger," "child," "dog," and the like, name differentiated slices of reality. Some concepts like "mass," "potential," "totalitarianism" are discerned by more subtle examination of nature. Some concepts need more precise operational definitions. However, Brodbeck notes that just as a concept names what is the same in different individuals or events (that is, a character they all exemplify), so "a law describes another constancy, namely, one instance of a concept always being connected with an instance of another concept, as thunder always follows lightning."[47] It is important to note, also, this distinction between "concept" and "law."

A construct is a concept, but as Marx and Hillix note, a

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[45]Kerlinger, op. cit., 31.

[46]D. H. Ford and H. B. Urban, Systems of Psychotherapy (New York: John Wiley and Sons, Inc., 1963), 36.

[47]Brodbeck, op. cit., 56.

construct is a special kind of concept.[48] A construct represents relationships among objects or events. Constructs such as "anxiety," "fear," and "habit" refer not merely to objects or to events that are simple actions of objects, but to some kind of relations among objects. They refer to a relatively complex kind of event. A construct, then, has added meaning that is "deliberately and consciously invented or adopted for a special scientific purpose."[49] For example, the concept "intelligence" can be observed and measured. Yet, as a construct, "intelligence" means more than a score on a test. It enters into broader theoretical schemes and is related theoretically and practically in various ways to other constructs, such as "achievement" or "conformity."

Constructs are useful in summarizing simple events and relationships succinctly. They are helpful in generalizing from some sets of observed relationships to other unobserved sets of events. But, as Marx and Hillix note, "many difficulties in psychology stem from a failure to define constructs unambiguously. The development of simpler and more empirically meaningful constructs is an important objective of contemporary psychology."[50] Yet, it is important to recognize the relationship of theory to constructs. In the less highly developed areas of knowledge, such as the behavioral sciences, theory plays a somewhat different role than in the physical sciences. Theories are

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[48]M. H. Marx and W. A. Hillix, Systems and Theories in Psychology (New York: McGraw-Hill Book Co., Inc., 1963), 44.

[49]Kerlinger, op. cit., 32.

[50]Marx and Hillix, op. cit., 44.

brought into play as a device to aid in the formulation of laws of behavior. As Spence states, theories consist primarily in the introduction of these abstract or hypothetical constructs which help to bridge gaps between other more clearly specified experimental variables.[51] Thus, constructs play a significant role in the construction and testing of theories.

There are two general ways of defining a construct. Or, to put it another way, constructs can be evaluated on one of two levels. They can be defined by using other words to describe it. For example, "intelligence" can be defined by saying it is "the ability to think abstractly." Or, it can be defined by describing the actions or behaviors it expresses or implies. It might be said that if a child of five can count up to 100, he is "intelligent." The first definition is unobservable, the second can be measured operationally. Even though he admits differences among constructs are multidimensional, Underwood,[52] following this general idea has developed a system for evaluating constructs on a unitary dimension. He proposes an abstraction continuum by which he means to determine how far the construct is removed from immediate data. He has designated five model points or levels among this rough dimension. On the basis of these reference points it is possible to evaluate the status of a construct. Within Table 3.1 Underwood's theoretical formulations are presented.

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[51]K. W. Spence, "Nature of Theory Construction in Contemporary Psychology," Psychological Review, LI (1944), 47-68.

[52]Underwood, op. cit., 195-232.

Table 3.1

Summary of Underwood's Abstraction Dimension for Evaluating Constructs[53]

Level	Label Name	Level Description
1	Recognition of Independent Variable	Specification of independent variable or meaning of term without immediate references to the behavior of the subject. Define in terms of time and amount.
2	Phenomenon Identification	Summarizes operations used to define phenomenon. Behavioral phenomena is most empirical and operational possible.
3	Causal Identification	Name and identify phenomena then apply it to a hypothetical process, or state, or capacity as a cause for observations.
4	Postulational Procedure	Construct is postulated to account for phenomena defined at Level 2.
5	Summarizing Construct	Summarize interaction of other postulated processes in an explanatory system.

Taken as a group, concepts at Levels 3, 4, and 5 have been traditionally known as "intervening variables."[54] The distinction between "intervening variables" and "hypothetical constructs" made by

[53] Ibid.

[54] Ibid., 225.

MacCorquodale and Meehl[55] discussed in the next section of this chapter are about the same as the distinction made by Underwood between Levels 3 and 4.

Underwood's abstraction dimension leads into a discussion of the nature of mediational and intervening variables. Constructs have been called intervening variables because they were to account for internal and directly unobservable psychological processes. But the meanings of the terms vary with the author under consideration.

Mediational Variables

Psychologists are interested in establishing the interrelations within a set of experimental variables. They are interested in discovering laws, creating theory, and testing hypotheses. Spence[56] states that two main groups of variables are studied. They are:

(1) R-variables: measurements of the behavior of organisms; simple response patterns, complex achievements (traits, abilities). There are the dependent variables.

(2) S-variables: measurements of physical and social environmental factors and conditions. These are independent variables.

The psychologist attempts to quantify his constructs and state their interrelations in terms of mathematical laws, for example:

$$R = f(S)$$

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[55] K. MacCorquodale and P. Meehl, "Hypothetical Constructs and Intervening Variables," Psychological Review, LV (1948), 95-109.

[56] Spence, op. cit., 48-49.

The aim is two-fold: (1) to discover the S variables, and (2) to obtain the nature of the functional relations holding between the S and R.variables. One group of scientists propose the introduction of theoretical constructs called "O" variables between the S and R variables. They claim the organism ("O") brings another set of variables that help explain the relationship between the S and R variables. Another group of more empirically minded persons attempt to refrain from the use of such inferred constructs. They confine themselves to the observable data. The "O" variables have been called intervening variables or constructs.

Theoretical constructs are intuitive hunches about variables other than the ones under experimenter control that are influencing the responses. Spence[57] has suggested that there are four types of theoretical constructs conceived in the manner in which constructs have been defined. They are as follows:

(1) Animistic-like theories in which the relations of the construct to the variables are left entirely unspecified. Examples are: "soul," "mind," "idea," "libido."

(2) Neurophysiological theories are defined in terms of operations and instruments of neurophysiologist. Examples are: "brain field," "neuro trace," "excitatory and inhibitory state."

(3) Theories involving constructs defined primarily in terms of the R variables. For example, constructs that look at the psychological situation or in terms of the way

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[57] Spence, op. cit., 51-52.

the subject sees the event. This includes constructs relating to the "phenomenal field" or "life space."

(4) Theories involving constructs intervening between the S and R variable. For example, "fear," "motivation," "anxiety."

To discover all the important variables and the precise nature of the interrelations holding within a set of variables (especially between the independent and dependent variables), it is necessary to introduce theoretical constructs. According to Hull[58] and Tolman[59] it is necessary to conceive of this complexity by breaking the whole down into successive sets of simpler functions and constructs that interconnect between the initiating causes of behavior and the final resulting behavior.

In the beginning an intervening variable was considered a theoretical variable, mentally created and not observable. Often the two phrases "intervening variable" and "theoretical" (or "hypothetical") "construct" were used interchangeably. A failure to distinguish between the two terms led to confusion. Some authors used the terms interchangeably to refer to abstract relations. Others used them to convey empirical relationships.

First, MacCorquodale and Meehl[60] suggested a distinction between constructs "which merely abstract the empirical relationships

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[58]C. L. Hull, "Mind, Mechanism and Adoptive Behavior," Psychological Review, XLIV (1937), 1-32.

[59]E. Tolman, "The Intervening Variable," in M. Marx (Ed.) Psychological Theory (New York: Macmillan, 1951).

[60]MacCorquodale and Meehl, op. cit., 95-109.

(Tolman's original intervening variable) and those constructs which are "hypothetical" (i.e., involve the supposition of entities or processes not among the observed)."[61] They focused on the issue of quantification. According to MacCorquodale and Meehl[62] "intervening variables" have three characteristics. First, the statement of such a concept does not contain any words which are not reducible to the empirical laws. Second, the validity of the empirical laws is both necessary and sufficient for the "correctness" of the statements about the concept. Third, the quantitative expression of the concept can be obtained without mediate inference by suitable groupings of terms in the quantitative empirical laws. The rule for proper intervening variables is that of convenience, since they have no factual content surplus to the empirical functions they serve to summarize."[63]

"Hypothetical constructs" do not fulfill any of these three conditions. They have a cognitive, factual reference in addition to the empirical data which constitute their support. The existence of "hypothetical constructs" should be compatible with general theoretical knowledge and with the next lower level knowledge in the explanatory hierarchy.[64]

Rozeboom[65] has attempted to make the distinction in the

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[61] Ibid., 108-109.

[62] MacCorquodale and Meehl, op. cit., 108-109.

[63] Ibid., 108.

[64] Ibid.

[65] W. W. Rozeboom, "Mediation Variables in Scientific Theory," Psychological Review, LXIII (1956), 249-264.

structure of causal linkage among a set of variables. That is, the intervening variable is a transformation variable that has been defined in terms of its antecedents, and depends upon the latter for its meaning. The intervening variable has two dimensions. It is derived non-empirically from its antecedent variables, or from a law relating the intervening variable to the dependent variable.[66] Thus, intervening variables have existential references. On the other hand, the hypothetical construct is an inferred variable not reducible to antecedents and not contained in antecedents. The hypothetical construct is not a "convenient fiction." It is possible to observe it. It has excess meaning, but is not vague, and has no undesirable or prescientific connotations.[67] Rozeboom claims that both concepts are not opposite to methodological rigor, and do not necessarily represent different degrees of operational validity.[68] Hueristically, intervening variables are sterile. They have little inductive or explanatory use. Hypothetical constructs on the other hand, have potential value because of their fertility in solving the urgent problems of expanding and testing psychological theory.[69] Rozeboom offers the following reason for replacing MacCorquodale and Meehl's quantification criteria with his own causal linkage notion:

> Recognition that the structure of causal linkages among a set of mediation variables is independent of the specific quantification nature of the relations frees us from

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[66] Ibid., 253.

[67] Ibid., 255.

[68] Ibid., 257-258.

[69] Ibid., 261.

> preoccupation with excessive quantification of empirical relations during the early phases of a science, enabling us to identify the major immanent determinants of behavior of their exact relations to their causal antecedents and observable consequences.[70]

Since the quantification orientation and the antecedent approach are not in conflict or opposition, there is no valid reason why both criteria cannot be used to define the terms or distinguish between the two. Thus, both ideas will be applied in the analysis of the authors.

Nomological Net

The meaning of theoretical constructs are best explicated by concentrating on the idea of a well-developed science.

Feigl states that the unification of the sciences is progressing most auspiciously on the level of scientific theory, and that the idea of a unitary nomological net "is the projection of an ideal science which can at present be sketched only in a very incomplete outline. Nevertheless, such a schematic reconstruction of the network of concepts and laws can be helpful and illuminating. Only in such an idealized schema are the concepts designating observables connected with the concepts designating unobservables by lawful connections."[71]

Margenau has also referred to the idea of a unified science or nomological net by saying that science consists of both theory and

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[70] Ibid., 263.

[71] Herbert Feigl and Michael Scriven (Eds.), "The Foundations of Science and the Concepts of Psychology and Psychoanalysis," Vol. I. In Minnesota Studies in the Philosophy of Science (Minneapolis: University of Minnesota Press, 1956), 20.

empirical data. Margenau has diagrammed his theory of unified science in the manner shown in Figure 3.3. The theoretical side involves constructs and their relations to one another. The empirical side of science is characterized by observable data. Connecting the two aspects are rules of correspondence which define theoretical constructs in terms of observable data.[72] Margenau also makes a distinction between constitutive and operational definitions. A constitutive definition is a definition that defines a construct with other constructs.[73] For example, we can define "anxiety" as "a state of internal tension or fear." Torgerson says that all constructs must possess constitutive meaning in order to be scientifically useful.[74] An operational definition is a definition that assigns meaning to a construct by specifying the "operation" or activities necessary to measure the construct.[75] When an operational definition describes how a variable will be measured it is called a measured operational definition. When an experimenter spells out the details of the operations used in the manipulation of a variable it is called an experimental operational definition.[76] Even though operational definitions yield only limited meanings of constructs they are indispensable to the scientific task.

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[72]Henry Margenau, The Nature of Physical Reality (New York: McGraw-Hill Book Co., 1950), 60-65.

[73]Ibid., 236ff.

[74]W. Torgerson, Theory and Methods of Scaling (New York: John Wiley and Sons, Inc., 1958), 5.

[75]H. Margenau, op. cit., 232.

[76]F. H. Kerlinger, op. cit., 34-35.

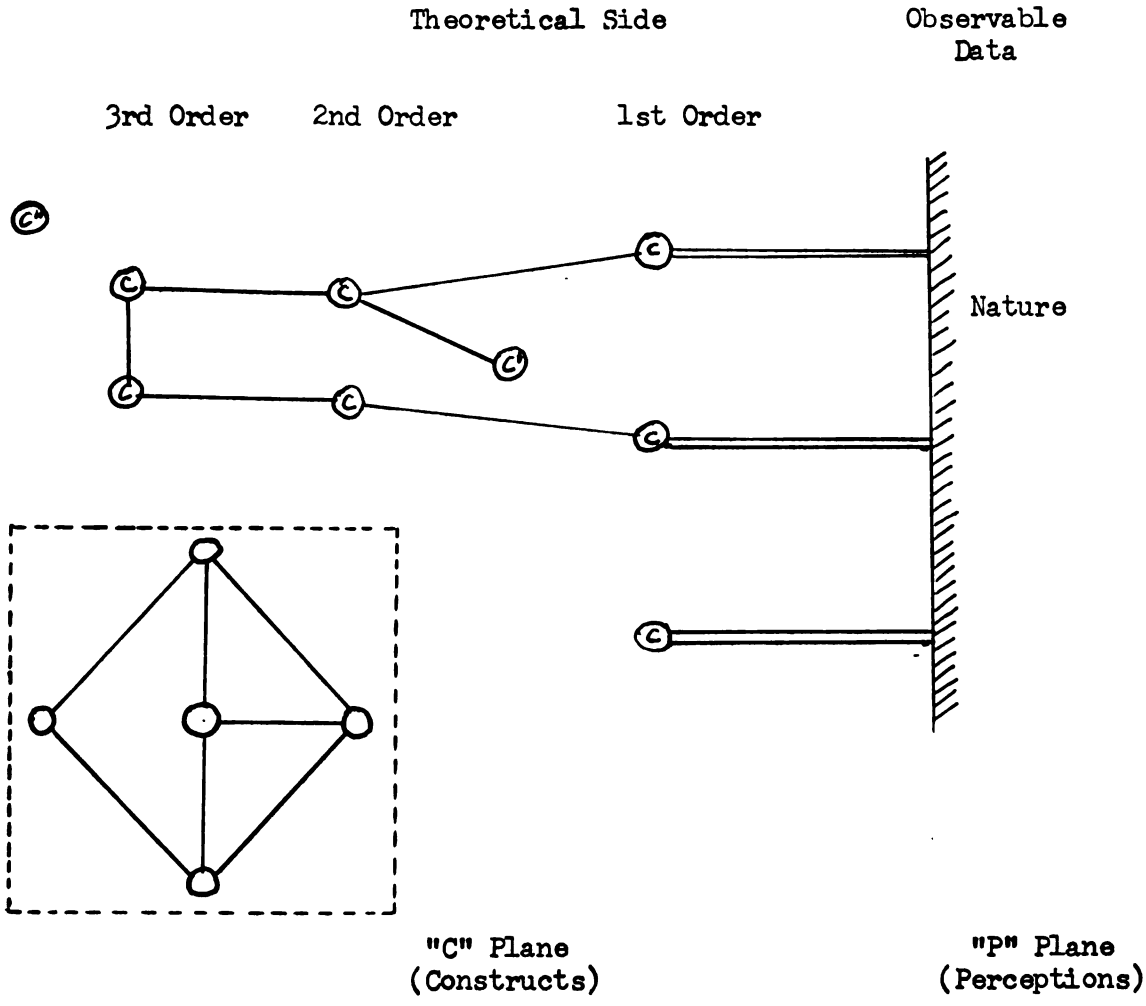

Figure 3.3. Margenau's Schematic Diagram Illustrating the Structure of a Well-Developed Science. The circles stand for Constructs, single lines for Formal Connections, and double lines for Rule of Correspondence Linking Certain Constructs with Data.[77]

Margenau's two definitions are diagrammed also in the manner shown in Figure 3.3. In the diagram (Figure 3.3) the vertical line stands for the observable data of Nature (the aggregate of all experience). The area to the left of the vertical line corresponds to what

[77]Margenau, op. cit., 85.

Margenau calls theoretical space or the "C" field (of constructs). The circles within the "C" plane stand for the theoretical constructs. The double lines indicate rules of correspondence (operational definitions or rules of interpretation) between the constructs and empirical or observable data. The single lines connecting two constructs indicate the formal, logical or theoretical connection between the two constructs. All constructs are denoted by C with or without primes.

Those without primes stretch two or more arms toward other constructs or toward Nature. The construct labeled C' possesses only one connection. It hangs loosely within the system and obtains meaning only from a coherent set of other constructs. The construct C" has no connection whatever with other constructs or with Nature. Its insertion into the nomological net makes no difference whatever. For example, if C were the God of deism, it would make no sense because "God" has no place in science.[78]

Those constructs surrounded by the dotted square are a group of isolated constructs that are mutually connected but without epistemic ("P" plane) connections. They form an island universe, consistent in itself, but unverifiable. Although constructs need not themselves possess operational definitions directly, they must at least be connected with observable data indirectly through other constructs that are verifiable. The group of three constructs to the left of Nature can be considered first order constructs. The next group of two constructs to the left can be called second order constructs, and the next group on the extreme left can be viewed as third

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[78]Margenau, op. cit., 86.

order constructs.

Torgerson states that the situation in the less well-developed behavioral sciences is not as neat as Margenau suggests.[79] There is often a shortage of important connections and the theoretical space is subdivided into two portions; an epistemic model of operational constructs, and a constitutive model which is a system of formal or theoretical constructs. A typical situation might be diagrammed something like that in Figure 3.4.

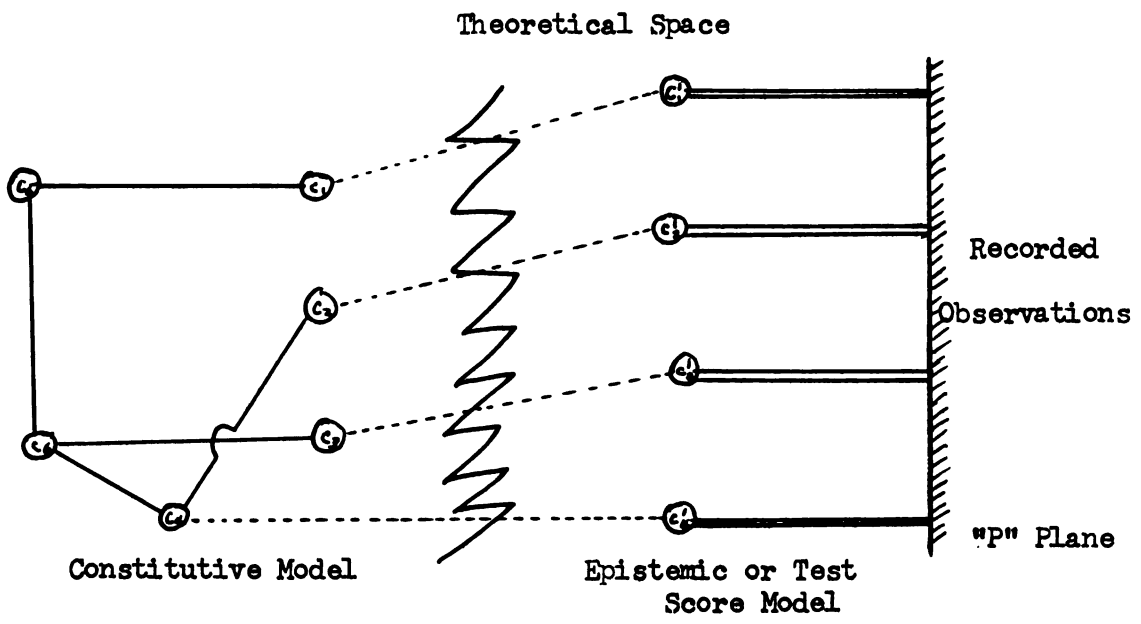

Figure 3.4. Torgerson's Illustration of a Typical Scientific Structure in the Social and Behavioral Sciences.[80]

The two submodels are loosely connected by intuitive statements

[79] Torgerson, op. cit., 5.

[80] Ibid.

rather than by precise logical statements (the dotted line). A dotted line stands for a presumed relationship between the construct with operational meaning and the equivalent concept which possesses a wealth of constitutive meaning. Margenau's epistemic model generally consists of relationships among test scores. The constructs on the right side of Figure 3.4, C1, C2, C3, C4, all possess operational definitions (rules of correspondence) relating them to the observable data. For example, "intelligence" is defined by a score on a particular intelligence test. The set of constructs on the left represent concepts that a theoretically minded person might have in mind when he begins work on constructing a theory of intelligence. The connections between constructs indicate theoretical relationships between the concepts.[81] For example, we might say that intelligence is "the ability to learn abstract symbols."

Cookingham[82] has suggested that Coombs[83] has constructed an intervening model between the theoretical space and the recorded observations of Nature. Coombs states that a theory of data involves three phases. These phases are represented in Figure 3.5.

At the extreme left of Figure 3.5 is the universe of potential observations that the scientist might choose to record. From the vast variety and number of possible observations the scientist must select some few events to record. This is called Phase 1 in the

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[81]Torgerson, op. cit., 6-7.

[82]F. Cookingham, "An Overview of Coombs' Theory of Data." (Unpublished Paper, College of Education, Michigan State University, 1967).

[83]C. H. Coombs, A Theory of Data (New York: John Wiley, 1964).

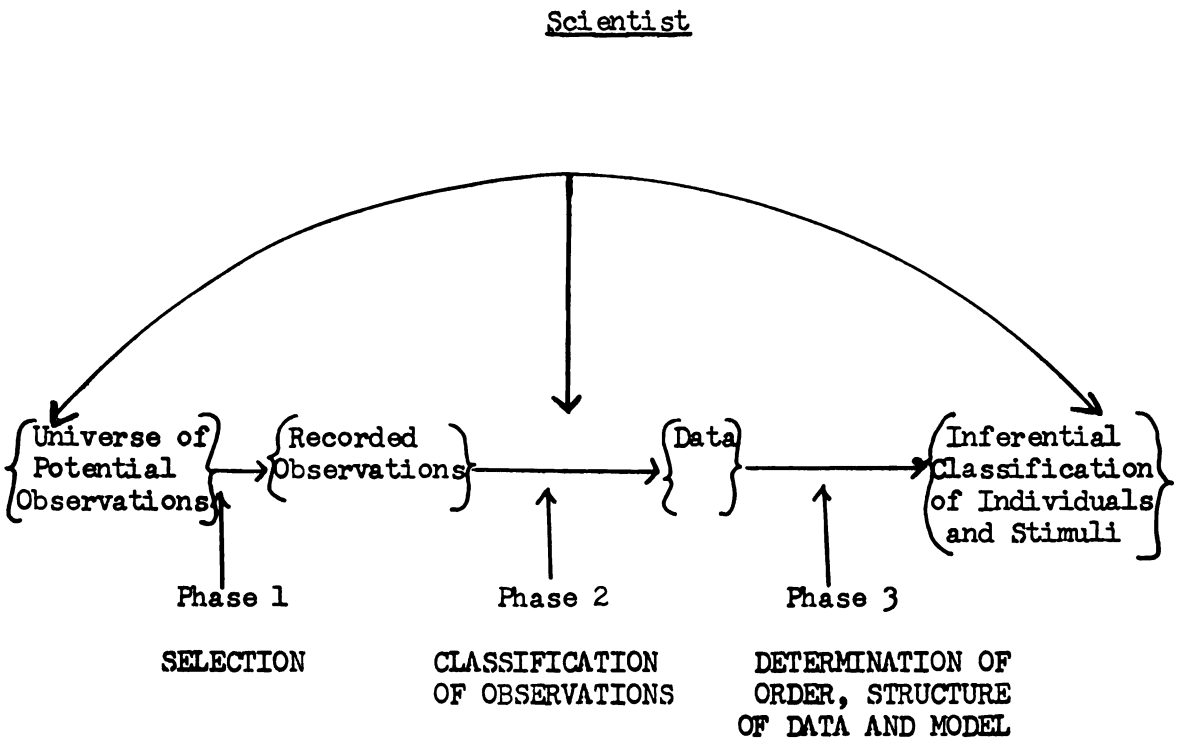

Figure 3.5. Coombs' Data-Flow Diagram of Phases from Real World to Inferences.[84]

Figure. However, these recorded observations are not yet data. An interpretive step (Phase 2) is required to convert the recorded observations into data. Phase 2 involves "a classification of observations in the sense that individuals and stimuli are identified and labeled, and the observations are classified in terms of a relation of some kind between individuals and stimuli, or perhaps just between stimuli,"[85] Phase 3 involves the detection of relations, order, structure

[84] Ibid., 4.

[85] C. H. Coombs, A Theory of Data (New York: John Wiley and Sons, Inc., 1964), 4-5.

which follow as a logical consequence of the data and the model used for analysis. At Phase 1 there are no limits on the potential conclusions that can be drawn. But each phase constrains the universe of possible inferences that can be drawn from the analysis.[86]

The basic point that Coombs is making is that our conclusions, even at the level of operational definitions (measurement), are already a consequence of a theory about behavior, since some rationale for selection, classification and structuring exists prior to measurement. Accordingly, Cookingham[87] states that Coombs' data model intervenes between the theoretical space and recorded observations as depicted in Figure 3.6.

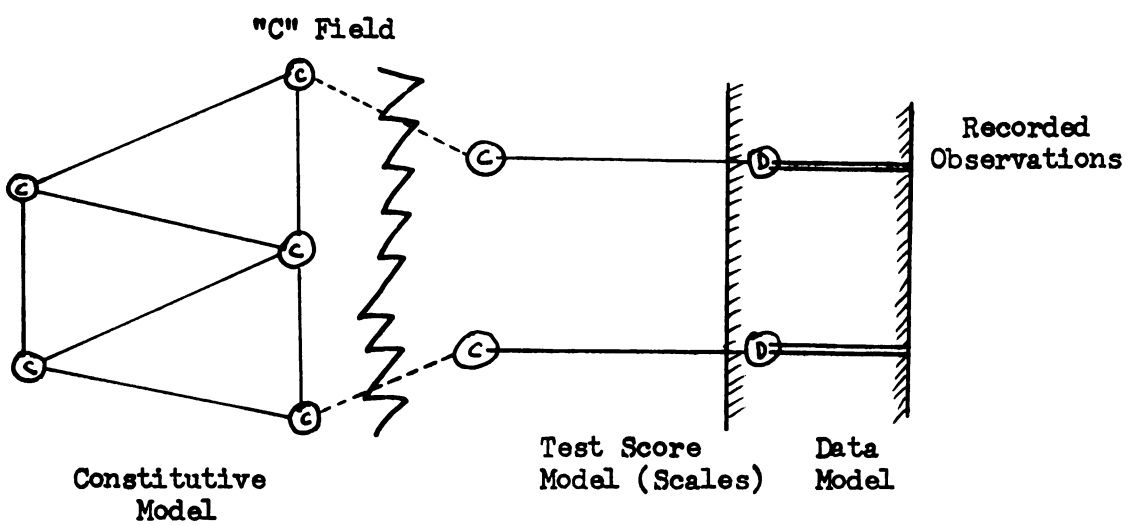

Figure 3.6. Coombs' Theory of Data Model as Part of a Well-Developed Science.[88]

[86] Ibid., 5.

[87] Cookingham, Loc. Cit., 5.

[88] Ibid.

The data model is linked to the test score model through logical statements. Coombs' theory of data explicates eight types of data models and discusses different types of test score models. However, it is not necessary to develop his thinking further, since only the ideas in relation to the nomological net will be used for purposes of evaluation. Basically, each theorist will be asked how close his concept of self-disclosure is to the P Plane and how well his construct connects with other constructs on the theoretical side of the nomological net. How tight is the logical network? How solid is its connection with other constructs? How separated is it from the observables of empirical data and the inferred constructs of the theoretical structure? Are there multiple or single connections? Is he working with a first, second, or third order construct? In short, how well developed is the construct? Do we need to stay closer to the P Plane until we can provide a tight formal net in the C Plane? Does the author need more lower order constructs or more higher order constructs which take on stronger explanatory power?

Various other components of self-disclosure will be examined, such as, does the author explain self-disclosure as a process or determinant. Is there an explanation of the process of self-disclosure. Does the author discuss the relationship between giving and receiving self-disclosure.

Summary

The purpose of the study is to focus on self-disclosure as a construct. A review of the notions of philosophy of science and theoretical psychology is necessary to gain an understanding of the nature

of a construct. The function of science is to develop theories, laws and concepts. A theory is a set of interrelated constructs and propositions that presents a systematic view of events by describing relations among variables, with the purpose of explaining and predicting events. Theories can have both inductive and deductive functions. The term model can be a synonym, or act as a "replica" of the actual situation.

Concepts represent particular sets of events that have been classified according to common characteristics. Constructs are special kinds of concepts that reflect relationships among events. They have great summarizing and generalizing ability. Some constructs are more easily quantified than others.

Constructs can be merely descriptive (operational) or more pervasively explanatory (not necessarily directly observable). MacCorquodale and Meehl indicate that some inferred concepts can have more surplus meaning than others. They propose that we refer to the surplus meaning constructs as hypothetical constructs, and that we restrict the usage of the term intervening variable for those terms which lie closer to the observable data. Both of these inferred constructs lie between the S and the R (i.e., within O) in the S-O-R experimental paradigm. Rozeboom refers to these two variables as mediation variables and makes a distinction between the two based on reduction of the variable to its antecedents.

Finally, each theorist's concept of self-disclosure will be analyzed according to Feigl's concept of the nomological net and Margenau's thinking regarding the C Plane and the P Plane. Margenau talks about the empirical component that science deals with as the P

or perceptual plane, and the theoretical component as the C Plane. It is possible to extend the theoretical component to include a data model and a test score model.

CHAPTER IV

ANALYSIS OF THEORISTS

One of the main purposes of this study is to investigate the component dimensions of self-disclosure as a construct. To gain an understanding of the nature of self-disclosure and its related constructs, it is necessary to examine the conceptualizations of theorists who are writing in this area. Three contemporary authors are most representative of writers concerned with self-disclosure: Sidney M. Jourard, O. Hobart Mowrer, and Carl R. Rogers.

Rationale for Inclusion of Theorists

Jourard was selected because he developed in 1958 the first limited tentative theory of self-disclosure and the first research instrument on the subject. Two-thirds of the studies conducted on self-disclosure have used his theory and instrument. Mowrer was selected because of his prominence as a theorist in the field of personality and counseling theory, and because his strong emphasis on the need for confession to significant others seems to be directly related to the self-disclosure process proposed by Jourard. Both Jourard and Mowrer feel self-disclosure is crucial for the promotion of therapy and mental health. Because the aim of this study is to delineate as many of the constructs and variables relating to self-disclosure as possible, it is necessary to investigate Mowrer's

ideas so that additional constructs may be available for the construction of the proposed self-disclosure model.

In 1957 Carl Rogers proposed the necessary and sufficient conditions of the therapeutic relationship. Since then there has been extensive research on the terms "empathy," "congruence," "experiencing," and "self-exploration" or "transparency." Because Rogers and his associates sometimes use the terms congruence, self-exploration, transparency, and self-disclosure interchangeably, it is necessary to examine the meaning and empirical support of these and related constructs. Rogers has been selected, then, because of the importance of his specific ideas relating to self-disclosure and his research activity.

Analysis and Evaluation of Sidney M. Jourard

Sidney M. Jourard is Professor of Psychology at the University of Florida. A graduate of the University of Toronto, he received his Ph.D. from the University of Buffalo. Prior to joining the University of Florida faculty in 1958, he taught at Emory University and the University of Alabama Medical College. He also has had an active, part-time private practice in psychotherapy since 1950. Professor Jourard has presented a paper at a major psychological convention every year since 1951, and has contributed to several books and published articles in many professional journals. He is the author of Personal Adjustment: An Approach Through the Study of Healthy Personality, The Transparent Self, and Disclosing Man to Himself. Jourard has also been the supervisor of a large number of doctoral dissertations relating to the concept of self-disclosure.

Jourard does not present one comprehensive or systematic view of self-disclosure in his writings. His earliest book, Personal Adjustment, focuses on the concept of the healthy individual and only mentions self-disclosure three times. The Transparent Self (1964), dealing with self-disclosure and well-being, is a potpourri of essays and speeches that deal with different aspects of self-disclosure. But The Transparent Self does not present a logical or definitive statement regarding the content, process, or dimensions of self-disclosure. Jourard's latest book, Disclosing Man to Himself (1968), develops further his "humanistic" approach to psychology by calling upon (teachers, researchers, counselors) psychologists to disclose themselves to men, and man to himself, rather than to one's colleagues alone, or to institutional agents. He suggests that counselors and researchers condition the amount of self-disclosure they get from clients or subjects by being objective (non self-disclosing) in their approach. Psychologists should more actively share with subjects the findings of their research and analysis.

Theory of the Healthy Personality

Jourard's concept of self-disclosure is developed in the context of a discussion of the nature of a healthy personality.

Real-Self-Being: The Honest Disclosure of Self

An individual's self-structure influences his personal experiences and his behavior. The self-structure consists of a set of beliefs, attitudes, and ideals constructed by a person in reference to his experience and behavior. The stronger the ego the more congruent his self-structure will be with his real self. Jourard states that the "real self is defined as the process or flow of

spontaneous inner experience. When the self-structure is not congruent with the real self, the individual is said to be self-alienated, showing symptoms of being driven by pride, conscience, external authority, the wishes of others, or by his impulses."[1]

The healthy personality is not self-alienated, but displays responsible real-self-direction of his behavior. Real-self-being is manifested by authentic self-disclosure to others.[2] Individuals have the capacity to fake, to conceal, to seem to be what they are not, and they also have the ability to reveal their true feelings and thoughts about themselves. When a person lets others know what he genuinely feels and thinks, and he answers their questions about him truthfully and without reserve, he is said to be engaged in real-self-being.[3]

Jourard says that the "relationship between self-disclosure and mental health is curvilinear, too much or too little self-disclosure betokens disturbance in self and in interpersonal relationships, while some as yet undetermined amount under specified conditions is synonymous with mental health."[4] Self-disclosure, then, is the obverse of repression and self-alienation. The man who is alienated from others is alienated from himself.

Self-Disclosure and Roles Social systems require members to play certain roles. Unless the roles are adequately performed, the social

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[1] S. M. Jourard, Personal Adjustment (New York: MacMillan Co., 1964), 185.

[2] Ibid., 160.

[3] Ibid., 161.

[4] S. M. Jourard, The Transparent Self (Princeton, New Jersey: D. Van Nostrand, 1964), 19.

systems will not produce the results for which they have been organized. Healthy individuals play roles satisfactorily and derive personal satisfaction from role enactment. They are able to grow and function at a high level. Unhealthy individuals never are able to enact the roles that legitimately can be expected from them.[5] They can be involved in a social group for years, yet never get to know the persons who are playing the other roles. Roles can be played personally and impersonally. A husband can be married to his wife for fifteen years and never come to know her.[6] To know an individual means to possess new knowledge regarding "the person's subjective side--what he thinks, feels, believes, wants, worries about--the kind of thing which one could never know unless one were told. We get to know the other person's self when he discloses it to us."[7]

What is the connection between self-disclosure and healthy personality? Jourard says that "self-disclosure, or should I say 'real' self-disclosure, is both a symptom of personality health and at the same time a means of ultimately achieving healthy personality. When I say that self-disclosure is a symptom of personality health, what I mean really is that a person who displays many of the other characteristics that betoken healthy personality will also display the ability to make himself fully known to at least one other significant human being."[8] Jourard concludes by stating that "we may find that those

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[6]S. M. Jourard, The Transparent Self, 23.

[7]Ibid., 24.

[8]Ibid., 24-25.

who become sick most frequently--physically and mentally--have long been downright liars to others and to themselves."[9]

If self-disclosure is one of the means by which healthy personality is both achieved and maintained, then, says Jourard, "such activities as loving, psychotherapy, counseling, teaching, and nursing, all are impossible of achievement without the disclosure of the client."[10] It is through self-disclosure that an individual reveals to himself and to the other party just exactly who, what, and where he is. Obviously, such openness or transparency entails courage and exposes an individual to real danger, because to be that open with others means to be without defenses. But, says Jourard, people are more likely to be overly cautious than they are to be excessively honest, "with the result that they are relatively safe, but lonely and misunderstood by others."[11]

Growth and the "Spirit" Healthy personality is growing personality. "It is a way for a person to function in his world, a way that yields growth without placing other important values in jeopardy," says Jourard.[12] Individuals commit themselves to a repertoire of values, they live for them. The healthy personality fulfills them and defends them. The growing individual dares to let himself be the one he is. Such a person has free access to a dimension of human being much neglected. He is able to experience himself more fully, spontaneously,

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[9] S. M. Jourard, Personality Adjustment, 354.

[10] S. M. Jourard, The Transparent Self, 28.

[11] S. M. Jourard, Personal Adjustment, 161.

[12] S. M. Jourard, Disclosing Man to Himself (Princeton, New Jersey: D. Van Nostrand), 1968), 45.

and creatively. He is in immediate contact with his feelings and real-self.

Even though scientists deal only with realities, Jourard includes the hypothetical term "spirit" into his vocabulary. The term "spirit" refers to the efficient level of functioning of the human organism. High level functioning (full of the "spirit") is like Maslow's peak experiences.[13] At higher levels of wellness says Jourard, "inspirations" appears to make it possible for a person to actualize all manner of potentialities for valued output.[14] The "spirited" individual is committed to life and to a goal. He is integrated and confident. He resists illness and disorganization. He recognizes his inner experience and the relationship between subjective states of meaning, hope, or purpose.[15]

Communication and Interpersonal Relationships

One of the criteria of the healthy personality is the ability to communicate effectively. Effective communication entails the ability to transmit intelligible messages and the ability to understand messages which have been sent by another. Mutual understanding and knowledge exists. The transmission of personal messages is another term for self-disclosure. Honest self-disclosure between persons, says Jourard, is the most direct means by which an individual comes to know

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[13]A. H. Maslow, Toward a Psychology of Being (Princeton: Van Nostrand, 1961).

[14]S. M. Jourard, The Transparent Self, 87.

[15]Ibid., 106

others as distinct persons.[16] Yet, honest self-disclosure inevitably will produce impasses in relationships. It is in the resolution of these impasses which inevitably arise in personal relationships that growth can be fostered. It is necessary for an individual to recognize and accept conflict as a condition for its resolution.

Thus full self-disclosure between participants in an interpersonal relationship promotes growth by creating impasses and conflicts in the relationship. It is in the resolution of the impasses that growth of personality occurs. But without the communication, there would never be sharply defined impasses.[17]

Jourard, in his latest writing states that a humanistic psychologist is concerned to identify factors that affect man's experience and action, but not to render the man predictable to, and controllable by, somebody else. Rather, his aim is to understand how determining variables function in order that a man might be liberated from their impact as he pursues his own free projects. In other words, scientific data belongs to the subject, not to the researcher. Under our present system we do not have a mutually revealing relationship between experimenter and subject. Effective communication between human beings requires mutual trust and knowledge.[18]

Psychotherapy and Self-Disclosure

Jourard says that "psychotherapy is not so much a science or

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[16] S. M. Jourard, Personal Adjustment, 341.

[17] Ibid., 346-347.

[18] S. M. Jourard, Disclosing Man to Himself, 18.

technique as it is a way of being with another person."[19] There are many reasons to be with a client and many ways to be with him. The therapeutic way is "the embodiment of an intention--the wish that the one who is Other for the therapist should experience his freedom, should be and become himself"[20] The therapist's commitment to the value of the client's freedom, growth, and wholeness exceeds his loyalty to some theory or technique. Effective therapists invite sufferers to change their previous ways of being. Valued change in clients is fostered when the therapist is a free individual functioning as a person with all his feelings and fantasies as well as his wits.[21]

Given therapy as invitation to be free, human, creative, spontaneous, what seems called for in most training programs for therapists, is encouragement and direction in modes of transcending or abandoning self-conscious or automatized technique in relating to clients.[22] The therapist needs to learn to possess (1) faith in the client's capacity for transcendence, (2) capacity for commitment to fostering growth and change, and (3) capacity to enter into dialogue (I-thou relationship) with clients.[23]

Instrumental Theory and Research Conditions

Jourard's Self-Disclosure Questionnaire purports to measure

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[19] S. M. Jourard, Disclosing Man to Himself, 57.

[20] Ibid.

[21] S. M. Jourard, The Transparent Self, 63.

[22] Ibid., 74.

[23] S. M. Jourard, Disclosing Man to Himself, 58-62.

the amount and content of self-disclosure to selected "target-persons." The idea of the questionnaire started when Jourard was considering his "real self" concept in terms of filling out a personal data sheet used as an application form when applying for a job. Some application forms, labeled "confidential," ask for amazingly detailed data about oneself. Jourard started by itemizing classes of information about oneself which could only be known by another person through direct verbal telling. He constructed a sixty-item questionnaire listing ten items of information in each of six categories, which Jourard called "aspects of self." The answer sheet contained rows of items and columns headed by Target-Persons. Jourard arbitrarily selected Mother, Father, Male friend, and Female friend and/or Spouse as Target-Persons. Subjects were asked to indicate to what extent they had made information (items) known to each Target-Person.

Thus, the theory of self-disclosure supporting the questionnaire measure suggests that self-disclosure basically involves three variables, the (1) degree to which an individual verbally expresses, (2) certain content areas (topics), to (3) certain select persons (targets). The review of Jourard's research literature (see Chapter Two) reveals other conditions influencing the giving of self-disclosure. The degree, content and target of self-disclosure is influenced by: (1) the sex, self-esteem, marital status, nationality, social perception, religious orientation of the discloser, (2) the amount of like or trust for and knowledge about the target-persons, (3) the amount the target-person discloses to the discloser and, (4) group-cohesiveness and modeling behavior by trainer (or leader).

Critique and Analysis of Jourard

Theory Jourard has been the first theorist to present even a tentative theory of self-disclosure. The structure of his theory is loose and informal, and difficult to conceptualize. One reason for Jourard's lack of integration is that he does not set forth his constructs in any logical or consistent order in one location. Jourard's main work on the subject of self-disclosure, The Transparent Self, is a series of unrelated essays and talks that cover various aspects of topic. But, scientifically, the reader is unable to focus on a set of formal propositions that consist of specifically defined and interrelated constructs, or statements regarding the relationship among the constructs that will enable the reader to explain or predict outcomes. Thus, according to the formal criteria for theory development and a well-developed science, Jourard presents only a set of loosely related hypothetical hypotheses that need not only empirical verification, but definitive rules of correspondence and tight constitutive definitions.

Mediational Variables Jourard has been the first theorist to offer a definition and system of measure of self-disclosure. Even though his definition of self-disclosure may be too comprehensive and crudely operational, it is a good beginning toward developing a science of self-disclosure. Self-disclosure is defined by topics and targets. The suggestion is made that the construct may have the possibility of becoming an intervening variable, because, in some cases antecedents can be specified and gross numerical counts are available. However, since the Jourard measure's validity is still questioned by some and the exact dimensions of the construct are not specified by Jourard,

self-disclosure as a concept of science remains a hypothetical construct containing a great deal of surpress meaning, but lacking reliable empirical support. Such concepts as "real-self being," "spirit," and "healthy personality" are clearly hypothetical constructs.

Jourard, through his research instrument and activity, has contributed a great deal to our understanding of the conditions surrounding the process of self-disclosure, especially in the area of demographic variables. Experimentally, more research is needed on self-disclosure as an independent variable operating in various settings influencing various dependent variables.

Jourard's contribution to the science of self-disclosure includes the offering of a broad generic working definition of the construct which serves as a solid starting point for heuristic activity. The development, construction, and testing of the first rough research instrument which has been the impetus for a great deal of further theoretical and empirical investigation in the field is another major contribution.

Nomological Net Within Figure 4.1 a proposed conceptualization of Jourard's system of constructs is summarized. Self-disclosure is not as close to the "P" plane as it could be, and it does not connect tightly with other constructs on the theoretical side of the net. There are a number of multiple connections, but it is still a second order construct. In short, the whole network could be tighter and closer to the "P" plane. It is also apparent that more higher order constructs are needed to give self-disclosure more explanatory power. Perhaps the factor analysis will provide such needed constructs.

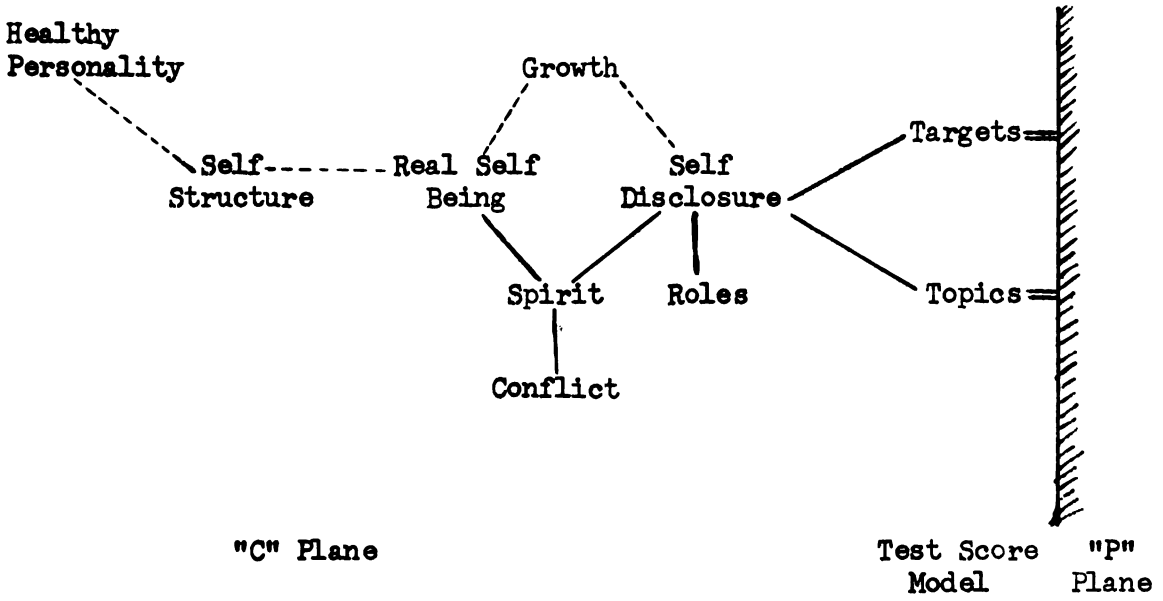

Figure 4.1. A Conceptualization of Jourard's System of Theoretical Constructs.

Analysis and Evaluation of O. Hobart Mowrer

Introduction

Orval Hobart Mowrer was born on January 23, 1907 in Unionville, Missouri. He received his A.B. from the University of Missouri in 1929 and his Ph.D. from Johns Hopkins University in 1932. Mowrer was a National Research Fellow at both Northwestern (1932-1933) and Princeton (1933-1934). He spent the years from 1934 to 1940 at Yale as a Sterling Fellow (1934-1936) and as an instructor in psychology and a member of the staff at the Institute of Human Relations (1936-1940). From 1940 to 1948 he was assistant professor, then associate professor of education at Harvard. Since leaving Harvard in 1948 he has been research professor at the University of Illinois.

Mowrer's early research and theory focused on a two-factor

learning theory with Freudian and cultural overtones. The central theme is on solution learning and sign learning, and the revising of his two-factor learning to include the organismic states of hope and fear within the individual in an expansion of the Thorndikian habit position. While solution and sign learning are basically different from each other, they are both involved in the human being.

However, it is Mowrer's most recent thinking regarding the theory and cure of neurosis (Integrity Therapy) that relates to the concept of self-disclosure. Mowrer has been reluctant to restate the tenets of Integrity Therapy in the language of his earlier learning theory because his two-factor learning theory originally had been cast in a psychoanalytic framework which Mowrer now rejects. Recently he attempted translation of such terms as "modeling," "imitation," and "punishment-avoidance strategies" into Integrity Therapy theory.[24,25]

Because Mowrer's theory suffers from a lack of philosophical cohesion and scientific research testing, it has been criticized as less theory than speculation. Even though he is beginning to accumulate clinical research from a variety of sources to support his theory of neurosis,[26] he does not present empirical evidence for his cure of

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[24] O. H. Mowrer, "The Behavioral Therapies, with Special Reference to Modeling and Imitation," American Journal of Psychotherapy, XV (1966), 439-461.

[25] O. H. Mowrer, "Psychoneurotic Defenses (Including Deception) As Punishment-Avoidance Strategies" (unpublished manuscript, August 1967).

[26] Cf. O. H. Mowrer, New Evidence Concerning the Nature of Psychopathology (unpublished resume of research, February, 1968; to be published in Studies in Psychotherapy and Behavior Change, Marvin J. Feldman, ed.)

neurosis which involves use of his two techniques, (1) confession and (2) restitution. Furthermore, Mowrer's assaults on cherished therapeutic theories, traditions, and institutions, coupled with his use of theological language to define psychological concepts, has aroused suspicion and rejection. As Perry London says:

> This suggests an extension of Newton's Third Law to human behavior, in which one useful index of the seminal quality of a new theory would be the extent to which it is publicly reviled. If so, then the theory of the origin and treatment of neurosis put forth by O. H. Mowrer may deserve more serious attention than any such theory since Sigmund Freud's psychoanalysis, for in the two generations that lie between them, no other mental health theorist has been subjected to such voluble and viturperative criticism.[27]

Theory of Neurosis: Identity Crisis, or Loss of Community

Mowrer's theory of neurosis is quite simple. He proposes that mental disorder relates to chronic subjective distress (including anxiety, depression, delusions, hallucinations) which results from an objective breakdown in an individual's relationship with "significant others." Mowrer borrowed the concept "significant others" from George Herbert Mead, and uses it to mean either specific individuals, such as mother, father, spouse, and employer, or abstractions that embody the idea of relationships, such as "Society," "Community," or "God."

The Genesis of Neurosis Mowrer states that mental breakdowns occur only in individuals who have made a sufficiently great emotional investment in their relationship to others.[28] When the relationships are

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[27]Perry London, The Modes and Morals of Psychotherapy (New York: Holt, Rinehart and Winston, Inc., 1967), 134.

[28]O. H. Mowrer, The New Group Therapy (Princeton: D. Van Nostrand, 1964), 28.

violated, individuals will suffer subjective distress because of the individual's capacity of "conscience."[29] Psychopaths and some other socially disordered groups are outside of the Mowrer theory of neurosis because they have not been sufficiently well socialized for the experience of guilt to be of influence on their behavior. Thus, as London notes, Mowrer's theory applies to learned functional disorders but not to persons whose environment lacks close relations with important others.[30]

Process of Neurosis An individual experiences a mental breakdown as a result of a sequence of specific behaviors he performs. Thus, the disorder is both self-initiated and actively maintained through a series of overt behaviors that culminate in feelings and symptoms that are labeled pathological.[31] The process operates as follows:

(a) The individual makes positive drive-reducing responses to impulses in a context where he has previously learned, through socialization training, to inhibit those impulses. This behavior becomes "ab-normal" behavior, which is defined as "deviation from the established norms of the individual's reference group(s)."[32] Mowrer hyphenates

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[29] O. H. Mowrer, The Crisis in Psychiatry and Religion (Princeton: D. Van Nostrand, 1961), 17ff. "Changing Conceptions of the Unconscious."

[30] Perry London, The Modes and Morals of Psychotherapy, 136.

[31] O. H. Mowrer, "The Behavioral Therapies, with Special Reference to Modeling and Imitations," American Journal of Psychotherapy, XX (1966), 439-461.

[32] Ibid., 448.

"ab-normal" to differentiate it from abnormality in the commonly held sense of disease and to indicate that the neurotic misbehavior is ab-normal, not the emotions arising from that misbehavior. In fact, says Mowrer, "given a knowledge of the individual's total life situation, these emotions, however turbulent or painful, are seen as essentially reasonable, normal, and if responded to in the right way, potentially helpful."[33]

(b) The breach of sociality created by the misbehavior stimulates anxiety. The absence of punishment in socialization also stimulates anxiety, and conflict is induced by the fear of negative results that revelation of the misbehavior might engender. Any form of punishment may be feared, but the most significant is loss of social esteem.[34]

(c) The individual enhances his conflict, by maintaining secrecy, which is reinforced still further by the continued operation of inhibited impulses whose expression got him in trouble in the beginning. According to Mowrer, the ego is captured by the id, not by the superego.[35]

(d) Trapped between this revulsion over his misbehavior, on the one hand, and his reluctance to pay for it or be done with it (fear of exposure), on the other, the individual

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[33]O. H. Mowrer, "The Behavioral Therapies, with Special Reference to Modeling and Imitations," American Journal of Psychotherapy, XX (1966), 449.

[34]O. H. Mowrer, The New Group Therapy, 72f.

[35]Ibid., 185.

"comes into a state of chronic insecurity."[36] In the end the individual may become overwhelmed by the intensity of the conflict and break down.

(e) Neurotic breakdowns are symptomatized by guilt, anxiety, and depression. The most significant symptom is guilt. Mowrer defines these symptoms as the "individual's own attempt at self-cure."[37] He states that most therapists and clients assume that the basic problem is wrong emotions or bad "nerves," whereas, in fact, the client's emotions are quite normal. It is the client's conduct which is "ab-normal."[38]

The above constitutes Mowrer's theory of neurosis, which he prefers to call "identity crisis or "sociosis."[39] The sequence involves: misbehavior, concealment of deviancy, conflict, breakdown, and symptoms.

Theory of Cure: Confession and Restitution, or Recovery of Community

If "identity crisis" occurs as a result of the disordering of one's relationships with significant others, it is reasonable to assume that cures may result from the reordering of those relationships. Mowrer proposes that cure may be facilitated by the use of four techniques that reverse the behavioral process that leads to breakdown.

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[36] O. H. Mowrer, "The Behavioral Therapies, with Special Reference to Modeling and Imitations," American Journal of Psychotherapy, XX (1966), 448.

[37] Ibid., 450.

[38] Ibid.

[39] Ibid., 449, 456.

They may be called: modeling, confession, recovery of community, and restitution.

(a) Modeling. Clients learn best when they see an example or model of appropriate behavior, as shown by Bandura.[40] Consequently, the therapist discloses himself to the patient and expects the patient to open himself up, and teaches the client to acknowledge his overt misbehavior, reveal his secrets, and take personal responsibility for his guilt.[41]

(b) Confession. If one part of the conflict leading to breakdown is enhanced by secrecy, then making public one's secrets will start to reduce the conflict. Hiding misbehavior and publicizing good works results in a loss of psychic energy and weakening of character. Now, hiding good works and publicizing perversions, crimes, "sins," or weaknesses to a small group of significant others strengthens character. Publication of secrets acts as a check against the force of troublesome impulse instead of increasing them. This tends to relieve the contribution of the impulses to the conflict. It is unnecessary, however, to

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[40]A. Bandura, "Behavior Modification through Modeling Procedures," Research in Behavior Modification, ed. L. Krasner and L. P. Ullmann (New York: Holt, Rinehart and Winston, 1965).

[41]O. H. Mowrer, "The Behavioral Therapies, with Special Reference to Modeling and Imitation," American Journal of Psychotherapy, XX (1966), 451; and in O. H. Mowrer, "Loss and Recovery of Community: A Guide to the Theory and Practice of Integrity Therapy" (unpublished manuscript, to be published in Theories and Methods of Group Psychotherapy and Counseling, G. M. Gazda ed.), (Springfield, Ill: C. J. Thomas, 1968), 38.

reveal one's whole self to the world. In this context, Mowrer does not necessarily wish to strengthen or increase the strictness of the conscience, rather, what he wants to say is that "perhaps the neurotic's great need was to have his conscience released."[42]

(c) Recovery of Community. As soon as possible the client's referent group is enlarged to include others with whom he can share his true self.[43] The group might be a therapy group with clients, which may be expanded to include significant others. Perhaps the entire family and others in the community would be involved.[44] Thus, the client becomes re-integrated with his total social community which gives him his identity as an individual.

(d) Restitution. However valuable sharing secrets publicly may be in reducing conflict, its curative role is minimal since it was the violation of sociality that produced conflict in the first place. Confession does not change the social consequences of the original misbehavior. Cure occurs only when the individual, relieved of conflict by confession, recognizes the source of his trouble in his avert actions and recommits himself to society by paying for his acts or compensating for his behavior with new

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[42] O. H. Mowrer, The Crisis in Psychiatry and Religion, 27.

[43] O. H. Mowrer, "Loss and Recovery of Community: A Guide to the Theory and Practice of Integrity Therapy," 14.

[44] O. H. Mowrer, The New Group Therapy, 82.

> avert behaviors which facilitate sociality instead of violating it. The individual is encouraged to make restitution (or payment) on the order of the Roman Catholic doctrine of penance.[45] The individual must endeavor to reconcile himself to those against whom he has transgressed. For the positive commitment to be curative and self-reinforcing it must be continuous process rather than an isolated fact or fixed state.[46]

Unique Aspects of Mowrer's Theory

Mowrer's theory of neurosis is similar to the classical drive-reduction theory of adjustment. But London finds "three critical points at which it differs in content from other theories of breakdown, whether reinforcement theories or associationist theories, and whether oriented towards insight or action."[47]

First, Mowrer states that once the primary drives are minimally satisfied, the secondary drives achieve more functional significance, especially where they are crucial to human relationships. In some cases the individual totally suppresses his primary drives which usually have priority over secondary drives in order to satisfy the secondary even though he knows that death might result from such suppression.[48]

Secondly, while other theorists emphasize purely mental phenomena

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[45] O. H. Mowrer, The New Group Therapy, 97.

[46] P. London, The Modes and Morals of Psychotherapy, 140.

[47] Ibid., 137.

[48] Ibid., 138.

as the major sources of conflict, Mowrer proposes that a person's overt misconduct is usually the real source. The covering of his cheating behavior by deception produces a deep sense of guilt and erodes his character. If guilt is present in awareness, it is always founded on some past action.[49] Therapists should consider guilt feelings as valid and real. Guilt must be dealt with seriously.

Thirdly, although Mowrer accepts the existence of ego defenses, he not only maintains that therapy research has failed to show that repression is central to neurotic development, but that recent research has firmly established the centrality of suppression.[50] Tracing the effects of guilt in neurosis and psychosis,[51] Mowrer concludes that both the problems develop as the Id captures the Ego, forcing suppression of the Superego. Anxiety arises because of the "unheeded railings and anger of conscience."[52]

A fourth difference is Mowrer's own thesis that psychopathology is the product of undersocialization whereas Freud conceived of psychopathology as the result of too intensive, overextended socialization in combination with a powerful Superego.[53]

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[49] P. London, The Modes and Morals of Psychotherapy, 138.

[50] O. H. Mowrer, The New Group Therapy, 184f, 188f, 225f.

[51] O. H. Mowrer, "Abnormal Reaction or Actions?" Introduction to General Psychology: A Self-Selection Textbook, ed. J. Vernon (Dubuque, Iowa: Wm. C. Brown, 1966), 13-23.

[52] Ibid., 31.

[53] Ibid., 30-32.

Critique and Analysis of Mowrer

Critique Mowrer's theory is an ego psychology in which self-esteem is the critical factor in establishing mental health. Self-esteem is a function of one's reputation. But reputation seems more influenced by personal behavior and morality than by social consensus. Mowrer rejects Roger's inherent goodness of man and the Freudian view of the innate corruption of man.

Mowrer's techniques for cure are directed toward relating the individual's behavior to society. But society is partly a symbolic term referring to a hypothetical normative moral order. His theory of neurosis is discussed in terms of "guilt" rather than "anxiety." Mowrer proposes that man is biologically constituted as a social animal. Man has never lived outside of organized groups, he never can, and never should. To be human, man must disclose himself to others, his misdeeds and his feelings. (Although all of Mowrer's writing focuses on confession of misdeeds, he also recognizes the need for the confession of emotions.[54])

Theory Mowrer's theory of disorder and treatment does not receive systematic treatment in his writings. His two major expositions, The New Group Therapy and The Crises in Psychiatry and Religion, contain a potpourri of essays that suffer from two major faults. First, his

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[54]O. H. Mowrer, Personal Communication, April 2, 1968: ". . . recently I have begun to explore the concept of emotional as opposed to behavioral honesty. Sometimes it proves more difficult to say how we are feeling than to report, specifically, on how poorly we have been behaving. To admit that one is murderously angry toward another person may seem far more dangerous and thus require more courage to do than is the confession of specific sins one has oneself committed."

collections of essays lack a logical, step-by-step presentation of basic arguments. To capture the essence of his thought one must read the entire collection of manuscripts to integrate the separate and repetitious thoughts presented. Second, Mowrer's conventional theological language (which by its very nature is non-operational) used to describe psychological concepts causes semantic confusion. Furthermore, his language often arouses antipathy in those attempting to verify procedures and compare treatment modalities.

Thus, according to the criteria for a theory established in Chapter Three, Mowrer's conceptualizations of self-disclosure tend to be weak in three aspects: (1) to present a logical set of propositions consisting of interrelated constructs, (2) to list the statements regarding the interrelations among the constructs, and (3) to explain the nature of the phenomena under consideration (define his terms operationally). However, one cannot be too hard on Mowrer because most theories of personality, and all known theories of self-disclosure, fall short of stringent tests.

Mowrer's failure to establish a theory of self-disclosure may be caused by the absence of an integrated philosophical base. This is similar to the situation in empirical research of generating hypotheses without theory. Mowrer's present theory is the result of his personal experiences with neurosis and psychosis, his readings in literature and his earlier experiments in psychology. Even though Mowrer's theory of self-disclosure lacks some structure and predictability, it has certain explanatory use which is of value in theory building and testing.

Variables and Constructs Mowrer's mediational variables can be described as highly hypothetical in nature according to both the quantification and antecedent criteria. For example, "society" or "community" refers to a hypothetical normative moral order. "Guilt" is a form of "fear." "Misbehavior" is defined as violation of the norms of society or the values of significant others. These terms are highly speculative and abstract.

Mowrer offers no empirical verification for the self-disclosure construct. It may well be that his terms are so vague and undefined that in the present stage the theory is not susceptible to empirical investigation. Confession involves statements about misdeeds. What is "misbehavior" operationally? How shall it be counted? At the present time the theory has little heuristic appeal because of its lack of logical cogency and because of vague non-operational definitions.

Since the term "confession" seems related to the concept of self-disclosure it is necessary to consider its content and process. The content of confession includes verbal statements concerning past "misbehavior" that has injured a "significant other." But Mowrer does not state whether the "misbehavior" is a function of the perception of the wronged or of the perpetrator. "Misbehavior" according to what criteria? Who decides the deed is "bad"? Is the feeling behind the "misbehavior" also disclosed? Why is it that a model can facilitate the disclosure? What are the steps in the process of disclosure? These variables remain unexplained in the theory.

Nomological Net Mowrer uses about eleven constructs to explain his theory of neurosis and cure. Within Figure 4.2 Mowrer's concepts

community (society), conscience, guilt, conflict, misbehavior, confession, restitution, modeling, significant others, Id, Ego, and Superego are plotted.

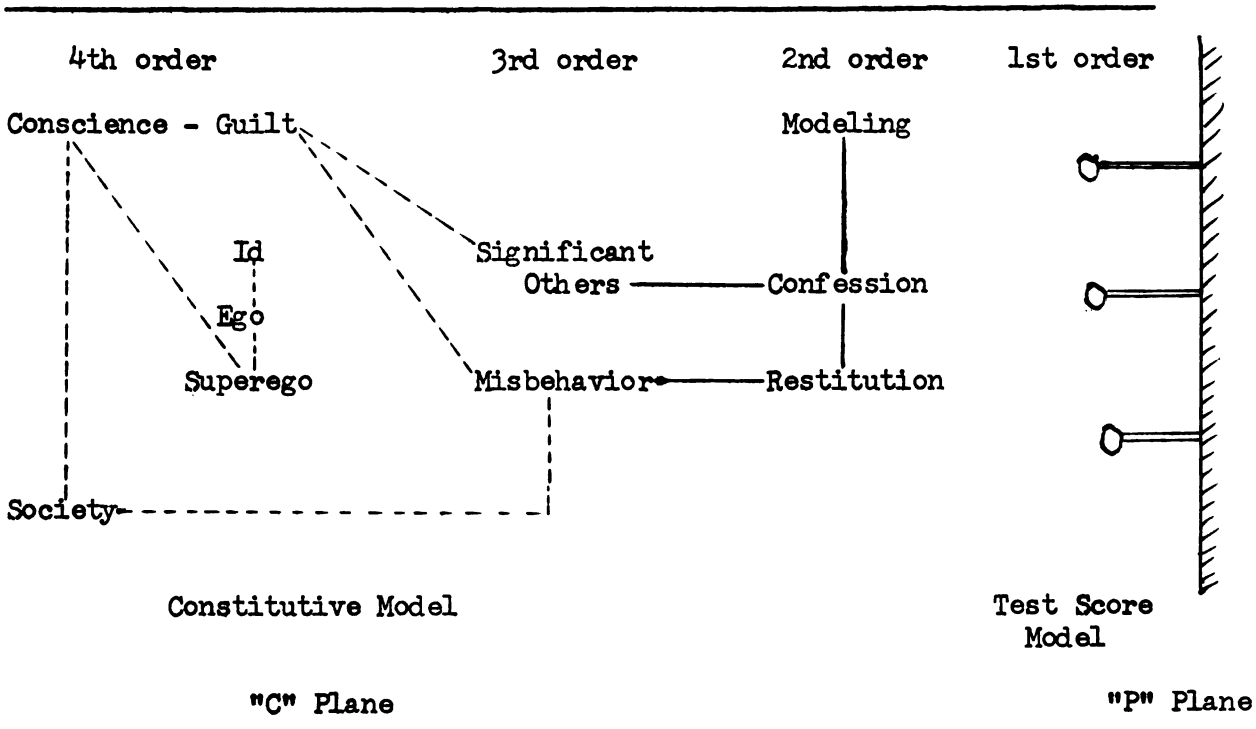

Figure 4.2. Proposed Nomological Net of Mowrer's Integrity Therapy Theory.

No term is operationally defined. Two terms, conscience and "society," are highly hypothetical. The constitutive model is not related by definition to the test score model.

For Mowrer, then, self-disclosure involves verbal statements regarding emotional honesty and confession of past misdeeds, and behavioral actions that restore one's feeling of integrity and interpersonal relations.

Analysis and Evaluation of Carl R. Rogers

The third and last author to be examined will be Carl R. Rogers. He and his associates have had extensive influence on the fields of personality theory, therapy, and therapy research. Although Rogers does not use the specific term "self-disclosure," several of his ideas seem closely related to the investigation of self-disclosure as a construct. These ideas will help us understand some of the dimensions of the concept.

Carl Ransom Rogers was born in Oak Park, Illinois, on January 8, 1902. He graduated from the University of Wisconsin in 1924 majoring in history. Rogers attended Union Theological Seminary in New York City from 1924 to 1926 and transferred to Columbia University in 1928, where he received his M.A. degree. At Columbia, Rogers studied with W. H. Kilpatrick and L. Hollingworth. He was awarded the Ph.D. degree in educational and clinical psychology at Columbia in 1931. During the years 1930 to 1938 he served as director of Rochester, New York's, Society for the Prevention of Cruelty to Children's Child Study Department. Moving to Ohio State University in 1940, Rogers became Professor of Clinical Psychology in 1945. He then became a Professor of Psychology at the University of Chicago and established Chicago's Counseling Center. In 1957 he moved to the University of Wisconsin.

He served as President of the American Psychological Association, 1946-1947, and several other professional organizations. In 1963, Rogers joined the Western Behavioral Sciences Institute at La Jolla, California.

Delimitations

Carl Rogers is a prolific writer. Many of his ideas and research findings will not be covered in this analysis. An attempt will be made to summarize briefly the context of his personality theory and his theory of neurosis and treatment. Primary emphasis will be placed on the conditions necessary to effect personality change in therapy. No coverage is made of Rogers' research in education, pastoral psychology, industry, or training of therapists. Only those concepts considered directly relevant to self-disclosure will be reviewed.

Context of Theory: The Phenomenal Field

Rogers' personality theory and client-centered psychotherapy is based on a phenomenological view of human learning and behavior (especially Goldstein, Snygg and Combs, Maslow, Angyal, Lecky).[55] According to this view, each individual exists in a phenomenal field, which is a way of defining events or phenomena as they uniquely appear to him. The individual's behavior is determined by his field, and prediction of his behavior in various situations demands knowledge of the individual's field. A person's phenomenal field is limited, but in constant flux according to the person's need. The phenomenal field includes the individual's physical self and his relationships with the cultural and physical worlds. The self-concept, which is the key to Rogers' theory, is an organized configuration of perceptions of the self which are present in awareness. Rogers states that "the organism

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[55] C. R. Rogers, Client-Centered Therapy (Boston: Houghton Mifflin, 1951), 145-147.

reacts as an organized whole to the phenomenal field."[56] The individual has only one basic tendency and striving--"to actualize, maintain, and enhance the experiencing organism."[57]

Carl Rogers in the way he lives and writes about himself is his own best example of his theory of personality and the reason he is included in this analysis of self-disclosure. In the first chapter, "This Is Me," of his book On Becoming a Person, Rogers writes:

> In my relationships with persons I have found that it does not help, in the long run, to act as though I were something that I am not. . . . I find I am more effective when I can listen acceptantly to myself, and can be myself . . . the curious paradox is when I accept myself as I am, then I change. [Italics are Rogers] . . . I have found it enriching to open channels whereby others can communicate their feelings, their private perceptual worlds, to me.[58]

Probably the most conclusive comment that can be made about Rogers' theory of personality and therapy is that it is changing and incomplete.

Theory of Neurosis: Incongruence

Rogers states that values which become an integral part of the individual's phenomenal field may be derived from the direct experiences of life or it may be taken (introjected) from others. Values which are experienced or introjected from others may be distorted because

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[56] C. R. Rogers, Client-Centered Therapy, 146.

[57] Ibid., 489.

[58] Carl R. Rogers, On Becoming a Person (Boston: Houghton Mifflin, 1961), 16-27.

conditions of worth are placed on the values.[59] The distortion leads to confusion, unhappiness, and behavioral ineffectiveness. The individual is not aware of what he has experienced or introjected. The person does not "know himself," for his organism tells him one thing and his self-concept tells him another. The individual is "incongruent," anxious, and vulnerable.[60]

Theory of Therapy: Accurate Symbolization of Experience

Rogers' therapy is a process of reorganization and integration of the self-concept.[61] The new organization contains more accurate symbolization of a much wider range of the visceral and sensory experience of the organism. It consists of a reconceptualized system of values based on the individual's own past and present experiences and feelings. The process of reorganization made by the client comes about mainly because the individual experiences that old contradictory attitudes he held are not only accepted by the therapist, but new, painful and difficult patterns experienced and tested in therapy are accepted by the therapist as well. The client, then, learns to dismiss his old attitudes and values and introject the calm, warm, acceptance of the therapist. The individual is now able to handle the new and sometimes threatening perceptions of reality necessary for the reorganization.[62]

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[59] Carl Rogers, "A Theory of Therapy, Personality and Interpersonal Relationship, as Developed in the Client-Centered Framework," in S. Koch (ed.), Psychology: A Study of a Science, Vol. III (New York: McGraw-Hill, 1959), 224.

[60] Ibid., 226.

[61] Ibid., 230.

[62] Ibid., 213-217.

Experiencing and the "Core" Conditions

Growing out of client-centered therapy and especially its recent application with hospitalized schizophrenics[63] there is now emerging a mode of psychotherapy which centers on the "experiencing"[64,65] of the two persons in the therapeutic interaction (rather than on the discussed verbal contents) and on the psychological conditions that are necessary and sufficient to bring about constructive personality change.[66]

These two developments are directly related to Jourard's and Mowrer's ideas of self-disclosure and confession. There is a strong tendency to emphasize the interaction between therapist and client in therapy, to emphasize that two human beings are involved in the dialogue, and to focus on the concrete subjective feeling events occurring in these two individuals, rather than only on the verbal statements being communicated.

Experiencing Gendlin, in collaboration with Rogers, has extended Rogers' ideas regarding the meaning of organismic experience. Gendlin states that therapy involves what he terms "experiencing," "a somatic,

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[63] Carl R. Rogers (ed.), The Therapeutic Relationship and Its Impact: A Study of Psychotherapy with Schizophrenics (Madison: University of Wisconsin Press, 1967).

[64] E. T. Gendlin, "Subverbal Communication and Therapist Expressivity Trends in Client-Centered Therapy with Schizophrenics," Journal of Existential Psychiatry, IV (1963), 105-120.

[65] W. Kempler, "The Experiential Therapeutic Encounter," Psychotherapy: Theory, Research and Practice, IV (1967), 166-172.

[66] C. R. Rogers, "The Necessary and Sufficient Conditions of Therapeutic Personality Change," Journal of Consulting Psychology, XXI, (1957), 95-103.

inwardly felt process the manner and meanings of which are affected by the interaction."[67] Gendlin has given his attention to the theoretical problem of how inwardly felt bodily events can have "meaning," be "explored" and "symbolized," and how these concrete implicit "meanings" can be affected and changed by therapist-client interaction.[68] Gendlin suggests that now that therapy is widely thought to involve some kind of concrete inner feeling process, we are less specific about the role of cognitive symbols and exploration. Different therapeutic orientations use different symbolical (cognitive) vocabularies. Yet, Gendlin claims, their clients appear able to work with any vocabulary system. Personality difficulties, says Gendlin, lie mainly in the "preconceptual" meanings of experiencing, and they are amenable to change through use of any of the various therapeutic vocabularies.[69]

Gendlin has presented a theory of personality change[70] based on his continuing work on "experiencing," and has constructed and developed his own scale[71] for the rating of "experiencing." His "experiencing" scale is part of a series of process scales used for

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[67]E. T. Gendlin, "Experiencing: A Variable in the Process of Therapeutic Change," American Journal of Psychotherapy, XV (1961), 233-245.

[68]E. T. Gendlin, Experiencing and the Creation of Meaning (New York: The Free Press of Glencoe, 1962).

[69]E. T. Gendlin, "Subverbal Communication and Therapist Expressivity Trends in Client-Centered Therapy with Schizophrenics," 105.

[70]E. T. Gendlin, "A Theory of Personality Change," in P. Worchel and D. Byrne (eds.), Personality Change (New York: John Wiley and Sons, 1964), 100-148.

[71]See C. R. Rogers (ed.), The Therapeutic Relationship and Its Impact, 87-88; 587-592.

rating taped therapeutic interviews developed by Rogers and his associates for research with schizophrenics. Gendlin's theory of personality change based on the "experiencing" concept provides a frame of reference in which old theoretical considerations are viewed in a new way. His theory contains twenty-six new terms which he carefully defines. He also offers specific comments on each term and a chain of theoretical hypotheses. Gendlin's "experiencing" scale is based upon many of the ideas developed in his tentative theory of "experiencing."

"Core" Conditions More recently research and theoretic emphases have been focused upon the behavior and function of the therapist in the therapeutic encounter. Rogers[72] has postulated that therapeutic personality change can be and will be effected when the following six conditions are fulfilled:

(a) There is psychological contact between therapist and client.

(b) A state of "incongruence" exists in the client.

(c) The therapist is in a state of "congruence."

(d) The therapist must experience unconditional positive regard for the client.

(e) The therapist must experience an empathic understanding of the client.

(f) The client must perceive the therapist's positive regard and empathetic understanding.

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[72] C. R. Rogers, "The Necessary and Sufficient Conditions of Therapeutic Personality Change," 95-103.

Rogers in collaboration with Gendlin, Kiesler and Truax, has completed a large research study on the three core qualities of the psychotherapeutic relationship--genuineness (congruence), acceptance, and empathic understanding with hospitalized schizophrenics. He had previously seen the core conditions as being effective with neurotic clients. The results of the ambitious and rigorous research with schizophrenics is reported in Rogers' latest book, The Therapeutic Relationship and Its Impact.[73] Commenting on the findings, Rogers states that:

> A significant theme of our findings is that much the same qualities of relationship are facilitative for the schizophrenic individual as for the neurotic. What differences there are do not appear major. This would seem to justify an intensive focus on the interpersonal relationship as perhaps the most important element in bringing about personality change in any group. It suggests that whether we are dealing with psychotics or normals, delinquents or neurotics, the most essential ingredients for change will be found in the attitudinal qualities of the person-to-person relationship.[74]

Of the common facilitative elements, therapist genuineness or congruence is closest to our self-disclosure construct, and is perhaps of most basic significance to the therapist. The congruence of the therapist refers specifically to the transparency of the therapist in the relationship. The therapist is to be a "real person" in the therapeutic encounter, devoid of the usual detached professional role. Therapist congruence assumes that a depth of self-exploration and self-expression has already taken place in the therapist. Both unconditional positive regard and accurate empathic understanding facilitate therapist

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[73] C. R. Rogers, The Therapeutic Relationship and Its Impact.

[74] Ibid., 92.

congruence in the relationship. Truax and Carkhuff[75] found that the greater the degree of self-disclosure or self-exploration in the client, and the greater the degree of self-disclosure by the client, the greater the constructive personality change.

Rogers' research, then, involves clear, operational definitions and measures for such theoretical concepts as empathy, unconditional positive regard, congruence, experiencing, problem expression, and manner of relating.[76]

Critique and Analysis of Rogers

Theory The most striking feature of Rogers' theory of personality and therapy is the meticulous and systematic treatment of all of the terms and constructs used. He presents a clear, concise, step-by-step presentation of his basic propositions and proceeds to carefully define his terms. According to the criteria for a good theory established in Chapter Three, Rogers seems to score higher than the other two theorists. The propositions setting forth the theory are logically interrelated with other constructs. Rogers should be credited for his efforts to handle theoretically such subjective activity as thoughts and feelings, to specify the circumstances under which these responses may be modified, and to suggest some of their interrelationships. The constructs used in the theory tend to be explanatory as well as

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[75] C. B. Truax and R. R. Carkhuff, "Client and Therapist Transparency in the Psychotherapeutic Encounter," Journal of Counseling Psychology, XII (1965), 3-9.

[76] C. R. Rogers, The Therapeutic Relationship and Its Impact, 551-610.

operational. His unfailing commitment to the use of scientific procedures has been a healthful influence in the generation of further research of therapy.

Rogers' theory, then, is moving in the direction of being well-structured, solid, and tends to include some existing knowledge. And one of the theory's strongest points is its predictability.

Variables and Constructs Rogers' theory provides a good balance of intervening variables and hypothetical constructs. Many of his central concepts are operationally defined and measurable. Yet, his general theory offers a number of hypothetical constructs that provide surplus meaning and help define other constructs in the network. Rogers is able to provide a measure for the concept of congruence which is directly related to the self-disclosure construct. Yet, he is able to suggest other constructs, such as positive regard and empathy, that influence the functioning of congruence. Rogers discusses congruence both as a process and determinant, and in his discussion of therapy and the "core" conditions, he presents both a giving and receiving description of congruence.

Thus, Rogers is recognized for his solid theory and his attempt to make his concepts operational. However, it should be noted that the three core conditions are still relatively abstract constructs, and since they are still only measured by ratings of judges, the core conditions are not easily transferable to other theoretical orientations.

Nomological Net Within Figure 4.3 Rogers' major concepts are plotted. Rogers' congruence concept is close to the "P" plane.

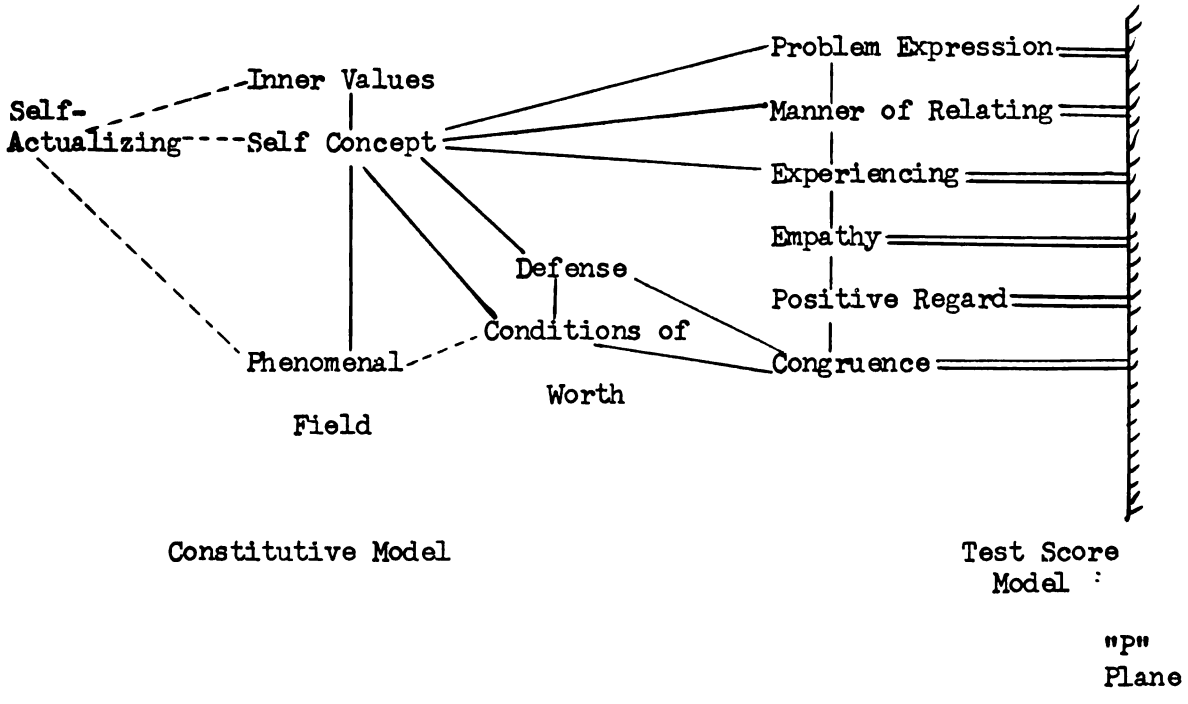

Figure 4.3. Proposed Nomological Net of Rogers' Personality and Therapy Theory.

It connects well with the other constructs on the theoretical side of the net. The logical network seems solid and tight. Rogers' congruence construct seems to be close to a first order construct. If anything, Rogers could use more higher order constructs which take on stronger explanatory power.

Conclusions

Jourard seems to take a humanistic-cognitive approach to self-disclosure as a construct, while Mowrer emphasizes the behavioral and practical (or utilitarian) view of the concept. Rogers' orientation is clearly subjective (affective), but tends to be more scientific in

theory and practice about self-disclosure than Mowrer and Jourard. In general, Rogers stresses the use of intervening variables, while Mowrer resorts almost entirely to hypothetical constructs. Jourard seems to rest someplace between the two poles, emphasizing the self, spirit, and healthy personality while at the same time offering a widely used research questionnaire.

Considering the number of constructs involved in the theory, Rogers seems to present the largest number of both operational and hypothetical constructs. Mowrer is second with probably the largest number of hypothetical constructs. Jourard's network of constructs is simple and small. Overall, Rogers seems to present the tightest and most operational network of the three theorists considered.

Conceptually, the three central core terms, transparency or self-disclosure (Jourard), confession or honesty (Mowrer), and genuineness or congruence (Rogers), seem to be highly related. They all convey the idea that the individual verbally or nonverbally let others know what he is thinking, or feeling, or doing. Each theorist specifies certain conditions influencing the act of self-disclosure. They have posited certain internal and external concepts that relate directly or indirectly to the core idea the three terms suggest. Within Figure 4.4 some of these constructs are listed. It is to be noted that all three theorists prefer the use of contingencies that have a tendency to relate to internal stimulus properties. The use of social constructs are limited.

The analysis of the three theorists has not increased greatly our ideas regarding the content of self-disclosure. It has only shown something of the richness of the soil in which the construct rests.

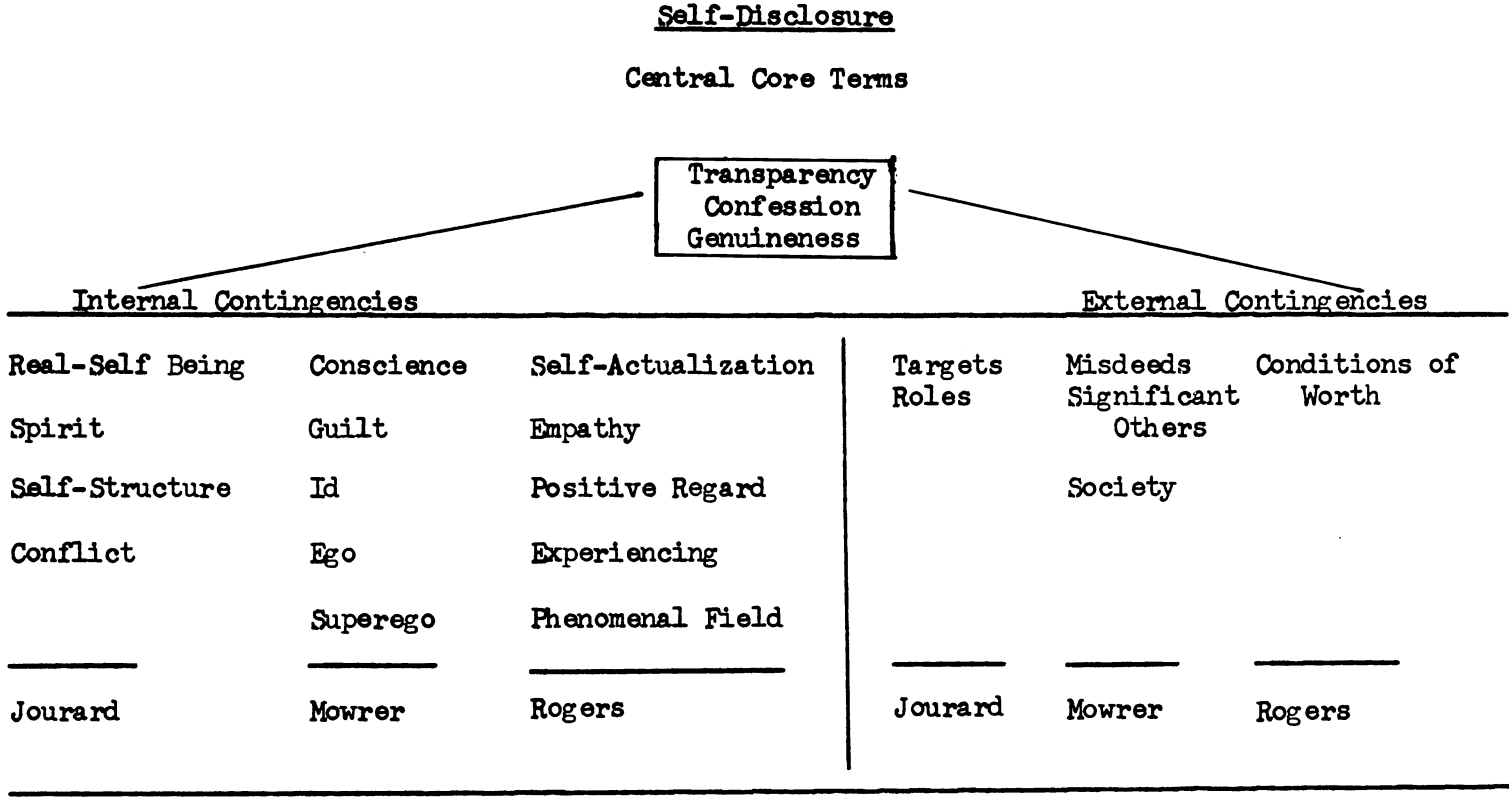

Figure 4.4. Internal and External Contingencies Influencing the Central Core Terms of Self-Disclosure

That is, Jourard says self-disclosure is the ability to share certain personal topics (values, tastes, feelings about money, job, body, and personality characteristics) with select target persons. Mowrer states that self-disclosure is the ability to state publicly feelings regarding past behavioral action that has violated significant others. Rogers claims that self-disclosure is the ability to symbolize experience (feelings) accurately. A single, simple, general theme pervades these definitions, yet each theorist presents a unique approach to the construct.

Theoretical Structure

Within Figure 4.5 the relationship of the general, group, and specific theoretical dimensions involved in the self-disclosure construct are summarized. Each large circle represents the position of one of the theorists. These appear to be at least seven elements. The first dimension, element I, may be called the general dimension which describes the general idea of the individual revealing or uncovering himself to others. It involves an exposition by the individual of personal or social content so that he can be known by others. Elements II, III, and IV may be considered group dimensions because they include aspects common to or representative of two other separate and unique dimensions. Element II involves both the behavioral and cognitive dimensions of self-disclosure. The individual is disclosing both thoughts and acts, perhaps his thinking about what he has done or will do. It assumes that the action has reality, or that it happened, at least the individual perceives that it took place. Element II may be called the rational-

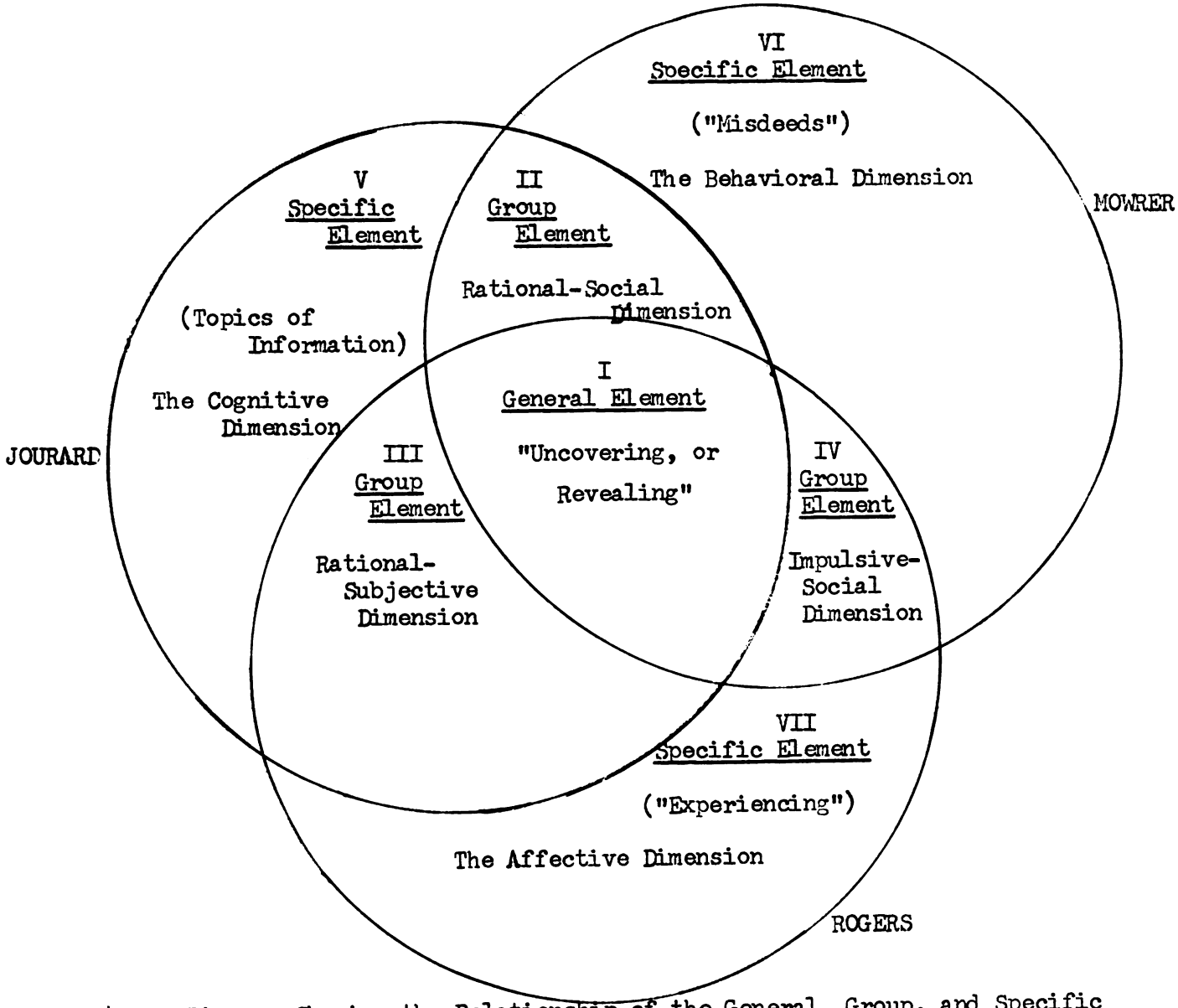

Figure 4.5. Diagram Showing the Relationship of the General, Group, and Specific Theoretical Dimensions Involved in the Self-Disclosure Construct.

social dimension of self-disclosure. Element III involves the behavioral and affective dimensions of self-disclosure. Here, the individual is uncovering his feelings about his actions, or perhaps his actions based on his feelings. Element III may be called the rational-subjective dimension of self-disclosure. Element IV involves the affective and cognitive dimensions of self-disclosure. The individual is revealing his feelings regarding a thought, idea, belief, or attitude. Element IV may be called the impulsive-social dimension of self-disclosure.

There are three specific or unique dimensions of self-disclosure. Element V is a specific dimension that refers to the cognitive dimension of the construct. According to Jourard we reveal certain topics which may vary from biographical data to emotionally charged sexual information. But, basically, what is discussed is intellectual information. This information is generally available to all individuals, but may be put together in a special way by the person, or may be seen by the individual as being particularly intimate. This dimension may be called the "topic" element of self-disclosure. Element VI is also a specific dimension that refers to the behavioral element of self-disclosure. Mowrer says that mental health involves not only the confessions of misdeeds, but also the restitution of wrongs perpetrated on others. Clearly the emphasis is on overt action. These misdeeds are generally, but not necessarily, available to the objective observer. Thus, this element of the self-disclosure construct can be called the behavioral dimension. Element VII is also a specific dimension that refers to the affective element of self-disclosure. It involves the concrete subjective feelings that have been experienced by the organism and are available to the individual for symbolization. It refers to

Gendlin's "experiencing" construct and to Rogers' concept of "congruence" where the individual is able to feel inward somatic sensations or events, and explore them consciously. The experiencing aspect is generally not available to the observer. Element VII may be called the "emotional" or "experiencing" dimension of self-disclosure.

A factor analysis of a number of self-disclosure measuring instruments presents a feasible avenue to identify the general, group, and specific dimensions involved in the content of the construct.

Summary

The major ideas of Sidney Jourard, O. H. Mowrer, and Carl Rogers concerning personality, neurosis, treatment, and self-disclosure constructs have been reviewed and analyzed according to certain philosophy of science criteria relating to theory, variables, and the nomological network of constructs. The conclusions stated that the construct has a fertile nomological network, but the analysis failed to greatly increase understanding of the content of self-disclosure. Generally, Jourard suggests the content of self-disclosure refers to cognitive aspects, while Mowrer emphasizes its behavioral content. Rogers stresses the affective dimension of self-disclosure.

The seven general, group, and specific theoretical dimensions involved in the self-disclosure construct were summarized, and a theoretical structure proposed.

CHAPTER V

DESIGN OF STUDY

The study was designed to analyze three theorist's ideas on self-disclosure and test the usefulness of the theory of the content of self-disclosure outlined in the previous chapter.

Within the following chapter the rationale for the use of factor analysis, the hypotheses, the instrumentation, the population, and the statistical procedures used in the study will be described.

Rationale for Use of Factor Analysis

Science organizes reality by experiment and theory building. Science creates hypotheses about how the parts of reality may fit together and tests these hypotheses in controlled samples of experience. In factor analysis, the experimental statistical analysis of empirical data blends into the process of theory-building through the construction of theoretical-mathematical models.[1]

The principal objective of factor analysis is to attain a parsimonious description of observed data. According to Diamond, factor analysis " . . .is a way of getting an overview of a large number of correlation coefficients to see if the common variance which they

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[1]S. Diamond, Information and Error (New York: Basic Books, Inc., 1959), 206.

express, which has been measured only in pairs of variables taken two-by-two, can be described in broader terms. A successful factor analysis is like the contour map of a whole countryside, which is based upon many separate measurements of the relative altitudes of hilltops and hollows. It gives new perspectives over the domain, and it brings into prominence features which had previously escaped attention."[2]

Factors as Constructs

Royce states that a "factor is a variable, process, or determinant which accounts for covariation in a specified domain of observation."[3] A factor as a construct relates itself to Margenau's C and P planes and Fergl's nomological net described in Chapter Three. Within the standard experimental paradigm S-O-R, the conceptual focus of factor analysis is on O variables. Factors are O variables intermediate between S and R variables. According to Royce, when the postfactorial focus is on S-O relationships, factors can best be seen as dependent variables. When the postfactorial focus is on O-R relationships, factors can best be seen as predictors or independent variables.[4] Thus, factors are seen as variables which mediate between S inputs and R outputs. They can be considered as either intervening variables or hypothetical constructs, depending on how deeply they penetrate the nomological net. However, Royce states that factor analysis per se does not deal with dependent and independent variables. Factor analysis simply

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[2]S. Diamond, Information and Error, 206.

[3]Joseph R. Royce, "Factors as Theoretical Constructs," American Psychologist, XVIII, 1963, 523.

[4]Ibid., 525.

identifies those variables which are likely to be useful in evolving a theoretical scheme--it is concerned with non-dependent variables.[5]

Royce says that "factors, as such, do not provide the empirical and rational equations which link theoretical constructs. Factor analysis can only identify those constructs which can eventually be related by mathematical equations."[6]

Three types of factors are commonly distinguished: general, group, and specific. A specific factor is present in one test or set of items but not in any of the other tests or items under study. A group factor is present in more than one test or item. A general factor is a factor found in all the tests or items. If all the correlations among a set of tests or items are positive, one can find a general factor operating. Within Figure 5.1 a diagram showing the correlation and factor patterns of general, group, and specific factors originally suggested by Cronbach[7] is summarized.

The methods of factor analysis may lead to some theory, scientific law, or mathematical model suggested by the form of the solution. Factor analysis may help explain the underlying behavior of the data. Or, conversely, one may formulate a theory and verify it by an appropriate form of factorial solution.[8] The study of self-disclosure attempts to use factor analysis to both verify (test) theoretical notions

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[5]Joseph R. Royce, "Factors as Theoretical Constructs," American Psychologist, XVIII, 1963, 526.

[6]Ibid., 527.

[7]L. Cronbach, Essentials of Psychological Testing, 2d ed. (New York: Harper and Row, 1960), 121.

[8]Harry Harmon, Modern Factor Analysis (Chicago: University of Chicago Press, 1967), 8.

(hypotheses), and suggest other variables underlying the behavior of self-disclosure.

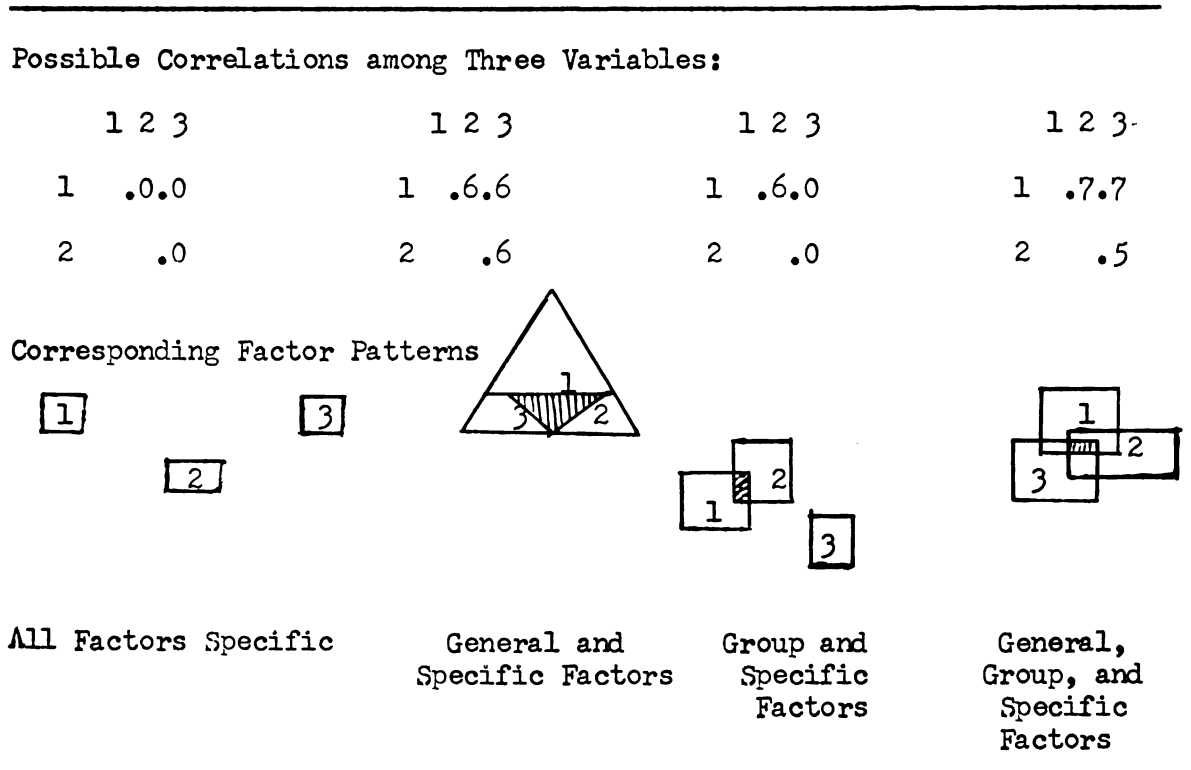

Figure 5.1. A Diagram of Cronbach's Possible Factorial Relations among Tests or Items

Hypotheses

The factor analysis of the correlational matrix using the principal axis solution and varimax rotation will yield an interpretable factor structure consisting of seven factors described as follows:

General Factor

Hypothesis I: The factor analysis of the correlational matrix using the principal axis solution will yield one general (G) factor that will tend to correlate with all factors. This general factor can be labeled "uncovering," or "revealing" what is hidden from others.

Group Factors

Hypothesis II: The factor analysis of the correlational matrix using the principal axis solution will yield three group factors as follows:

(a) One group factor will include both a behavioral and cognitive aspect of self-disclosure, and can be labeled the rational-social factor.

(b) One group factor will include both a behavioral and affective aspect of self-disclosure, and can be labeled the impulsive-social factor.

(c) One group factor will include both an affective and cognitive aspect of self-disclosure, and can be labeled the rational-subjective factor.

Specific Factors

Hypothesis III: The factor analysis of the correlational matrix using the principal axis solution will yield three specific (unique)factors as follows:

(a) One unique factor will include the cognitive aspect of self-disclosure, and can be labeled the topic factor.

(b) One unique factor will include the behavioral aspect of self-disclosure, and can be labeled the behavioral factor.

(c) One unique factor will include the affective aspect of self-disclosure, and can be labeled the emotional or experiencing factor.

All of the hypotheses were kept in above research form because they are not tested in an exact statistical sense against error models. Decisions of inclusion and exclusions of dimensions or concepts in the theory were based on psychological interpretation. Therefore, the hypotheses were not reformulated in Null form.

Design

Subjects

The sample of the study was arbitrarily selected with two

primary factors under consideration: (1) the practical and geographical availability of certain testing data, and the apparent age and educational range of the subjects, the variety and size of groups, and (2) the qualifications of the group leadership. A geographical survey of the groups in existence at the time of the study was made to determine the nature of the group interaction and the availability for research. It was decided that groups emphasizing counseling, self-exploration, group dynamics and therapeutic procedures (rather than groups stressing instructional, dydactic or information gathering), would best serve the purposes and design of the study. It was felt that more interpersonal interaction between group members would be manifested in counseling groups. The assumption was that more self-disclosing behavior would be manifested in counseling groups.

Sixteen groups were asked to participate in the study. Sixteen groups agreed to participate, but only thirteen groups were used in the study. One group was organized and met for a short period of time, but failed to develop as a group or manifest a continued desire for external feedback the test battery might offer. Only half of the members of each of the other two groups returned the questionnaires to the leaders at the appointed time. The other members failed to respond to the leader's continual request for cooperation in returning the test booklets. Hence, the three groups were dropped from the study.

Before describing the characteristics of the 96 subjects used in the factor analysis, it is necessary to account for the 10 subjects who were initially part of the groups used in the study, but not included in the analysis. Three subjects were omitted on recommendation of the two leaders involved, one because of a language problem, and the other

two because the high level of personal disturbance rendered their data uninterpretable. Three subjects failed to return questionnaires and could not be contacted before they left the community. Four subjects failed to respond to continual requests to submit the questionnaires outstanding.

Within Table 5.1 the sex, marital status, and age of the subjects by group are summarized. There were fifteen more female subjects than male subjects in the sample, and fourteen more single subjects than married or divorced subjects. According to previous research regarding female and male self-disclosing behavior this would mean that the sample used in the study may be more self-disclosing than usual since there were fifteen percent more females present in the sample. Also, because single subjects are more numerous than married subjects, it should be expected that scores for close-friend same sex and other sex would be fifteen percent lower than self-disclosing scores to father and mother targets.

The sample represents a range in age of subjects. Group mean ages range from 16 years to 34 years. The actual age range is 14 years to 54 years. The wide differences in subject age may add to the reliability and stability of results, but lower the correlations in the correlational matrix.

Within Table 5.2 the occupation and education of the subjects by group are summarized. In the sample of student subjects 29 subjects were full time graduate students, 21 subjects were full time undergraduate students, and 13 subjects were high school students. In all, 66 percent of the sample consisted of full time college and high school students. There was an $8\frac{1}{2}$ year range in the mean years of formal

education possessed, with the mean years of formal education received 15.8.

Table 5.1

Sex, Marital Status, and Age of Subjects by Groups

Group Number	Group Size	Sex		Marital Status			Group Mean Age	Median Age
		Male	Female	Single	Married	Divorced		
1	8	5	3	1	7	0	33.6	37.0
2	10	6	4	5	5	0	29.5	27.5
3	5	3	2	2	3	0	34.0	35.0
4	5	3	2	2	3	0	26.6	22.0
5	12	5	7	6	5	1	30.0	26.5
6	11	8	3	5	6	0	26.6	25.0
7	7	3	4	7	0	0	20.3	20.0
8	7	4	3	7	0	0	19.4	19.5
9	7	3	4	7	0	0	19.9	20.0
10	6	0	6	0	2	4	31.5	32.5
11	5	0	5	0	5	0	33.6	34.0
12	7	0	7	7	0	0	16.0	16.0
13	6	0	6	6	0	0	16.9	17.0
Totals	96	40	56	55	36	5	26.1	25.0

Table 5.2

Occupation and Education of Subjects by Groups

Group Number	Occupation					Mean Years of Education
	Student	Housewife	Clergy	Teacher	Other*	
1			3	5		18
2	6		1	3		17.6
3		2			1	18
4	3			2		17.4
5	10		1		1	19.4
6	9		1	1		17.9
7	7					15
8	7					14.6
9	7					14.6
10		6				12
11		5				14.1
12	7					11
13	6					11.3
	63	13	7	11	2	15.8

*Other includes 1 speech therapist and 1 youth worker.

The sample had a total of 222 brothers and sisters in the family constellations (see Table 5.3). Sixty percent of the total of brothers and sisters were brothers, with thirty-seven percent of the total of brothers and sisters consisting of younger brothers. Of the

brothers, eighty-one percent were younger brothers, and of the sisters, sixty-five percent were younger sisters. Thus, the average subject had at least one sister and brother with the probability being that the sister and brother were younger than the subject.

Table 5.3

Family Relationships of Subjects by Groups

Group Number	Brothers		Sisters	
	Younger	Older	Younger	Older
1	7	8	2	2
2	6	5	4	3
3	0	4	1	3
4	4	0	2	1
5	9	2	5	4
6	7	2	10	4
7	7	2	9	2
8	9	1	6	1
9	7	7	1	2
10	7	11	2	3
11	8	2	3	0
12	7	4	3	5
13	3	2	7	2
Totals	81	50	59	32

Groups

The sample consisted of thirteen groups conducted by seven group leaders. Within Table 5.4 the group size, interaction hours, and number of group meetings is summarized.

Table 5.4

Sample Size, Interaction Hours, and Number of Meetings by Group

Group Number	Leader	Number of Subjects	Interaction Hours	Number of Sessions
1	A	8	30	10
2	A	10	30	10
3	B	5	30	30
4	B	5	30	30
5	C	12	110	33
6	D	11	30	20
7	E	7	60	24
8	E	7	30	15
9	F	7	25-100	11-40
10	G	6	12	6
11	G	5	5	3
12	G	7	11	6
13	G	6	30	20
	Totals	96	833	380

The average group size was 7.4 subjects, not including the leader. Three group leaders handled 2 groups, and 3 leaders led 1 group each. One group leader conducted 4 groups. The 13 groups represented a total of 833 hours spent in interaction with each group spending an average of 43.8 hours in session. Each group met for an average of 20 sessions.

The leaders of the groups were asked to indicate the stage of the life of the group the questionnaires were administered. The four stages considered were:

1. EARLY - during or between the first 2 or 3 meetings of the group.
2. MIDDLE - during or between the group sessionf that fall in about the center of the group's existence.
3. LATE - during or between the last 2 or 3 sessions of the group.
4. END - after the group sessions are completed.

The leaders were also asked to rate the general inter-personal interaction level of the group. The following were the instructions to the leader:

> What is your judgment regarding the general inter-personal level of the group:
>
> By Interaction Level - we mean the degree to which members are willing
> (1) to confront and challenge one another and give personal, direct and specific feedback
> (2) to disclose themselves--express emotions and personal problems
> (3) to risk involvement in group process and new role taking
> (4) to learn how to learn in the group situation
>
> 1. ____ HIGH Interaction Level
> 2. ____ MEDIUM Interaction Level
> 3. ____ LOW Interaction Level

Only one group received the test battery during the first two or three meetings of the group, and only four groups received it after the group had ended. Seven groups received the questionnaire between the last two or three group sessions, and two leaders administered the battery during the middle of the group's life.

Eleven groups were rated by their leaders as manifesting a medium level of interaction, and one group was rated as high, and one group low in interpersonal interaction.

There was some variety in the philosophy of the leaders about the goals for the groups and the time spent in group sessions. However, the general emphasis seemed to be on actual interpersonal interaction and individual growth in the group situation. A summary of group leader qualifications will be described in the next section.

The physical environments of the group meetings were different for the thirteen samples. Seven campus groups met in separate classroom settings, while two campus groups met in the group leader's home where the atmosphere was relaxed and informal. Four groups met in the offices of the mental health clinic. All sessions were free from outside distraction.

The subjects in all groups usually sat in a circle facing one another. Seats were not assigned, but most subjects sat in the same chairs each week. The group leader might sit in any chair of his liking or in the same chair each session. Tape recorders or other devices for monitoring the group sessions were not used. In some groups one group session was used after the administration of the test battery to give feedback to the group members regarding the results of the test battery and to discuss group interaction and member participation if the group

had requested the feedback. Six groups requested and received feedback from the test battery.

Description of Leader Qualifications

All seven group leaders involved in the conduct of group sessions and the rating of group members for the study possessed a doctor's degree in counseling education, clinical psychology, or student personnel administration. Each group leader brought a broad background of experience in both individual and group counseling. Six of the seven group leaders were professors of counseling, psychology, or research development at Michigan State University.

Three group leaders (A, B, C) were professors of counseling and guidance, and regularly teach a course in the use of group procedures and counseling. There is some use of didactic materials in the group meetings, but sixty-seven to ninety percent of the course time is spent in actual interpersonal confrontation by group members.

One group leader (D) was a Professor of Clinical Psychology at Michigan State University and teaches a course in group therapy each quarter at the University. He also conducts T-group or sensitivity experiences for students and adults.

Group leader (E), the director of student-college relationships (dean of students) at a new college at Michigan State University, has had counseling and sensitivity training experiences and was assisted in two groups by leader (F).

Leader (F) directed the counseling and research program in a new college at Michigan State University, and has led at least two student groups each school term, either counseling groups or growth groups. Leader (F) has had considerable experience leading individual

and group therapeutic sessions.

One group leader (G) was a counseling psychologist working in a community mental health clinic where group counseling and interpersonal interaction was carried on as a regular part of the education and therapy program. She directed four groups consisting of adolescents and adult women.

Data Collection Procedure

All members of the thirteen groups were given the self-administered subject test battery of instruments and asked to take the battery home, complete it, and return it at the next meeting of the group. The groups were told the battery consisted of several (four) different tasks and that the directions should be read carefully for each section of the form. The group members were instructed to read the questions carefully, but not to ponder long over each item. The administration of the battery was done by the leaders of the thirteen groups, and answers to subjects' questions regarding the completion of the battery were given by the leader at the meeting in which forms were returned to the group.

The seven leaders involved in the group interaction and the administration of the subject test battery were given the leader's test booklet consisting of a group informational data sheet, the Hurley Self-Disclosure Rating Scale, and the Scale for Rating Manner of Problem Expression. The group leader rated each member in his group and returned the ratings with the subject test battery to the experimenter.

The administration of the subject test battery and the leader test booklet was completed during the end of the Michigan State University calendar spring quarter, 1968.

Instrumentation

The subject battery consisted of a personal data sheet, the Subject Self-Report Self-Disclosure Inventory, the K scale of the MMPI, the Hurley Self-Disclosure Rating Scale, and the Peer Nomination-Confiding-In Ranking Scale. The leader test booklet consisted of a group informational data sheet, the Hurley Self-Disclosure Rating Scale, and the Scale for Rating Manner of Problem Expression.

The first major instrument, the so-called Subject Self-Report Self-Disclosure Inventory, involves sixty-seven items taken from three other self-disclosure instruments developed by Jourard, Plog, and Taylor. The second scale used was the "K" scale of the MMPI (Minnesota Multiphasic Personality Inventory). The third measure used was the Hurley Self-Disclosure Rating Scale. The fourth measure used was the Scale for Rating the Manner of Problem Expression by van der Veen and Tomlinson. The fifth instrument was Himelstein's Confiding in Ranking Scale. Considering the sub-scales of the major self-report inventory, seven different scales were involved in the study.

The Subject Self-Report Self-Disclosure Inventory

The Subject Self-Report Self-Disclosure Inventory (SS-RS-DI) (see appendix B) is an instrument that involves sixty-seven items taken from three self-disclosure instruments developed by Jourard, Plog and Taylor. The theory and format of the measure is similar to the one used by Jourard and Plog. Sixty-five topics or items for discussion classified into eight topic areas and intimacy levels are presented to

the subject. The subject is asked to indicate on a four-point scale the degree of his willingness to discuss each topic with five target persons. Three target persons, mother, father, and spouse, comprise his family constellation. Two other target persons, close friend-same sex and age, and close friend-other sex and same age, involve the subject's social contacts. Two additional items taken from Plog's self-disclosure questionnaire ask the subject to compare his current self-disclosure behavior with his behavior two years ago and with most other people.

The use of five targets and eight topic areas accounts for forty variables included in the factor analysis. Using a sub-scale score for each of the Jourard, Plog and Taylor items, and a total self-report scale score, provides four additional variables to be factor analyzed. The two items taken from Plog's scale mentioned above add six more variables to be factor analyzed. (For further explanation of variables used, see Table 5.6.)

The Self-Disclosure Questionnaire (JSDQ) - Sidney M. Jourard

Twenty-nine items from the Jourard Self-Disclosure Questionnaire (JSDQ) were included in the Subject Self-Report Self-Disclosure Inventory (SS-RS-DI). The list of items included in the SS-RS-DI are found in Appendix F. The Jourard questionnaire has been used in at least seventeen published studies (see Chapter Two) including four studies which were conducted with groups.

Jourard reports that "satisfactory" internal reliability has been demonstrated and that odd-even coefficients for larger subtotals

run in the 80's and 90's."[9] Jourard also states that his method of measuring self-disclosure has some validity, but is subject to the usual problems of personality measures based on self-report.

In an attempt to predict self-disclosure behavior in groups from the Jourard questionnaire, Lubin and Harrison[10] rated 68 subjects at the end of 20 group sessions on a 9-point scale of self-disclosure (reliability $=.69$). The Jourard score did not predict rated behavior ($r=.13$), $p<.05$). In a further effort to correlate the Jourard scale against an outside criterion, Himelstein and Lubin[11] administered the Jourard scale to fraternity and sorority groups and asked the individuals to make peer nominations for "most likely to confide in others" and for "most likely to tell my troubles to." The correlation between the total Jourard inventory and the first nominations were not significant, as were relationships between the two peer nominations. The split-half reliability for the adopted version of the Jourard questionnaire used in the study, after correction by the Spearman-Brown formula, was .82.

Query[12] used a shortened form of Jourard's instrument in a study

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[9]S. M. Jourard, The Transparent Self (New York: D. Van Nostrand Co., 1964), 176.

[10]B. Lubin and R. Harrison, "Predicting Small Group Behavior," Psychological Reports, XIV (1964), 77-78.

[11]P. Himelstein and B. Lubin, "Attempted Validation of the Self-Disclosure Inventory by the Peer-Nomination Technique," Journal of Psychology, LXI (1965), 13-16.

[12]W. T. Query, "Self-Disclosure as a Variable in Group Psychotherapy," The International Journal of Group Psychotherapy, XIV (1964), 107-116.

of self-disclosure as an independent variable in group psychotherapy. He reported a correlation of ratings made of each subject after each session by group leaders with scores made on the Jourard scale of .59. In another study of self-disclosure in groups, Hurley[13] found that the Jourard measure correlated negatively with the Hurley Self-Disclosure Rating Scale, nominations of most self-disclosing member by group leaders, and direct ratings by group members. The only positive correlation ($p. < .05$) occurred between the Jourard instrument and leader "Most closed Nomination."

The only evidence available that Jourard's instrument measures disclosing behavior is the correlation of his questionnaire with Rorschach inkblots[14] (see Chapter Two). The correlations are low, but may be regarded as some form of "construct validity."

Test data on validity and reliability on the Jourard instrument does not appear in Buros' Mental Measurement Handbook. The failure of all serious attempts (except one) to validate the most popular self-disclosure instrument raises questions regarding its reliability and use as a tool of research. However, it is probably the best self-disclosure measure available at this time. Jourard's theoretical ideas supporting the instrument are still considered by most researchers as sound.

For the purposes of the present study, the Jourard questionnaire

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[13] S. Hurley, "Self-Disclosure in Counseling Groups as Influenced by Structured Confrontation and Interpersonal Recall," (unpublished doctoral dissertation, Michigan State University, 1967), 38.

[14] S. M. Jourard, "Self-Disclosure and Rorschach Productivity," Perceptual and Motor Skills, XIII (1961), 323.

was used with only one change. Only half of Jourard's items were used. The items were selected on the basis of securing the highest intimacy level per item. The aim was to keep the test battery to a reasonable length for ease of administration.

Plog Self-Disclosure Questionnaire Twenty-one items from the Plog Self-Disclosure Questionnaire (PSDQ) were included in the Subject Self-Report Self-Disclosure Inventory (see Appendix F). The format of Plog's test is similar to Jourard's questionnaire. Plog's forty-item test of self-disclosure was developed with questions divided equally among eight topic areas as follows: (a) habits and interests, (b) political views, (c) interpersonal relationships, (d) views on morality and sex, (e) self-doubts and anxieties, (f) religious beliefs, (g) occupational goals, and (h) marriage and family.

Plog's selection of topics was made after a review of existing tests of self-disclosure and by incorporating some of the six "dominant" values listed by Spranger.[15] Subjects are asked to rate themselves, on a four-point scale, about their willingness to discuss material selected from the topic areas with each of six target persons: mother, father, close friend of the same sex, close friend of the opposite sex, older friend, and acquaintance. Split-half reliability of the test is .94 for American men (N=194) and .89 for American women (N=218).

For the purpose of the present study, the Plog test was used with only two changes. First, only one-half of Plog's items were used, selected on the basis of intimacy level and uniqueness of the item.

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[15]E. Spranger, Types of Men (Halle: Max Niemeyer Verlag, 1928).

That is, those items having a high intimacy level and not appearing in either of the Jourard scale or Taylor pool were selected for inclusion in the Subject Self-Report Self-Disclosure Inventory. Second, target persons "older friend" and "acquaintance" were omitted because of space and time limitations.

One major difference exists between the Jourard and Plog scales. Jourard asks the subject to state the degree to which he has disclosed a topic to a target person. Plog asks the subject to state the degree to which he is willing to disclose a topic to a target person. Jourard is calling for disclosure of actual behavioral acts, while Plog is asking the individual to state his perceptions as to his potential (future) disclosing activity. Hence, Jourard and Plog are asking two different things. Both approaches suffer from the limitations of self-report, but Plog's "willingness to discuss" orientation was employed because it was felt that on some subjects (topics) some individuals would not have the opportunity to discuss certain items with target persons.

Taylor Intimacy-Scaled Stimuli The Subject Self-Report Self-Disclosure Inventory contains 58 statements taken from the Taylor item pool of Intimacy-Scaled Stimuli (see Appendix F).

Taylor and Altman[16] have developed 671 statements about various aspects of the self which people might discuss as they form interpersonal relationships with others. The battery of statements were scaled for intimacy by the Thurstone procedure of equal-appearing intervals.

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[16]D. A. Taylor and I. Altman, "Intimacy-Scaled Stimuli for Use in Studies of Interpersonal Relations," Psychological Reports, XIX (1966), 729-730.

Also, the items were scored by judges (using Q scores) into one of 13 topical categories: Religion, Love and Sex, Own Family, Parental Family, Hobbies and Interests, Physical Appearance, Money and Property, Current Events, Emotions and Feelings, Relationship with Others, Attitudes and Values, School and Work, Biography. Intimacy and topic category judgments were made by two independent populations of college students and sailors. Judge agreement between the two populations according to a pooled Pearson product-moment correlation was .90, and correlations ranged from .76 to .94 for the 13 categories considered individually. The validation of the a priori category nomenclature showed that placement of 497 out of the 671 items was agreed upon by at least 8 of 16 judges. There was reliable agreement among judges as to statement topic for 77 percent of the items.

Use of 35 and 70-item self-disclosure instruments yielded split-half and alternate-form reliabilities of .82 and .86 (Spearman-Brown correction added).

For the purposes of the present study, the topical categories Religion, Hobbies and Interests, and Attitudes and Values were combined into an Attitude, Tastes, and Value category. The Love and Sex, and Own Family categories were combined into a Love, Marriage and Sex grouping. Because the intimacy level of the Biography category was low, it was dropped entirely. Only items rated high in intimacy level were chosen to be included. Most of the 29 Jourard items were found in the Taylor pool (see Appendix F). Only the intimacy judgments made by the college population were used in the present study. Within Table 5.5 the topical categories and intimacy levels are summarized.

Table 5.5

Topical Categories in the Self-Report Section of the Subject Battery of Self-Disclosure Instruments Showing Question Number and Intimacy Level

	Topical Category	Self-Report Question Number	Intimacy Level
I	Love, Dating, Sex	32-39	9.54
II	Emotions and Feelings	16-24	8.99
III	Marriage and Family	40-47	8.97
IV	Personality and Interpersonal Relations	56-64	8.46
V	Finances	25-31	7.87
VI	Physical Condition and Appearance	8-15	7.44
VII	Occupation	48-55	7.03
VIII	Attitudes, Opinions, Tastes, Values	1-7 and 65	4.50

"K" Scale of the Minnesota Multiphasic Personality Inventory

The twenty-nine items from "K" scale of the MMPI were administered to all subjects. A list of the items from the "K" scale is found in Appendix B.

Hathaway and McKinley[17] state that the K scale is to be thought of as a measure of test-taking attitude. The K score is regularly used

[17] S. R. Hathaway and J. C. McKinley, Manual: Minnesota Multiphasic Personality Inventory (New York: The Psychological Corporation, 1951), 18.

as a correction factor to sharpen the discriminatory power of the Inventory. Thus, a high K score "represents defensiveness against psychological weakness, and may indicate a defensiveness that verges on deliberate distortion in the direction of making a more 'normal' appearance."[18] Dahlstrom and Welsh[19] state that a person with "a high score on K not only denies personal inadequacies, tendencies toward mental disorder, and any trouble in controlling himself, particularly in regard to temper, but also withholds criticism of others."[20] A low K score indicates that a person is overly candid and open to self-criticism and the admission of symptoms even though they may be minimal in strength. Thus, low scores are obtained by admitting a variety of difficulties in what Goodenough has described as "a peculiar kind of exhibitionism which takes the form of an urge to display one's troubles and confess one's weaknesses."[21] According to Dahlstrom and Welsh, the general elevation of K that characterizes college student groups still reflects defensiveness, but it should be viewed as part of a general self-concept in which self-enhancement and personal reserve are but a part.[22] Recent studies have emphasized interpretations of K as

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[18] S. R. Hathaway and J. C. McKinley, Manual: Minnesota Multiphasic Personality Inventory, 18.

[19] W. G. Dahlstrom and G. S. Welsh, An MMPI Handbook (Minneapolis: University of Minnesota Press, 1960), 51-52.

[20] Ibid.

[21] F. L. Goodenough, Mental Testing: Its History, Principles, and Applications (New York: Rinehart, 1949), 408.

[22] W. G. Dahlstrom and G. S. Welsh, op. cit., 145.

a measure of good emotional adjustment. Sweetland and Quay[23] state that the scale is a measure of healthy emotional adjustment, and King and Schiller[24] interpret K as a measure of the functions pertaining to ego-strength. Heilburn[25] reported that, for females but not for males, K was positively related to level of psychological health, and for maladjusted subjects it was a measure of defensiveness. In Himelstein and Lubin's[26] study of the relationship of the K scale and the Jourard Self-Disclosure Questionnaire, they found that only two of eight product-moment correlations between the Jourard targets and the K scale were significant ($p = .05$). The other six correlations were negative, as expected, but not significant. Both the significant correlations involved male subjects, with best male and female friends as target persons.

It appears that the K scale has differential meaning for males and females. For male subjects, the high K may indicate defensiveness, while for females a similar score may be an indication of good psychological health. It will be necessary to be careful in interpreting the use of the K scale with males and females.

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[23]A. Sweetland and H. Quay, "A Note on the K Scale on the Minnesota Multiphasic Personality Inventory," Journal of Consulting Psychology, XVII (1953), 314-316.

[24]G. F. King and M. A. Schiller, "A Research Note on the K Scale of the MMPI and 'Defensiveness,'" Journal of Clinical Psychology, XV (1959), 305-306.

[25]A. B. Heilbrun, Jr., "The Psychological Significance of the MMPI K Scale in a Normal Population," Journal of Consulting Psychology, XXV (1961), 486-491.

[26]P. Himelstein and B. Lubin, "Relationship of the MMPI K Scale and a Measure of Self-Disclosure in a Normal Population, Psychological Report, XIX (1966), 166.

For the purposes of the present study, all of the K scale items were used without adjustment. The raw score for each subject consisted of the number of items marked false.

Hurley Self-Disclosure Rating Scale

The Hurley Self-Disclosure Rating Scale was used by both subjects and leaders. The instrument is illustrated in Appendix C. Each group member and the leader was requested to make a decision regarding which behavior out of eight descriptive categories most approximated the within-group behavior of each other group member. Four categories are in the direction of self-concealment (from passive to active) and four are in the direction of self-revealment (from passive to active). Each individual's score on the instrument was the mean of the group ratings. Hurley states that "there is some evidence that individuals tend to rate themselves rather high on the scale, and there is a negative correlation between self-ratings and group ratings when the group rating is in the direction of self-concealment."[27]

Hurley found that her instrument correlated positively with two other group-based "openness" ratings ($r = .84$, $p < .001$, and .66, $p < .001$) and negatively with the "most closed" nominations index (-.59, $p < .001$). Thus, there is some evidence of concurrent validity with three other instruments used. The Hurley measure's negative correlation with the Jourard Questionnaire was noted in the previous section. The large correlation between the Hurley scale and the Subject Direct Disclosure Rating of self-disclosure used in the Hurley study suggests that the

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[27] S. J. Hurley, "Self-Disclosure in Counseling Groups as Influenced by Structured Confrontation and Interpersonal Process Recall," 34.

two scales may be nearly equivalent measures in view of the .45 stability of the Hurley Scale.[28] Computations of the average reliability of the Hurley ratings (the amount of agreement with which all members rated all other members) on post-treatment scores ranged from $r \simeq .49$ to $r \simeq .72$, and the reliability of the Hurley average ratings of persons (how each individual was perceived by entire group) on post-treatment scores ranged from $r = .90$ to $r \simeq .96$.

The predictive validity of the Hurley scale is illustrated by the significant correlations between pre-treatment Hurley scores and post-treatment scores on three other measures ($r \simeq .45$, $p < .01$, $r \simeq .29$, $p < .05$); and most closed nomination ($r = -.20$, $p < .05$).[29]

For the purposes of the present study the scale was used without alteration by subjects and group leaders.

Leader Scale for Rating Manner of Problem Expression

The Leader Scale for Rating Manner of Problem Expression used in the present study is an adaptation of van der Veen and Tomlinson's Scale for Rating the Manner of Problem Expression[30] which was originally used by judges to rate the content of individual therapy tape recordings. An illustration of the Leader Scale for Rating Manner of Problem Expression is found in Appendix D.

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[28] S. J. Hurley, "Self-Disclosure in Counseling Groups as Influenced by Structured Confrontation and Interpersonal Process Recall," 39.

[29] Ibid., 38.

[30] F. van der Veen and T. M. Tomlinson, "A Scale for Rating the Manner of Problem Expression," in The Therapeutic Relationship and Its Impact, ed. C. R. Rogers (Madison: University of Wisconsin Press, 1967, 599-601.

The original van der Veen and Tomlinson Problem Expression Scale was part of the battery of "Rating Scales for Therapeutic Progress" used by Rogers and associates in studies of psychotherapy with schizophrenics. The Problem Expression Scale was designed to evaluate the manner in which the client related to his problems--whether denying his problems, feeling they existed at a distance, or accepting full and personal responsibility for his contribution to them. The scale consists of seven stages, ranging from little or no subject expression of personal problems to talk about the member's involvement, reaction, contribution, understanding, and actual resolution of his problem situation.

The Problem Expression Scale is easier to use than the whole process scale developed by Rogers, and it has face validity for use with the speech of "normals." The Problem Expression Scale has been shown to correlate significantly with several other strands of the Rogerian process scale: "manner of relating" (close or open relationship with therapist), "construing of experience" (rigid to tentative meaning constructions), and "experiencing" (remote form, to immediate living in process).

In a study of a T-Group, the Problem Expression Scale, Clark and Culbert[31] tested the hypotheses that: (1) some members would show higher ratings on the scale near the end of their group experience than at the beginning, and (2) the members showing the most problem expression movement will be those members who enter into the most interpersonal

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[31] J. V. Clark and S. A. Culbert, "Mutually Therapeutic Perception and Self-Awareness in a T-Group," Journal of Applied Behavior Science, I (1965), 180-194.

relationships in which members perceive one another as high in level of regard, empathy, congruence, and unconditionality of regard. One-half of the members of the group had significantly positive Problem Expression Scale changes. Also, the number of mutually perceived therapeutic relationships in which a member participated was related to improvement of problem expression ratings.

Van der Veen and Tomlinson found the correlation between two judges over 90 taped segments was .46 ($p < .001$) on the Problem Expression Scale. The correlation indicates considerable agreement between the two judges as well as a considerable area of difference in the application of the scale. To achieve more stable values, the ratings of the two judges were averaged. The reliabilities of the averages (by Spearman-Brown formula) were .63 for the Problem Expression Scale. The agreement between the judges on the thirty interviews, rather than on the individual segments, was .60 for problem expression.

For the purposes of the present study the Problem Expression Scale was adapted for use in the group context. The leader was asked to rate each member of the group according to the member's general stage of development of problem expression in the group interaction. Instead of rating tape segments, the leader was asked to consider his average, or general behavior in the group.

Peer-Nomination Technique-Confiding-In Ranking Scale

Included in the test battery for subjects was the "Peer-Nomination Technique" suggested by Himelstein and Lubin[32] (see Appendix E).

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[32]P. Himelstein and B. Lubin, "Attempted Validation of the Self-Disclosure Inventory by the Peer-Nomination Technique," Journal of Psychology, LXI (1965), 13-16.

Himelstein and Lubin have used this technique in an attempt to validate the Jourard measure. The Jourard inventory was given to subjects first, then the nomination procedure was used. In the latter procedure, all subjects (members of fraternities or sororities) were given a roster of the members of the group. On the first nomination sheet, the subject was asked to select the name of the person to whom he would be most likely to tell his troubles, the second most-likely person, etc., until five names from the roster had been chosen. Next, the subject was to select the one individual to whom he was least likely to tell his troubles; and names were selected until five names were chosen. As reported in an earlier section, the results of the study were nonsignificant.

Unfortunately, Himelstein and Lubin present no figures suggesting the technique's validity or reliability. However, they do state that on the basis of Jourard's theoretical ideas those who score high on the Jourard test or who are nominated as confiders (self-disclosers) would also be nominated as individuals in whom others would confide.

For the purposes of the present study the technique was altered to secure from each subject the ranking of each other member of the group from the individual to whom he would most like confide, to the individual to whom he would least likely confide. Each subject's mean ranking is listed as a percentile score.

Table 5.6

Summary of Variables Used in Factor Analysis

Number	Type of Variable	Variable Name
1	Group Situation Variables	Group Size
2		Group Interaction Hours
3		Number of Group Meetings
4		Group Age at Administration
5		Group Interaction Level
6	Subject Variables	Subject Age
7		Subject Sex
8		Subject - Marital Status
9		Subject - Number of Brothers
10		Subject - Number of Sisters
11		Subject - Occupational Status
12		Subject - Educational Level
13	Measures	Leader - Problem Expression
14		Leader - Hurley Self-Disclosure
15		Self-Rating - Hurley Self-Disclosure
16		Peer Mean - Hurley Self-Disclosure
17		Disclosure Growth - with Mother
18		Disclosure Growth - with Father
19		Disclosure Growth - with Spouse
20		Disclosure Growth - with Female Friend
21		Disclosure Growth - with Male Friend
22		Disclosure Growth - with Others
23		Other Confiding-In Nomination
24		"K" Scale - MMPI
25		Jourard Scale
26		Plog Scale
27		Taylor Scale
28		Total Self-Report Scale
29-68	Topic - Targets	8 Topics
		A Attitudes
		B Body
		C Emotions
		D Finances
		E Love
		F Marriage
		G Occupation
		H Personal - Interpersonal with 5 Targets
		1 Mother
		2 Father
		3 Spouse
		4 Close Friend - Same Sex and Age
		5 Close Friend - Other Sex, Same Age

Statistical Procedure

A number of methods for factoring a matrix are available. Harmon lists eleven types of factor solutions.[33] However, only the principal (or principal components) axis solution is mathematically precise[34] and capable of extended analysis. With the availability of computers, investigators are able to obtain a principal-factor solution for an observed correlation matrix, and then transform it to a varimax multiple-factor solution.[35]

The principal axis solution extracts all of the variance presented by an intercorrelation. Other factor solutions leave residual correlations. Because of its precision and flexibility, the principal components (axis) solution was used, followed by varimax rotation. The Kiel-Wrigley criterion of K-1 tests loading on a factor (K being the number of factors) was used in combination with inspection of the content loadings for psychological sense to determine when to cease rotation.

The computer input consisted of raw data from punch cards. The CISSR library tape (TR34), FACTORA, from the Michigan State University computer Institute for Social Science Research was used. The diagonals were given the value of one in order for the extraction to account for all possible variance. Sixty-eight variables were factor analyzed. (Within Table 5.6 a listing of variables used is summarized.) Five group interaction and demographic items, seven demographic subject items,

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[33]Harry H. Harmon, Modern Factor Analysis, 99-109.

[34]Raymond B. Cattell, Factor Analysis (New York: Harper and Brothers, 1952), 328.

[35]Harry H. Harmon, op. cit., 107.

sixteen instrument items [including seven self-disclosure tests], and forty topic-target items were included in the factor analysis.

The mathematics of the reduction of the correlational matrix into factors rests on the assumption that the total intercorrelation variance can be divided into independent sets of variance. The independent sets represent factors of the number of orthogonal dimensions of geometric space necessary to account for an intercorrelational matrix. It is not necessary that correlations be normally distributed or that the population from which the correlations are obtained be normally distributed.

The varimax method of rotation is a modification of the quartimax method which more nearly approximates simple structure. Varimax rotation requires a high-speed electronic computer, and, according to Harmon, "is the most popular means of getting an orthogonal multiple-factor solution."[36] The principle of factorial invariance is stated by Thurstone as "a fundamental requirement of a successful factorial method, that the factorial description of a test must remain invariant when the test is moved from one battery to another which involves the same common factors."[37] The varimax method tends to have invariance characteristics. In addition, it achieves Thurstone's original criteria for simple structure:

1. Each row of the factor structure should have at least one zero (some of the other factors should not correlate with the item).

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[36]Harry Harmon, Modern Factor Analysis, 309.

[37]L. L. Thurstone, Multiple Factor Analysis (Chicago: University of Chicago Press, 1947), 361.

2. Each column should have at least m zeros (m being the total number of common factors).
3. For every pair of columns there should be at least m variables whose entries vanish in one column but not in the other.[38]

Only those factors which had a sum of squares (Eigen value) in excess of one were rotated. Variables were interpreted with caution if their highest loading on a factor fell below .35.

Summary

The study consists of a factor analysis of a number of self-disclosure instruments, group and subject demographic items, and target-topic variables. The hypotheses state that the factorial analysis will produce one general factor, three group factors, and three specific factors.

Thirteen counseling groups involving 96 subjects were used as the sample in the study. Seven professional group leaders conducted a total of 833 hours of group interaction. Seven different self-disclosure instruments were used in the study involving a total of 68 variables in the factor analysis.

The principal axis solution for factoring a correlational matrix was used, followed by varimax rotation. The Kiel-Wrigley criterion was used to set limits on rotation, and only those factors which had a sum of squares (Eigen value) in excess of one were rotated.

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[38] L. L. Thurstone, Multiple Factor Analysis, 335.

CHAPTER VI

RESULTS OF THEORETICAL AND EMPIRICAL ANALYSIS

The 5 group demographic, 7 subject demographic items, 16 instrment variables, and 40 topic-target items were subjected to factor analysis to provide a base for theorizing about the structure of the self-disclosure construct. As specified in Chapter Five, the principal axis solution for factoring a matrix was used. Factors with a sum of squares (Eigen value) in excess of 1 were rotated using the varimax method. Rotation was continued until (1) at least K-1 (K being the number of factors) items loaded on all factors, and (2) the resultant factors made psychological sense.

Hypotheses

Three hypotheses dealing with general, group, and specific factors were considered in the analysis. The hypotheses tested were:

> The factor analysis of the correlational matrix using the principal axis solution and varimax rotation will yield an interpretable factor structure consisting of seven factors described as follows:

General Factor

> Hypothesis I: The factor analysis of the correlational matrix using the principal axis solution will yield one general (G) factor that will tend to correlate with all factors. This general factor can be labeled "uncovering," or "revealing" what is hidden from others.

Group Factors

Hypothesis II: The factor analysis of the correlational matrix using the principal axis solution will yield three group factors as follows:

(a) One group factor will include both a behavioral and cognitive aspect of self-disclosure, and can be labeled the rational-social factor.

(b) One group factor will include both a behavioral and affective aspect of self-disclosure and can be labeled the impulsive-social factor.

(c) One group factor will include both an affective and cognitive aspect of self-disclosure, and can be labeled the rational-subjective factor.

Specific Factors

Hypothesis III: The factor analysis of the correlational matrix using the principal axis solution will yield three specific (unique) factors as follows:

(a) One unique factor will include the cognitive aspect of self-disclosure, and can be labeled the topic factor.

(b) One unique factor will include the behavioral aspect of self-disclosure, and can be labeled the behavioral factor.

(c) One unique factor will include the affective aspect of self-disclosure, and can be labeled the emotional or experiencing factor.

All of the hypotheses were kept in above research form because they are not tested in an exact statistical sense against error models. The hypotheses were not reformulated in Null form.

Statistical Findings

Correlation Matrix and Unrotated Factors

The means and standard deviations for all the items factor analyzed are reproduced in Tables G.1 and G.2, Appendix G. In the principal axis analysis 14 items had Eigen values exceeding 1. Since

Eigen values 15 through 68 were either negative or less than the threshhold value 1.00, the associated factors were not used. It is not practical to include all of the original correlation matrix for the 68 variables nor all of the unrotated factors which had sums of squares (Eigen values) in excess of 1 in the study. However, since a major part of the study involves the factor analysis of seven self-disclosure instruments, the item intercorrelations of 16 instrument items used in the factor analysis is included in this section and reproduced in Table 6.1.

Item (A) was the leader ratings of subject problem expression. Items (B), (C), and (D) involve ratings on the Hurley Self-Disclosure Rating Scale. Item (B) was the leader rating, item (C) mean peer rating, and item (D), self-rating on the Hurley scale. Items (E) through (J) were taken from the Plog scale and involve subject self-ratings on whether in the last two years they had grown or fallen behind in disclosing behavior toward Mother (E), Father (F), Female Friend (G), Male Friend (H), Spouse (I), and whether they see themselves as more or less self-disclosing than other people (J).

Item (K) represents mean peer nominations of confiding-in behavior, and item (L) involves the "K" Scale of the MMPI. Items (M), (N), (O), (P), represent, respectively, the Jourard Scale, the Plog Scale, the Taylor Scale, and the total Self-Report Self-Disclosing Inventory.

Inspection of the intercorrelation matrix reveals a number of interesting relationships. The intercorrelations of the four major self-report instruments (the Jourard questionnaire, the Plog Scale, the Taylor Item Pool, and the Self-Report Self-Disclosure Inventory)

Table 6.1

Item Intercorrelations of Sixteen Instrument Items Used in Factor Analysis

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Problem Expression - Leader	(A)															
Hurley Ratings - Leader	(B)	.70**														
Hurley Ratings - Peer	(C)	.67**	.79**													
Hurley Ratings - Subject	(D)	.62**	.70**	.75**												
Growth in Disclosing to Mother	(E)	.05	-.06	.00	-.08											
Growth in Disclosing to Father	(F)	-.03	.02	-.05	-.12	.51**										
Growth in Disclosing to Female Friend	(G)	-.18	-.12	-.16	-.22*	.06	.11									
Growth in Disclosing to Male Friend	(H)	-.23*	-.24*	-.16	-.22*	.12	.15	.66**								
Growth in Disclosing to Spouse	(I)	-.04	.08	.10	.14	.04	-.09	.11	.01							
More or Less Disclosing than Others	(J)	.18	-.26**	-.34**	-.24**	.04	.08	.27**	.29**	.22*						
Peer Ranking of Confiding	(K)	.53**	.43**	.62**	.45**	.07	-.07	-.10	-.13	-.03	-.28**					
"K" Scale - MMPI	(L)	-.10	-.08	-.12	.06	-.21*	-.23*	-.27**	-.25*	.08	-.05	.00				
Jourard Scale	(M)	.24*	.20*	.29**	.27**	-.31**	-.24*	-.30**	-.37**	-.16	-.39**	.15	.30**			
Plog Scale	(N)	.27**	.23*	.26**	.30**	-.23*	-.19	-.32**	-.33**	-.08	-.38**	.13	.28**	.93**		
Taylor Scale	(O)	.23*	.21*	.28**	.27**	-.28**	-.17	-.30**	-.39**	-.11	-.41**	.14	.29**	.94**	.93**	
Self-Report Self-Disclosing Inventory	(P)	.23*	.21*	.28**	.27**	-.28**	-.18	-.30**	-.39**	-.12	-.42**	.13	.28**	.94**	.94**	.99**

(N 96) *significant at .05 level
**significant at .01 level

were in the middle to high 90's, and showed that the instruments intercorrelate at such a high level that they were essentially measuring the same criterion. The Manner of Problem Expression Scale (A) correlated in the 60's and 70's with each of the 3 ratings on the Hurley Scale. The correlations between self (D), leader (B), and peer (C) ratings on the Hurley Scale are fairly high ($r \simeq .70$ to .79), showing some consistency among the three types of self-disclosure judgments.

The three ratings of the Hurley Scale were only moderately correlated with peer rankings of confiding-in others in the group (K). The Hurley leader rating (B), the Hurley peer rating (C), and the Hurley subject rating (D) correlated .43, .62, and .45 respectively with the confiding-in ranking. The leader rating of problem expression only correlated .53 with the peer rankings of confiding-in scale (K).

The other surprising finding was the relatively high correlation between growth in disclosing to female friend and to male friend (.66), and between growth in disclosing to mother and to father (.51). One interpretation of the findings regarding growth in disclosing to male and female, and to mother and father, may be that the focus was on the concepts of "parents" and "close friends," rather than (1) on the separate concept of "mother," or "father" or "male friend" or "female friend," or (2) on the concept of "sex."

Rotated Factors

Applying the criteria described in Chapter Five rotation was stopped at the six-factor level. The items and factor loadings are summarized in Tables 6.2 through 6.7

Table 6.2

Factor I Items and Loadings

Item Number	Item Name	Loading
67	Willingness to Disclose Personal-Interpersonal Topics to Close Friend of Same Sex and Age	.8587
52	Willingness to Disclose Love, Dating and Sex Topics to Close Friend of Same Sex and Age	.8583
42	Willingness to Disclose Emotional and Feeling Topics to Close Friend of Same Sex and Age	.8511
57	Willingness to Disclose Marriage and Family Topics to Close Friend of Same Sex and Age	.8475
62	Willingness to Disclose Occupation and Work Topics to Close Friend of Same Sex and Age	.8095
68	Willingness to Disclose Personal-Interpersonal Topics to Close Friend of Other Sex-Same Age	.8043
47	Willingness to Disclose Financial Topics to Close Friend of Same Sex and Age	.8033
43	Willingness to Disclose Emotional and Feeling Topics to Close Friend of Other Sex-Same Age	.8032
37	Willingness to Disclose Physical Condition and Appearance Topics to Close Friend of Same Sex-Same Age	.8028
58	Willingness to Disclose Marriage and Family Topics to Close Friend of Other Sex-Same Age	.7966
63	Willingness to Disclose Occupation and Work Topics to Close Friend of Other Sex-Same Age	.7728
53	Willingness to Disclose Love, Dating and Sex Topics to Close Friend of Other Sex-Same Age	.7713
48	Willingness to Disclose Financial Topics to Close Friend of Other Sex-Same Age	.7643
38	Willingness to Disclose Physical Condition and Appearance Topics to Close Friend of Other Sex-Same Age	.7010
32	Willingness to Disclose Attitude, Opinion, and Value Topics to Close Friend of Same Sex and Same Age	.6951
33	Willingness to Disclose Attitude, Opinion, and Value Topics to Close Friend of Other Sex-Same Age	.6661
27	Total Taylor Scale	.6610
28	Total Self-Report Self-Disclosing Inventory	.6555
19	Self-Rating of Growth in Disclosing to Female Friend	.4691
22	Self-Rating of More or Less Disclosing than Others	.4407

Factor I Twenty items loaded heaviest on Factor I. The items were drawn primarily from the topic-target variables and the two major self-report instruments (Taylor Items and Total Inventory). The items describe a person who sees himself willing to disclose the most intimate information to social contacts (rather than to parents or even spouse), especially to a close friend of the same sex and age. Factor I accounted for .2016 proportion of the variance. The factor was labeled Target-Topic Intimacy.

Factor II Twenty items loaded heaviest on Factor II. The items were drawn primarily from the topic-target variables, the Jourard Scale and the Plog Scale. All eight topical categories are included and focus on disclosure to parents. The items describe a person who sees himself willing to disclose fairly intimate information to parents (especially to mother), but preferring to discuss most personal data concerning love, dating, and sex the least. Factor II accounted for .1856 proportion of the variance. The factor was labeled, Uncovering to Parents.

Table 6.3

Factor II Items and Loadings

Item Number	Item Name	Loading
65	Willingness to Disclose Personal-Interpersonal Topics to Father	.8834
64	Willingness to Disclose Personal-Interpersonal Topics to Mother	.8780
39	Willingness to Disclose Emotional and Feeling Topics to Mother	.8665
59	Willingness to Disclose Occupational and Work Topics to Mother	.8521
60	Willingness to Disclose Occupational and Work Topics to Father	.8482
34	Willingness to Disclose Physical Condition and Appearance Topics to Mother	.8341
40	Willingness to Disclose Emotional and Feeling Topics to Father	.8180
54	Willingness to Disclose Marriage and Family Topics to Mother	.8084
35	Willingness to Disclose Physical Condition and Appearance Topics to Father	.8038
55	Willingness to Disclose Marriage and Family Topics to Father	.7857
29	Willingness to Disclose Attitude, Opinion, and Value Topics to Mother	.7194
30	Willingness to Disclose Attitude, Opinion, and Value Topics to Father	.7164
49	Willingness to Disclose Love, Dating, Sex Topics to Mother	.7139
50	Willingness to Disclose Love, Dating, Sex Topics to Father	.6823
25	Jourard Scale	.6519
26	Plot Scale	.6365
45	Willingness to Disclose Financial Topics to Father	.5986
44	Willingness to Disclose Financial Topics to Mother	.5847
17	Self-Rating of Growth in Disclosing to Mother	.3943
18	Self-Rating of Growth in Disclosing to Father	.2676

Factor III Eight items loaded heaviest on the third factor. The items were drawn primarily from the topic-target variables and included disclosure of all 8 topic categories to spouse. A low intimacy topic area (Occupation and Work) carried the highest loading, and the lowest intimacy topic area (Attitudes, Opinions, Tastes, and Values) carried the lowest loading. The items describe a person who see himself willing to disclose both high and low intimacy level information to his married partner. Surprisingly, the factor did not include growth in disclosing to spouse. Factor III accounted for .0932 proportion of the variance. The factor was labeled Uncovering to Spouse.

Table 6.4

Factor III Items and Loadings

Item Number	Item Name	Loading
61	Willingness to Disclose Occupational and Work Topics to Spouse	.8746
41	Willingness to Disclose Emotional and Feeling Topics to Spouse	.8716
66	Willingness to Disclose Personal-Interpersonal Topics to Spouse	.8664
36	Willingness to Disclose Physical Condition and Appearance Topics to Spouse	.8419
56	Willingness to Disclose Marriage and Family Topics to Spouse	.7956
5151	Willingness to Disclose Love, Dating, and Sex Topics to Spouse	.7942
46	Willingness to Disclose Financial Topics to Spouse	.7123
31	Willingness to Disclose Attitude, Opinion, and Value Topics to Spouse	.6338

Factor IV Five items loaded heaviest on the fourth factor. The items drew primarily from subject-demographic variables such as age, occupational and marital status, and number of sisters possessed by group member. The items reveal that self-disclosure is conditioned first by the age of the individual (the heaviest loading), and then by his occupation and marital status. The lowest loadings (.2696) was whether the subject has younger or older sisters. This low loading should be interpreted carefully. Factor IV accounted for .0517 propostion of variance. The factor was labeled Subject Demographic Convergence.

Table 6.5

Factor IV Items and Loadings

Item Number	Item Name	Loading
6	Demographic Variable, Subject Age	.8956
11	Demographic Variable, Subject Occupational Status	.7941
21	Self-Report of Growth in Disclosing to Spouse	.7249
8	Demographic Variable, Subject Marital Status	.7076
10	Demographic Variable, Subject Number of Sisters	.2696

Factor V Five items loaded heaviest on the fifth factor. The content drew from ratings of subject self-disclosure and problem expression behavior by leaders and group peers. The highest loading was leader rating on the Hurley self-disclosure scale. The items in general focus on observations of self-disclosing behavior in the group setting and in

interaction with other individuals. Factor V accounted for .0592 proportion of variance. The factor was labeled Uncovering Performance Rating.

Table 6.6

Factor V Items and Loadings

Item Number	Item Name	Loading
14	Hurley Self-Disclosure Scale - Leader Rating	.8896
15	Hurley Self-Disclosure Rating Scale - Peer Rating	.8536
13	Manner of Problem Expression - Leader Rating	.7636
16	Hurley Self-Disclosure Rating Scale - Self-Rating	.7560
23	Peer Ranking of Members on Confiding-In Others	.6055

Factor VI Nine items loaded heaviest on the sixth factor. The items represent a mixture of group and subject demographic variables, with the group variables generally receiving the highest loadings. The size of the group and the number of meetings and interaction hours seem to be the strong factors in disclosing behavior. Factor VI accounted for .0773 proportion of the variance. The factor was labeled Subject-Group Maturation Opportunities.

Table 6.7

Factor VI Items and Loadings

Item Number	Item Name	Loading
5	Group Size	.7805
2	Number of Group Meetings	.7350
3	Group Age at Administration of Test Battery	.6953
12	Demographic Variable, Subject Educational Level	.6842
1	Number of Group Interaction Hours	.6315
24	"K" Scale - MMPI	.5041
20	Growth in Disclosing to Close Friend - Male Sex	.4167
7	Demographic Variable, Subject Sex	.3642
9	Demographic Variable, Subject Number of Brothers	.2414

The six factors derived from the factor analysis are summarized in Table 6.8 with a brief description of the major elements in the factor. The six factors accounted for .67 percent of the variance.

Table 6.8

Interpretive Emphasis of the Six Factors
Produced by the Factor Analysis

Factor	Name	Description
1	Target-Topic Intimacy	Willingness of subject to disclose all topic areas to peer-friends
2	Uncovering to Parents	Willingness to disclose all topic areas to mother and father
3	Uncovering to Spouse	Willingness to disclose all topic areas to spouse
4	Subject Demographic Convergence	The influence of time and willingness of subject to learn from experience. The tendency of time to foster commonality and convergence.
5	Uncovering Performance Rating	The reflected appraisals of revealing behavior
6	Subject-Group Maturation Opportunities	The opportunities the subject has for growth experiencing interaction with others. Involves both personal (emotional) and group learning experiences.

Factor Interpretation Related to Factor Hypotheses

The decision to reject or accept the original factor hypotheses of the study regarding general, group, and specific factors was a subjective one on at least two levels.

First, the naming of the factors was subjective. Four independent judges were given the items and factor loadings and asked to label the factors. Thereafter, considerable time was spent discussing the labels until consensus was reached in giving them names. Secondly, the labels and items were visually inspected to determine the extent of congruence or overlap with labels suggested in the hypotheses.

Hypothesis I

Hypothesis I was stated in Chapter Five as follows:

> The factor analysis of the correlational matrix using the principal axis solution will yield one general (G) factor that will tend to correlate with all factors. This general factor can be labeled "uncovering" or revealing that which is hidden from others.

To test the hypothesis regarding the general factor the highest three loadings on each factor were chosen as representative of the plane of the factor, and correlated with each of the three highest loadings of the other factors. The median intercorrelation of each set of factors was chosen and plotted in a correlation matrix as a crude estimate of the intercorrelation of the six factors.

The estimate of the inter-item correlation of factors was summarized in Table 6.9.

Table 6.9

Estimate of Inter-Item Correlation of Six Factors by Use of Median Coefficients from Intercorrelation Matrix

		Factors					
		I	II	III	IV	V	VI
Factors	I						
	II	.22*					
	III	.33**	.36**				
	IV	-.17	.00	-.11			
	V	.25*	.07	.09	.02		
	VI	.29**	.05	.20*	-.16	.10	

(N = 96)

*significant at .05 level
**significant at .01 level

According to Table 6.9, Factor I comes closest to being a general factor. Four of five inter-item correlations were significant, two at the .01 level. Factor I was labeled Target-Topic Intimacy and involved the subject reporting his willingness to disclose all eight topic areas to both male and female peer friends. The concept of uncovering was the theme stressed, but the general factor derived from the analysis also included the idea of uncovering to a close friend. The close friend can be of either sex, because both received disclosure of all topic categories. Thus, according to the results of the estimate of the inter-factor correlation, Hypothesis I is accepted. The general factor was actually more specific than "uncovering" or "revealing," but it was a general (G) factor.

Hypothesis II

Hypothesis II dealt with group factors. Hypothesis II was formulated in Chapter Five as follows:

> The factor analysis of the correlational matrix using the principal axis solution will yield three group factors as follows:
>
> (a) One group factor will include both a behavioral and cognitive aspect of self-disclosure, and can be labeled the rational-social factor.
>
> (b) One group factor will include both a behavioral and affective aspect of self-disclosure, and can be labeled the impulsive-social factor.
>
> (c) One group factor will include both an affective and cognitive aspect of self-disclosure, and can be labeled the rational-subjective factor.

According to the results of the factor analysis, Hypothesis II (a) was accepted and Hypotheses II (b) and II (c) were rejected. It is clear that factors I, II, and III involve both a rational and social emphasis. All eight topic areas are represented in each of the three

above factors giving the factors a cognitive or rational orientation. Also, the focus of the topic disclosure was to social contacts; for factor I disclosure to peer-friends (especially of same sex and age), for factor II disclosure to mother and father (parents), and for factor III disclosure to spouse. Thus, there were three factors that involved both a rational and social emphasis.

Hypothesis II (b) involved a behavioral and affective aspect. The behavioral (social) element was present in five out of the six factors obtained. But the affective aspect did not reveal itself clearly in any of the factors. There were affective (emotion and feelings) items included in the eight topic categories, but the affective domain did not predominate. Even the intimacy level dimension in factors I and II did not come through strong enough to consider it primarily affective in nature.

Hypothesis II (c) called for the affective and cognitive aspect of self-disclosure. Again, in Hypothesis III (c), as with Hypothesis II (b), the rational (topic) emphasis was present in the first three factors, but the affective aspect was not sufficiently strong to warrant acceptance of Hypothesis II (c).

Hypothesis III

Hypothesis III dealt with specific (unique) factors. Hypothesis III was formulated in Chapter Five as follows:

> The factor analysis of the correlational matrix using the principal axis solution will yield three specific (unique) factors as follows:
>
> (a) One unique factor will include the cognitive aspect of self-disclosure, and can be labeled the topic factor.

(b) One unique factor will include the behavioral aspect of self-disclosure, and can be labeled the behavioral factor.

(c) One unique factor will include the affective aspect of self-disclosure, and can be labeled the emotional or experiencing factor.

According to the results of the analysis, Hypotheses III (a) and III (c) were rejected, and Hypothesis III (b) was not clearly rejected. The cognitive (topic) aspect of self-disclosure was present in factors I, II and III, but disclosure of topics was not the sole focus of any of the first three factors. Factors II and III were more group factors than unique (specific) factors. The three factors, I, II, and III included topic disclosure to social contacts, or parents, or spouse. However, there was some justification for not clearly rejecting Hypothesis III (b), because factor VI seemed to be auunique, single factor dealing with growth through interaction with others, and factor V was a single factor dealing with the appraisal of uncovering behavior. From the analysis of the theorists it was seen that the behavioral aspect involved acts or "misdeeds" against others (or society). Thus, factors V and VI give partial support to Hypothesis III (b).

Synthesis of Theoretical and Empirical Analysis

The hypotheses of the study dealt with the content of the self-disclosure construct. However, it was the purpose of the study to also consider the network of constructs surrounding the self-disclosure concept, and the associated variables that seem to influence the giving and receiving process of self-disclosure.

The high loadings or the empirically derived factors I, II, and III seemed to dramatize the importance of the self-disclosure

target. The amount and kind of self-disclosure was conditioned by the person receiving the disclosure. The disclosure's relationship to receiver was the crucial variable in three factors (I, II, and III) accounting for the largest proportion of variance. The target-person not only influenced the range of topics to be disclosed, but also controlled the degree of intimacy to be expected from the discloser. The focus in factor I was on social contacts, especially on disclosure to close friend of same sex and age, then disclosure to close friend of other sex. Factor II emphasized disclosure to parents, while factor III centered on disclosure to spouse exclusively. Both factor I and factor II had the highest loadings on the most intimate test items. One reason for the above findings may be the relative youth and unmarried status of the majority of the subjects in the sample. The college student was more willing to disclose intimate information to close friend (of both sexes) than to parents.

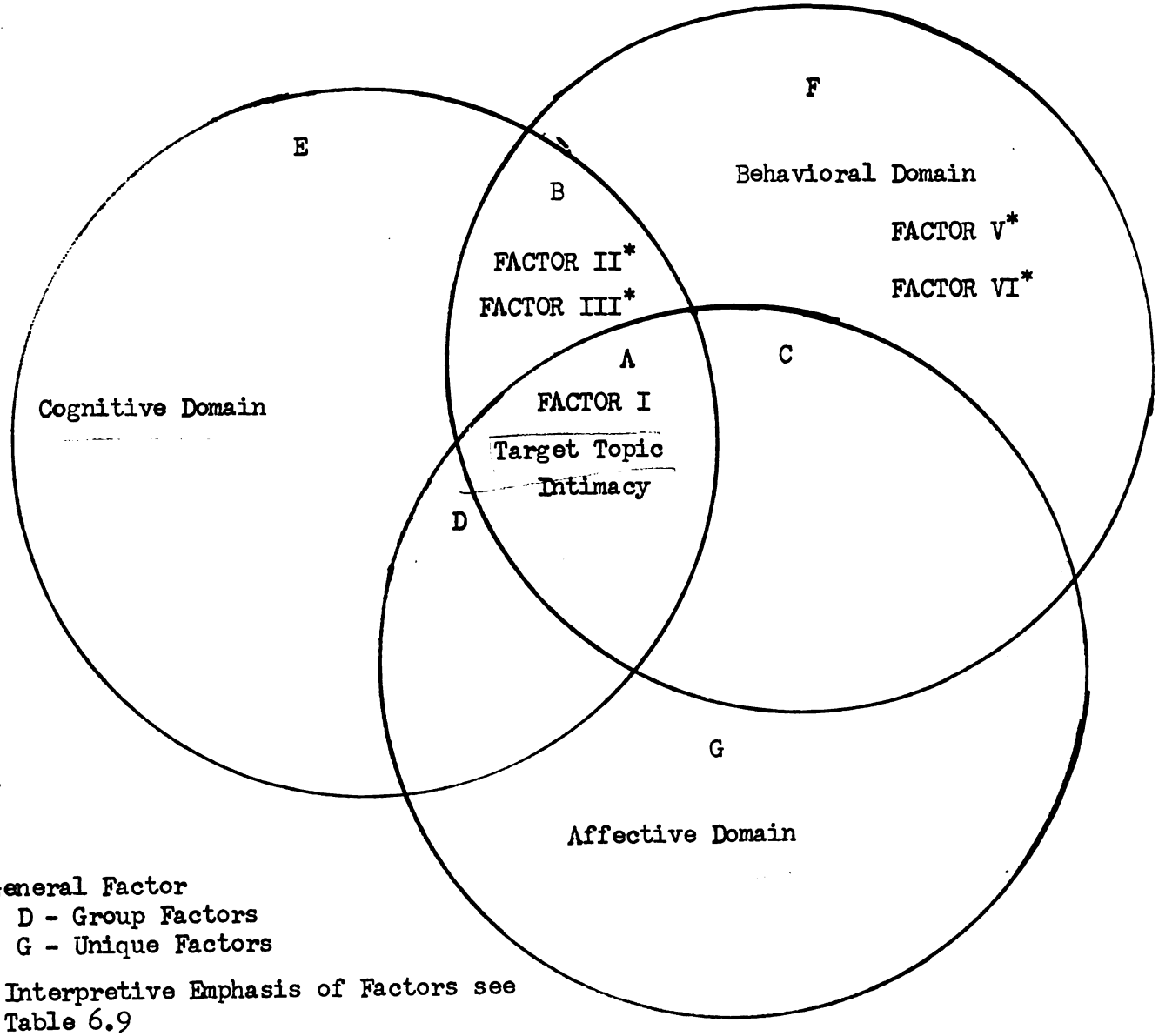
Theoretical Modification and Adaptation

Inspection of the content of the factors leads to the speculation that four of the factors are operational statements closely allied with Elements (Dimensions) I, II, and VI diagrammed in Figure 4.5, Chapter Four. In Figure 6.1 the fourth chapter figure is reproduced with the various factors assigned to their logical position within the previously postulated schema.

The empirical evidence derived in the first three factors gave strong support to the theoretical positions of Jourard, Plog, and Taylor. In particular, Jourard and Plog consider self-disclosure the ability to share personal topics (values, tastes, and feelings about

money, job, body, personality) with selected target persons. The focus on target and topic was the major theme of factors I, II, and III. Also, Taylor's item intimacy level concept added a new dimension to target-topic emphasis. Factors I and II tended to support Taylor's contentions because the highest loadings on both factors I and II were from the highest intimacy level data categories. It is also significant to note that all four instruments, Jourard, Plog, Taylor, and the experimentor self-disclosure inventory, were included in the loadings of factors I and II. Thus, the analysis of current measures available seem to give empirical support to Jourard's theoretical ideas regarding the content of self-disclosure. As Jourard emphasizes, the self-disclosure construct possesses a cognitive dimension (see Figure 4.5), but a topic element in conjunction with a target person.

Although the factor analysis provided some basis for positing a behavioral dimension involved in the self-disclosure construct, the results of the empirical analysis were not conclusive. Factor V did reflect a focus on the rating of uncovering behavior in the group context. However, because of the lack of the use of any specific measure in the empirical analysis dealing with Mowrer's "misdeeds" concept of self-disclosure, the empirical findings only partially support Mowrer's theoretical ideas. In fairness to Mowrer, it must be stated that the absence of any behavioral instrument concerned with his specific ideas was a serious limitation of the study. In spite of the limitation, the Uncovering Performance Rating factor did show that Mowrer's general behavioral dimension has theoretical importance for the construction of a theory of self-disclosure and should be retained.



Areas

A - General Factor
B, C, D - Group Factors
E, F, G - Unique Factors

*For Interpretive Emphasis of Factors see Table 6.9

Figure 6.1. Diagram Showing the Relationship of the General, Group, and Specific Empirically Derived Factors Involved in the Content of the Self-Disclosure Construct

The above comments regarding Mowrer's contribution to the building of a theory of the self-disclosure also apply to Rogers. No specific instrument measuring "affective" disclosure was included in the array of tests used. The Manner of Problem Expression Scale was the closest evaluation of affect in the series. The topic category "Emotions and Feelings" ranked second in intimacy level and appeared at or near the top of factors I, II, and III. However, the presence of the above two variables does not justify acceptance or rejection of Rogers' affective dimension. Since the affective dimension was not adequately represented in the battery of tests administered, an empirical judgment regarding the importance of the affective dimension of self-disclosure is not justified and must wait on future research.

Instruments

A previous section described the results of the empirical analysis and the reliability and validity of the three major instruments, the Plog scale, the Taylor Items, and the Jourard Questionnaire. The three above instruments are the best empirical measures of the self-disclosure construct in existence. However, the focus of the instruments was limited to target-topics, and the definition of the construct by the authors was less than precise. The items from the Plog scale dealing with growth in disclosing to mother, father, spouse, friend, and to other individuals, did not, in general, contribute anything new to the present knowledge or theory of self-disclosure as a construct.

The relatively high inter-judge reliability of ratings on the Hurley scale offers researchers new hope in investigating other ways

of appraising self-disclosure behavior besides self-report judgments. The fact that the Problem Expression scale and the confiding-in rankings correlated to a moderate degree with the Hurley ratings should be noted. As indicated earlier, it could be that the Problem Expression and the Hurley scales are measuring somewhat the same criterion. But, the inclusion of Problem Expression scale and the confiding-in rankings in the empirical analysis seemed to contribute little to knowledge of the self-disclosure construct.

The failure of the "K" scale of the MMPI to correlate with any other measure was not surprising in view of the confusion that exists regarding the "K" scale's reliability and validity as a separate measure of defensiveness, and the differential results with males and females. The highest correlation (-.27) of the scale with growth in disclosing to female friend was hard to interpret. Perhaps the fact that more females were present in the sample may have raised the correlation. Some interpret a high female "K" score as a sign of a healthy individual.

Construct Network and Contingencies

In Figure 4.4, in Chapter IV, the theoretical constructs associated with self-disclosure were summarized. The factor analysis provided empirical support for some of the constructs listed, and added other variables considered important in describing other internal and external contingencies.

The empirically derived factors give strong support to Jourard's concept of topics, and overwhelming support to the two external contingencies (target persons) (Jourard) and "significant

others" (Mowrer). Indirectly, the ratings in Factcr V lend empirical support to Jourard's concept of "role."

The empirical data suggests that the concept of time (age)--factor IV--be given a prominent place in the network of constructs. And, along with age, one's position in society should be recognized as influencing the process of self-disclosure. That is, such concepts as occupation, education and marital status (factor IV) should be considered when appraising disclosure. Occupation, education, and marital position represent an individual's contact with society. The finding lends some support to Mowrer's theoretical construct "society." Also, the data from factor VI suggested that not only was the nature of the relationship to the "significant other" important, but also the number of targets present and the length of time spent with the target was vital in understanding the curvilinear nature of self-disclosure.

Outline of a Modified Interpersonal Self-Disclosure Model

On the basis of the theoretical and empirical analysis a new outline of a self-disclosure social interaction model is presented. But in order to develop a theory of self-disclosure using the theoretical and empirical data of the study, a reformulation of the definition of self-disclosure presented in Chapter One is necessary.

Generic Definition of Self-Disclosure

> Self-disclosure is the act of communicating verbally or behaviorally to one or more other individuals in a specific social-interpersonal situation some intimate past or present (or sometimes future) information, feelings or actions that the discloser believes other persons would unlikely possess unless the discloser reveals it.

The above definition stresses six aspects of self-disclosure: goal, mode, target-context, tense, content, and type.

Two general types of goals may be identified; meta-goals, and immediate goal. Meta-goals refer to such ideas as disclosing for the purpose of catharsis, seeking support, wanting to be known to others, enhancing self-acceptance, or working through a problem or idea. Immediate goals are more utilitarian in nature in that they are used in the service of meta-goals. The definition of self-disclosure uses an immediate goal. Some writers refer to self-disclosure as an ability or characteristic. The above definition stresses that self-disclosure is an action (not a trait) having a communicative function. The definition sees self-disclosure as an action whereby messages with content are transmitted from one individual to another. The term "goal" of disclosure also refers to the reasons, needs, or motivations which prompt the revealing of the self.

The definition takes into consideration the mode of self-disclosure. Disclosure can be verbal, non-verbal, or behavioral. Different modes of communication carry different meanings for receiver and discloser. Some individuals claim "action (behavior) speaks louder than words." Other individuals (counselors and therapists) feel that the therapists' sensing of the expressions of feelings by the client is important. The definition stresses the idea that self-disclosure involves the use of several "means" or modes of conveying disclosure content.

The phrase "one or more individuals" stresses the target and contextual situation. Self-disclosure always has a direction and

target. The communication has a receiver. And as Richers-Ovisiankina[1] and Jourard and Lasakow[2] have shown the amount and kind of self-disclosure is dependent upon the relationship that exists between the discloser and disclosee. The empirical findings in the current study showed that any discussion of self-disclosure must include the nature of the target and target situation (who, how many are present, for how long). What constitutes too much self-disclosure, under what circumstances, and by whom is a complex issue. The phrase "in a specific social-interpersonal situation" also focuses on the target and target context, and interpersonal process of self-disclosure. In a recent publication Culbert[3] lists three dimensions that should also be included in the consideration of the interpersonal process of self-disclosure. These dimensions are: (1) the appropriateness of the disclosure, (2) the timing of the disclosure (when it entered the verbal interchange), and (3) the communicator's *a priori* intention in making the disclosure known.

Mowrer's idea of disclosure as confession of past (or present) "misdeeds" helps emphasize the value of time as a variable in the study of the self-disclosure construct. The appearance of factor IV in the empirical analysis makes time a consideration not only for the

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[1] M. Richers-Ovisiankina, "Social Accessibility in Three Age Groups," Psychological Reports, II (1956), 283-294.

[2] S. M. Jourard and P. Lasakow, "Some Factors in Self-Disclosure," Journal of Abnormal and Social Psychology LVI (1958), 91-98.

[3] S. Culbert, The Interpersonal Process of Self-Disclosure: It Takes Two to See One (Washington, D. C.: National Training Laboratory Institute for Applied Behavioral Science, Renaissance Editions, Inc. 1968), 27-29.

subject, but for nature of the content of disclosure. When did the act, feeling, or thought that is being disclosed take place? Was it past, present, or future? Thus, the aspect of tense was included in the definition.

The idea of content of self-disclosure was one of the themes of the study. The theoretical and empirical analysis emphasized the cognitive, affective, and behavioral elements of self-disclosure. The three kinds of content (cognitive, affective and behavioral), are general categories that include a variety of information, such as, perceptions, judgments, thoughts, sensations, desires, fantasies, intuitions, values, practices and ideologies. However, it was felt that all of the above types of data may be classified into one of the three broad elements in the content of self-disclosure.

The concept of the type of disclosure is illustrated by the term "intimate information, feelings, or actions" in the definition. The content of the disclosure is personally private to the discloser. The concept of "type" means that the data of disclosure is secret. The discloser may or may not reveal the secret. In the definition the concept of "type" is phenomenological. The content may be seen as a secret to the discloser, but may actually be known to others even though the discloser is not aware that others possess the secret knowledge.

Modified Interpersonal Self-Disclosure Model

On the basis of the theoretical and empirical data of this study a modified social interpersonal model of self-disclosure can be constructed. The empirically derived general factor focused on the

interpersonal nature of self-disclosure, uncovering to close friends. Information, feeling, and behavior may be known only to one's self. The content of self-disclosure may remain a secret, or it may be revealed to others. Some self-information remains just data about self, unknown to others. But, self-disclosure becomes disclosure when the content of the construct is revealed. Hence, the interpersonal nature of self-disclosure.

Culbert[4] has suggested a useful framework for conceptualizing the interpersonal nature of self-disclosure in use of the Johari Window.[5] The concept is a representation of an individual's disclosure disposition at a given point in time, and is summarized in Figure 6.2.

	Known to Self	Not Known to Self
Known to Others	A Areas of Open and Free Activity	B Blind Area
Not Known to Others	C Secret, Avoided of Hidden Area	D Dark Area of Unknown Activity

Figure 6.2. The Johari Window: A Representation of an Individual's Disclosure Status

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[4]S. Culbert, The Interpersonal Process of Self-Disclosure, 3.

[5]The Johari Window was named after Joe Luft and Harry Ingham who suggested the concept. The idea is found in J. Luft, Group Processes (Palo Alto, Calif.: National Press, 1963).

In Figure 6.2 an individual's position on self-disclosure in a two-by-two matrix indicating the areas known and unknown to self, and known and unknown to others, is summarized. Cell A, known to self and known to others, is described by Luft as the "area of free activity." The individual has a choice of deciding for himself whether he will disclose himself to others. If the individual becomes defensive or threatens others he would move from cell A to cell C (known to self but unknown to others), or from cell A to cell B (unknown to self but known to others). When an individual moves from cell C (known to self but unknown to others) to cell A (known to self and others), the process can be called self-disclosure. The presence of cell B (unknown to self but known to others) raises the problem of the intentionality of disclosure. Is self-disclosure only a conscious act? What is the relationship between unconscious disclosure and mental health? It was hoped that the use of the "K" scale of the MMPI in the study would yield some information on this issue. The Johari diagram then, focuses on the broad types of disclosure available and the interpersonal nature of the construct.

In Figure 6.3 some of the elements involved in self-disclosure and the circular process of social interaction are summarized. The step-by-step process in a five-phase unit of behavior could be described briefly as follows:

1. In the initial Disclosure Output signal the individual has some feelings about himself (his self-concept identity) and has formed from past experience a set of expectations (or perceptions) of others that are in the form of values, feelings, attitudes, beliefs, response

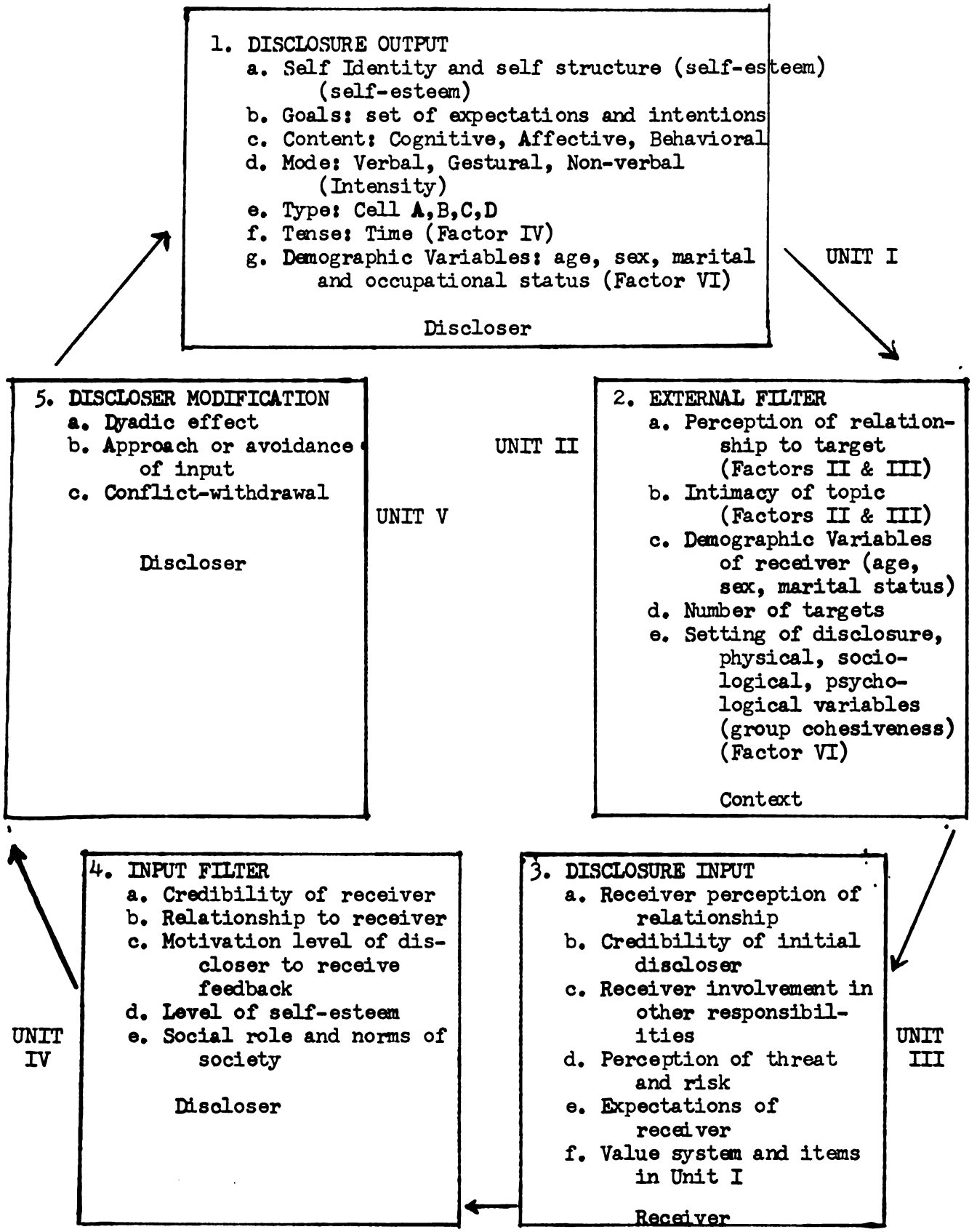

Figure 6.3. Diagram Showing Elements in the Circular Process of Giving and Receiving Self-Disclosure in Interpersonal Social Interaction.

sets or cognitions. These are the product of self-evaluation and learned reactions of others and comprise his pre-behavioral organization (the cognitive dimension of self-disclosure). He behaves toward another individual or in a group on the basis of these feelings, needs, values, and expectations. He initiates behavior toward others and responds to them. His output can be called an act of self-disclosure (behavioral dimension) which is directed toward a target-person (or persons). The act has certain specific content aspects (called topics). The individual's feelings and expectations become conscious intentions that are put into action and directed toward others. But they are first based on internal contingencies as posited by the theorists in Figure 4.4. For example, if he feels his ideas and attitudes are valued by others, and he feels that he desires to add to the meaning of the discussion, we can say with a high degree of probability that he will have the intention of making a valuable contribution to another individual. On the basis of these expectations the individual will initiate some disclosing behavior toward another person that may be on a non-verbal or attitudinal level, or may be one of voice, gestures or other bodily movements or styles. Often the disclosure output is of a verbal nature stressing topic categories.

2. The behavior output passes through a screen called the <u>External Filter</u> which exists in the relationship of the two individuals (or group), and in the broader physical, psychological and social setting. Some of the elements involved are listed in Figure 6.3.

3. The Disclosure Input of the receiver is based on his value system, expectations and experience with how he has behaved in similar situations. The receiver input finds it source in such other receiver internal contingencies as discloser credibility, perception of threat, and other dimensions. The Disclosure Input becomes feedback for the initial discloser.

4. The discloser then begins to act upon the Behavior Input. But other input is filtered again according to the discloser's perception of whether the receiver has met the discloser's initial expectations. Social Roles and norms contribute to the input screen, as well as level of intimacy and credibility of the receiver. This fourth phase may be called the Input Filter.

5. The behavior of the discloser is modified according to the feedback (Disclosure Input) offered by the receiver. In the Disclosure Modification phase the discloser may approach or avoid the input. If the discloser approaches the input the dyadic effect may be in operation; he discloses more of himself. However, the receiver's disclosure may violate the discloser's expectations, and the discloser will find himself in a state of conflict. Further disclosure may be impossible.

Summary

A factor analysis was made on 68 items involving 7 self-disclosure instruments, 5 group demographic items, 7 subject demographic variables, and 40 target-topic self-disclosure items. The

principal axis solution was used to factor the correlational matrices. Factors identified with a sum of squares in excess of one were rotated by the varimax method until at least K-1 (K being the number of factors) items loaded on a factor. Rotation was stopped at the sixth factor level. Six factors were identified and labeled: Factor I - Target-Topic Intimacy, Factor II - Uncovering to Parents, Factor III - Uncovering to Spouse, Factor IV - Subject Demographic Convergence, Factor V - Uncovering Performance Rating, and Factor VI - Subject-Group Maturation Opportunities. Hypotheses I and II (a) were accepted, and hypothesis III (b) was not clearly rejected. Hypotheses II (b) and II (c), and III (a) and III (c) were rejected. A synthesis of the theoretical and empirical analyses was made, and a definition of self-disclosure and an outline of a modified five-step model of the interpersonal process of self-disclosure was proposed.

CHAPTER VII

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The problem of this study was to conduct a theoretical and empirical inquiry into the nature of self-disclosure as a construct. Specifically, within the study an attempt was made to: (1) conduct an analysis of the theory and research of three major authors writing on self-disclosure; namely, Sidney M. Jourard, O. H. Mowrer, and C. R. Rogers; (2) conduct a factor analysis of a number of self-disclosure measures; (3) re-examine the theory of self-disclosure in light of the empirical findings; and (4) propose a modified theory of the construct.

In order to conduct the theoretical analysis of the authors it was necessary to gain an understanding of the nature of a construct, and suggest criteria for evaluating the authors' theoretical structure. Thus, a review of the notions of philosophy of science and theoretical psychology was presented. It was stated that the function of science is to develop theories, laws and concepts. A theory is a set of interrelated constructs and propositions that presents a systematic view of events by describing relations among variables. The purpose

of the theory is to explain and predict events. Theories can have both inductive and deductive functions. Constructs are special kinds of concepts that reflect relationships among events. They have great summarizing and generalizing ability. Some constructs are more easily quantified than others. Constructs can be merely descriptive (operational and observable) or more pervasively explanatory (not necessarily directly observable). Some inferred concepts have many shades of meaning, and are usually not operationally defined. Constructs having surplus meaning are called hypothetical constructs. The use of the term intervening variable is restricted to those constructs which lie closer to the observable data and are operationally defined. Both of these above constructs lie between the S and the R (i.e., within O) in the S-O-R experimental paradigm. Rozeboom refers to the two above variables as mediation variables and makes a distinction between the two based on reduction of the variable to its antecedents. The evaluation criteria also consisted of Feigl's concept of the nomological net and Margenau's thinking regarding the "C" plane and the "P" plane. Margenau calls the empirical component of science the "P" or perceptual plane, and the theoretical component the "C" plane.

The major ideas concerning personality, neurosis, treatment, and self-disclosure constructs of Sidney Jourard, O. H. Mowrer, and Carl R. Rogers were reviewed and analyzed according to the above philosophy of science criteria dealing with theory, variables, and the nomological network of constructs. Generally, Jourard suggested that the content of self-disclosure refers to cognitive aspects,

while Mowrer emphasized its behavioral content. Rogers stressed the affective dimensions of self-disclosure. The conclusions of the theoretical analysis stated that the self-disclosure construct has a fertile nomological network of constructs, but that the analysis of the authors' ideas concerning the content of self-disclosure yielded only limited understanding of its dimensions. Also, from the theoretical analysis 7 general, group, and specific dimensions involved in the content of self-disclosure construct were summarized, and a theoretical structure of the network of internal and external contingencies was proposed.

The empirical section of the study consisted of a factor analysis of 68 items involving 7 self-disclosure instruments, 5 group demographic items, 7 subject demographic variables, and 40 target-topic self-disclosure items from the self-report instruments.

Three hypotheses stated that the factoral analysis would produce one general factor (Hypothesis I), 3 group factors (Hypothesis II), and 3 specific factors (Hypothesis III). The Hypotheses were stated as follows:

The factor analysis of the correlational matrix using the principal axis solution and varimax rotation will yield an interpretable factor structure consisting of seven factors described as follows:

<u>General Factor</u>

Hypothesis I: The factor analysis of the correlational matrix using the principal axis solution will yield one general (G) factor that will tend to correlate with all factors. This general factor can be labeled <u>"uncovering</u>," or "revealing" that which is hidden from others.

Group Factors

Hypothesis II: The factor analysis of the correlational matrix using the principal axis solution will yield three group factors as follows:

a. One group factor will include both a behavioral and cognitive aspect of self-disclosure, and can be labeled the rational-social factor.

b. One group factor will include both a behavioral and affective aspect of self-disclosure, and can be labeled the impulsive-social factor.

c. One group factor will include both an affective and cognitive aspect of self-disclosure, and can be labeled the rational-subjective factor.

Specific Factors

Hypothesis III: The factor analysis of the correlational matrix using the principal axis solution will yield three specific (unique) factors as follows:

a. One unique factor will include the cognitive aspect of self-disclosure, and can be labeled the topic factor.

b. One unique factor will include the behavioral aspect of self-disclosure, and can be labeled the behavioral factor.

c. One unique factor will include the affective aspect of self-disclosure, and can be labeled the emotional or experiencing factor.

Thirteen counseling groups involving 96 subjects were used as the sample in the study. Seven professional group leaders conducted a total of 833 hours of group interaction.

The principal axis solution for factoring a correlational matrix was used, followed by varimax rotation. The Kiel-Wrigley criterion was set at three, and only those factors which had a sum of squares (Eigen value) in excess of one were rotated. Rotation was stopped at the six-factor level. Six factors were identified and labeled: Factor I - Target-Topic Intimacy, Factor II -

Uncovering to Parents, Factor III - Uncovering to Spouse, Factor IV - Subject Demographic Convergence, Factor V - Uncovering Performance Rating, and Factor VI - Subject-Group Maturation Opportunities. On the basis of the statistical data hypotheses I and II (a) were accepted, and hypothesis III (b) not clearly rejected. Hypotheses II (b) and II (c), and III (a) and III (c) were rejected.

A synthesis of the theoretical and empirical analyses was made, and a definition of the self-disclosure construct was suggested. Also, an outline of a modified model of the interpersonal process of self-disclosure was proposed.

Conclusions

The theoretical and empirical analysis of the study led to the following conclusions:

From the Theoretical Analysis

1. Self-disclosure was an interpersonal construct which involved consideration of the demographic characteristics of the discloser, the topic of communication, the target of disclosure, and the relationship between the sender and receiver of the disclosure. The idea of the interpersonal nature of self-disclosure was perhaps the most important finding of the study.
2. The comprehensive nomological network of self-disclosure constructs consisted of more hypothetical constructs than intervening variables. The self-disclosure construct was closer to the "C" plane than the "P" plane. There was a

need for greater clarity of terms and concepts used by the authors.

3. Theoretically, the content of the self-disclosure construct consisted of a cognitive dimension, an affective dimension, and a behavioral dimension. There was some empirical support found for the cognitive and behavioral domains, but the affective dimension was not adequately delineated. Sources of the lack of support whether in theory or empirical analysis was not identifiable from the nature of the current study.

4. Jourard's ideas regarding the content of self-disclosure (topic-targets) were generally found to be theoretically and empirically sound. Jourard's network of concepts was limited, but the development and use of the Jourard Self-Disclosure Questionnaire stimulated new theoretical and research activity on the self-disclosure construct. The Jourard instrument was found to correlate highly with the other three self-report self-disclosure instruments, but although the Jourard scale correlations with the Hurley self, peer, and leader ratings of self-disclosure were significant, the general concurrent validity of the Jourard scale based on ratings was low.

5. Mowrer's idea regarding the behavioral aspect of self-disclosure was found to be theoretically sound. But, practically Mowrer's behavioral dimension remains empirically untested. The factorially derived constellation of targets

and the concept of item-intimacy-level were related to the social situation, thus giving support to Mowrer's emphasis on the importance of the social context.

6. Rogers' theoretical concepts of experiencing and the affective dimension were considered sound, but were not empirically examined in the study. At this point in time Rogers' nomological net is more heuristic and tends to be more operational (at least within his theoretical system) than Mowrer's.
7. Taylor's assumption of the intimacy level of topics had some bearing on the self-disclosing model. Taylor's concept had empirical verification in the first three factors produced by the factor analysis. It was concluded that Taylor's idea possessed great heuristic value.
8. Specific operational definitions of the self-disclosure construct were limited. Measurement of the content of the construct was considered to be at a rudimentary and constricted level.
9. The proposed theoretical structure of the content of self-disclosure and the modified model of the interpersonal process of self-disclosure possessed heuristic value for future experimental research.

<u>From the Empirical Analysis</u>

1. The factors were all psychologically interpretable. If factors are considered rudimentary constructs, this study did identify dimensions of self-disclosure which have

potential for further refinement.

2. The Jourard, Plog, Taylor, and Hurley instruments hold promise in building other constructs to explain the content and contingencies of self-disclosure. But, obviously, the above measures need more work in the area of (1) basic definition of operations involved, and (2) limiting the influence of the weaknesses of self-report instruments.
3. The empirical analysis revealed the strong influence of situational variables such as the number of targets, the extent of the relationship to the target, and the opportunities available for interpersonal interaction.
4. It is necessary to consider subject demographic variables such as age, sex, and marital status when studying disclosing behavior.
5. The basic orientation of the self-report self-disclosure instruments needed further study in the area of basic time perspective. There is a need for further investigation of the use of both the "willingness to discuss" concept, and the "have you disclosed" idea. What variables are involved when one or the other of the perspectives is used?

Implications

1. The concept of self-disclosure is part of the scientific body of knowledge regarding personality theory and change. The counselor and therapist should be aware of this professional domain. The counselor as scholar, clinician, and

professional person should have direct, personal experience with the process and technique of self-disclosure, and should have opportunities to supervise others in development of disclosing behavior. Self-disclosure is not a simple concept to understand. The concept of self-disclosure has many dimensions and aspects. It is a complex tool, but it can be used for the understanding of interpersonal behavior.

2. Self-disclosure has important implications for the understanding of the various stages of the counseling process. How does the process, goal, type, and mode of self-disclosure relate to the various stages of therapy (the pre-therapy stage, the beginning phase, the middle phase, the concluding stage, and the follow-up phase)?

3. The study can help the therapist realize the importance of his knowledge of client-disclosure behavior patterns for the planning of therapy programs. Clients differ in the level of their disclosure behavior on such variables as age, therapeutic interaction time, level of topic intimacy, and relationship to target or targets. When planning therapy programs with clients, the therapist should consider such factors as when the client should disclose and what kind of disclosure is appropriate with which target-person.

4. Therapists need to recognize the interpersonal nature of self-disclosure. Self-disclosure is a characteristic of clients. Yet, it is also considered a function of responses from others in the client's social context. The client's

mental health depends to a degree upon his ability to disclose himself to others. It also depends upon his willingness to receive disclosure (feedback) from others. The therapist should be aware of the proposed curvilinear nature of self-disclosure.

5. The above implication regarding mental health leads to a consideration of self-disclosure as an index of mental health. The theory of the content of self-disclosure can be used as a rough diagnostic tool for making clinical judgments. The therapist could evaluate the amount of client disclosure on the cognitive level, on the affective level, and on the behavioral level.

6. The study revealed the importance and effectiveness of the dyadic phenomena. The therapist could begin to see himself as a stimulus object and test the proposition that the therapist begin individual therapy by being less disclosing and gradually become more self-disclosing as the sessions continue. In the group counseling setting the reverse process could be followed. The leader begins by being very disclosing, and gradually becomes less disclosing as the group members imitate the leader's self-disclosing modeling behavior.

Recommendations

It is suggested that the empirical section of the study be replicated to test further the disclosure behavior of different sub-groups. Additions to the present study which are suggested for inclusion in the design of future empirical research are:

1. Select samples from a variety of age, occupational, educational, sex, marital and group levels, and conduct a separate factor analysis for each sub-group.
2. Design, construct, and validate a self-disclosure instrument that will measure the three content dimensions of the self-disclosure construct: the cognitive, the affective, and the behavioral. Focus on the precise definition of terms.
3. Now that new models of self-disclosure are being suggested, it is recommended that one important aspect of a model be selected and defined, then tested. There is a need for more research on such concepts as the goals of self-disclosure, the mode of self-disclosure, the context (situation and group variables) of self-disclosure, the feasible curvilinearity or multidimensionality of disclosure, and the conscious-unconscious dimension of self-disclosure.
4. Investigate more carefully Jourard's ideas regarding the relationship of self-disclosure construct to mental health of individuals.
5. Increase the size of the sample to include at least 250 to 300 subjects in order to stabilize the correlation values.

6. Apply other factorial methods to comparable data to see if the general (G) factor will hold up.
7. Additional instruments that measure other facets of self-disclosure should be constructed from the theoretical network of concepts offered by the authors. These additional instruments should then be included in the factor analysis.
8. Develop and test new techniques for evaluating disclosure behavior. For example, to determine the discrepancy between subject description of self-disclosure and actual subject disclosure behavior, a record could be kept of behavior in different settings by use of portable tape recorders or audio-visual T.V. equipment.

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APPENDIX A

ESTES' OUTLINE FOR EVALUATION OF THEORY

APPENDIX A

Estes' Outline for Evaluation of Theory

I. STRUCTURE OF THE THEORY

A. Delineation of empirical area
   1. Data Language
      Is the data language explicit and theoretically neutral?
      How does the theorist relate his empirical variables to the data language?
   2. Dependent and independent variables
      How does the selection of variables compare with those of other learning theories?
      What influence does the choice of variables exert upon the form of the theory?

B. Theoretical concepts
   1. Primitive terms
      Are the primitive terms of the theory reducible to physical or object language?
      Is the usage of primitive terms fixed by implicit or explicit definitions?
   2. Principal constructs
      Do these serve only a summarizing function or are they related by definition or by hypothesis to terms of other disciplines (e.g., physiology)?
   3. Relations assumed among constructs
      How are the major theoretical variables interrelated in the foundation assumptions of the theory?
      How are such interrelations constructed from the observation base of the theory?
   4. Relations assumed or derived between constructs and experimentally defined variables.

II. METHODOLOGIC CHARACTERISTICS

A. Standing of the theory on principal methodologic "dimensions"
   1. Explicit axiomatization
   2. Quantitativeness
   3. Consistency and independence of principal theoretical assumptions
   4. Use of physical or mathematical models

B. Techniques of derivation
   Are the empirical consequences of the theory developed by informal arguments or formal derivations?

III. EMPIRICAL CONTENT AND ADEQUACY

A. Range of data for which interpretation or explanation in terms of the theory has been claimed
B. Specificity of prediction demonstrated
C. Obvious failures to handle facts in the area III-A
D. Tours-de-force
   Has it been possible to predict new experimental phenomena?
   Have any predictions of this sort been confirmed?
   Does the theory account for facts not predictable from competing theories in the same area?
E. Sensitivity to empirical evidence
F. Programmaticity
G. Special virtues or limitations: Techniques which may prove useful outside the context of the specific theory

From W. K. Estes, et al. Modern Learning Theory. New York: Appleton, Century and Crofts, Inc., 1954, p. 15.

APPENDIX B

SUBJECT SELF-REPORT SELF-DISCLOSURE INVENTORY

Birthdate: _____ Age: _____
Month Day Year

Sex: Male _____ Female _____

Marital Status: Single _____ Married _____ Divorced _____ Widowed _____

Brothers and sisters (their age and sex only)

Age _____ Sex _____

Age _____ Sex _____

Age _____ Sex _____

Age _____ Sex _____

Present occupation (if not in school): _____

How much formal education have you had? _____years

Year in school (if full time student): Freshman _____ Sophomore _____

Junior _____ Senior _____

Your course major _____

Grad. _____ Other _____

INTRODUCTION

People differ in the extent to which they let other people know them. We are seeking to investigate what people tell others about themselves. Some of the things about yourself you will regard as more personal and private than others; people differ widely in what they consider appropriate to let others know, and what they consider is nobody's business but their own.

INSTRUCTIONS

On the following pages are topics of conversation. This questionnaire does not ask about your views concerning these topics, but about your willingness to discuss these matters freely with the following people:

FAMILY
1) Your MOTHER (assume that she is living).
2) Your FATHER (assume that he is living).
3) Your wife or husband – SPOUSE (leave blank if not married).

SOCIAL CONTACTS
4) A CLOSE FRIEND of your own sex and age.
5) A CLOSE FRIEND of the OPPOSITE sex, about your age.

In the answer spaces provided, PLEASE CIRCLE the degree of your willingness to discuss each topic as follows:

With 1 if you would not tell the other person anything about this aspect of yourself or would try to conceal your views.

With 2 if you would talk in general intellectual terms about the topic (i.e., discuss it superficially).

With 3 if you would talk in some detail and reveal a great deal about your feelings, but hold back a few things about the topic.

With 4 if you would be willing to reveal everything of your views and feelings on this topic to the other person.

1 TELL NOTHING
2 GENERAL TERMS
3 SOME DETAIL
4 EVERYTHING

RATINGS

1 TELL NOTHING .....
2 GENERAL TERMS .....
3 SOME DETAIL .....
4 EVERYTHING .....

WILLINGNESS TO DISCUSS:

1) My likes and dislikes in music.....

2) The kinds of clothes you like to buy.....

FAMILY			SOCIAL CONTACTS	
MOTHER	FATHER	SPOUSE	CLOSE FRIEND SAME SEX AND AGE	CLOSE FRIEND OTHER SEX SAME AGE
1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

RATINGS
1 TELL NOTHING
2 GENERAL TERMS
3 SOME DETAIL
4 EVERYTHING

WILLINGNESS TO DISCUSS:

	FAMILY			SOCIAL CONTACTS	
	MOTHER	FATHER	SPOUSE	CLOSE FRIEND SAME SEX AND AGE	CLOSE FRIEND OTHER SEX SAME AGE
3) My favorite foods, the ways I like food prepared, and my food dislikes	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
4) What you think will be the eventual outcome of the struggle between the Communist nations and the free world	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
5) My views on the present U. S. Government - President, Government, policies, etc....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
6) How often I pray	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
7) What I believe about God	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
8) How satisfied I am with different parts of my body - legs, waist, weight, chest, etc.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
9) Problems I have with sleeping, digestion, allergies, piles, etc.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
10) Long-range worries or concerns that I have about my health, e.g., cancer, ulcers, heart trouble.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
11) What special effort, if any, I make to keep fit, healthy and attractive, e.g., calesthenics, diet.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
12) The parts of my body I am most ashamed for anyone to see.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

RATINGS	
1	TELL NOTHING
2	GENERAL TERMS
3	SOME DETAIL
4	EVERYTHING

WILLINGNESS TO DISCUSS:

	FAMILY			SOCIAL CONTACTS	
	MOTHER	FATHER	SPOUSE	CLOSE FRIEND SAME SEX AND AGE	CLOSE FRIEND OTHER SEX SAME AGE
13) Times when I have wished that I could change something about my physical appearance.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
14) Problems and worries that I had with my appearance in the past.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
15) Any physical defects that you have	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
16) What feelings, if any, I have trouble expressing or controlling.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
17) Things in the past or present that I feel ashamed or guilty about.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
18) What it takes to make me worried, anxious, or afraid.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
19) What it takes to hurt my feelings deeply..	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
20) Your feelings about someone who has played a "dirty" trick on you	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
21) Whether or not I ever cried as an adult when I was sad.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
22) Things which I have been sorry that I have done.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

RATINGS

1 TELL NOTHING
2 GENERAL TERMS
3 SOME DETAIL
4 EVERYTHING

WILLINGNESS TO DISCUSS:

	FAMILY			SOCIAL CONTACTS	
	MOTHER	FATHER	SPOUSE	CLOSE FRIEND SAME SEX AND AGE	CLOSE FRIEND OTHER SEX SAME AGE
23) Any feelings of inferiority that you have..	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
24) Your fears of being a failure in life	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
25) How much money I give to the church	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
26) How much money I make on my present job...	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
27) How much money I owe.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
28) My total financial worth, including property, savings bonds, insurance, etc.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
29) Whether or not others owe money to me, the amount and who owes it to me.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
30) How much money I have in the bank.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
31) My father's income.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
32) My personal standard of beauty and attractiveness in women--what I consider to be an attractive woman.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

RATINGS

1 TELL NOTHING
2 GENERAL TERMS
3 SOME DETAIL
4 EVERYTHING

WILLINGNESS TO DISCUSS:	FAMILY			SOCIAL CONTACTS	
	MOTHER	FATHER	SPOUSE	CLOSE FRIEND SAME SEX AND AGE	CLOSE FRIEND OTHER SEX SAME AGE
33) Feelings about my adequacy in sexual behavior my ability to perform adequately in sexual relationships.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
34) How important a part you think sex should play in a person's life	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
35) The extent of your sexual experiences.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
36) How often I masturbate.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
37) How I feel about a girl (boy) after having had sexual relations with her (him).....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
38) Guilt feelings, if any, that I have (or have had) about my sexual behavior.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
39) Persons with whom I have had sexual experiences.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
40) Your views on how children should be raised.	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
41) What you think should be the duties of the husband and the wife to each other after marriage.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
42) What birth control methods I would (do) use in marriage.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

RATINGS	
1	TELL NOTHING
2	GENERAL TERMS
3	SOME DETAIL
4	EVERYTHING

WILLINGNESS TO DISCUSS:	FAMILY			SOCIAL CONTACTS	
	MOTHER	FATHER	SPOUSE	CLOSE FRIEND SAME SEX AND AGE	CLOSE FRIEND OTHER SEX SAME AGE
43) Things which I would never tell my wife... (husband)	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
44) How I would feel about having sex relations with another woman (man) after I was married.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
45) What I would do if I caught my wife (husband) playing around with some other man (woman)	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
46) How I have felt or might feel if I ever saw my mother drunk.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
47) Things I dislike about my mother ,.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
48) My ambitions and goals in my work.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
49) My special strong points and qualifications for my work.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
50) How much my work is appreciated by others (boss, fellow-workers, teachers, spouse, etc.)	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
51) How I really feel about the people I work for or work with.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
52) The doubts you might have about your present occupation or choice of occupation...	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

RATINGS

1 TELL NOTHING
2 GENERAL TERMS
3 SOME DETAIL
4 EVERYTHING

WILLINGNESS TO DISCUSS:	FAMILY			SOCIAL CONTACTS	
	MOTHER	FATHER	SPOUSE	CLOSE FRIEND SAME SEX AND AGE	CLOSE FRIEND OTHER SEX SAME AGE
53) My worst experience in school.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
54) How I feel about using influential people I know to get ahead in a job.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
55) Whether or not I ever lied to my boss....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
56) The aspects of my personality that I dislike, worry about or regard as a handicap to me	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
57) The kinds of things that make me especially proud of myself.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
58) Under what circumstances, if any, would I kill another person.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
59) The kinds of things that I don't like people watching me do.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
60) The things about yourself that you would like to change	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
61) What you feel others think about you	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
62) How well you feel you get along with others.	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

RATINGS
1 TELL NOTHING
2 GENERAL TERMS
3 SOME DETAIL
4 EVERYTHING

WILLINGNESS TO DISCUSS:	FAMILY			SOCIAL CONTACTS	
	MOTHER	FATHER	SPOUSE	CLOSE FRIEND SAME SEX AND AGE	CLOSE FRIEND OTHER SEX SAME AGE
63) Lies that I have told my friends.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
64) Times when I have not been dependable.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
65) My feelings about religious denominations other than my own.....	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

The "K" Scale of the MMPI

was inserted here.

The "K" Scale of the MMPI

was inserted here.

95) Compared to two years ago, do you feel that <u>at present</u> you are more willing to reveal information about yourself to the following people, or are you less ready to do so? (Please indicate by writing an "M" for <u>more</u>, or an "L" for <u>less</u>, or "S" for <u>same</u>.

1. Mother ....._____
2. Father ....._____
3. Female friend ...._____
4. Male friend ..._____
5. Wife or husband (if married) _____

96) Compared to most people, do you feel you are <u>more</u> or <u>less</u> willing to reveal information about yourself to others, or about the same? (Check one).

More willing _____

Less willing _____

About the same _____

APPENDIX C

HURLEY SELF-DISCLOSURE RATING SCALE

SELF-DISCLOSURE RATING SCALE

Shirley J. Hurley and John R. Hurley

Michigan State University
East Lansing, Michigan

The concept of Self-Disclosure with which this scale is concerned is described by Sidney Jourard in The Transparent Self (1964). How self-disclosing a person should be rated depends more upon the direction of his perceived motivation and intent than it does upon the number of self-references, amount of verbalization, level of insight, or the appropriateness of the self-conception. The person's general behavior, affect, apparent degree of honesty, and sincerity must all be taken into account.

For example, a person who constantly talks about himself in the group may not be a real self-discloser when carefully observed but may be wearing a mask of transparency or playing a "game" of "See how open and honest I am." Glibness and pseudo self-revealing statements may be nearly as defensive or as self-concealing as complete refusal to talk about feelings. Psychology, social work, and counseling students are often found playing at this game of "dig my great insights."

Difficult to rate accurately is the individual who seems to think a lot about his behavior but who often arrives at very erroneous or naive conclusions about himself. Even if it is obvious that the individual is a long way from knowing or being completely honest with himself, but appears genuinely motivated to move toward further self-discovery, he should be rated in the self-disclosing direction.

Obviously no individual is completely transparent and openly self-disclosing in all situations, but there are some who seem deeply motivated to move in this direction and are almost always willing to examine their thinking or behavior. An important feature of this rating scale is the attempt to assess motivation toward "openness."

Please list all the group members, including the leader(s) and yourself, in the indicated spaces on the reverse side of this page. Identify yourself(S) on the list. Read all the rating classifications carefully, noting the distinctions between adjacent categories, before attempting to use them. Then place the appropriate rating number after each name. These ratings are only for descriptive purposes, so please try to avoid giving pre-dominantly positive ratings or overusing the middle positions on the scales.

1. Makes an obvious effort to project some desired self-image. Seems to continually express opinions, rationalize, or make defensive statements which are often predictable. Personality structure seems very rigid. Person seems not to hear or accept ideas or feelings of others.

2. The effort to project a desired self-image is less obvious than type 1. Rigidity of thinking is partially concealed by a pleasant facade. Seems to hear and accept opinions of others momentarily, but quickly re-establishes a new defensive position with other rationalizations.

5. Plays the role of a conventionally friendly person but rarely reveals self. May be outgoing and congenial but is limited by conformity to a social code restricting conversation largely to ideas and safe topics rather than feelings or intimate topics. Seems more inhibited than defensive in emotional expression.

6. Often participates in group interaction and seems genuinely involved and concerned for others' feelings and problems but rarely reveals own personal feelings. The person who frequently plays helper but hardly ever plays helpee epitomizes this type.

OVERTLY SELF-CONCEALING ← 1 2 — 3 4 → COVERTLY SELF-CONCEALING — INVOLVED CONVENTIONAL ← 5 6 — 7 8 → SELF DISCLOSING

3. Seems quiet and withdrawn from group interaction and uses passivity as a defense against involvement with others. Resists efforts to elicit social participation. Hostility or indifference is often conveyed by non-verbal expressions of boredom, sullkness or anger.

4. Seems quiet and withdrawn from group interaction and uses passivity as a defense against the exposure of anxiety and fear. Conveys by expression or other non-verbal behavior an attitude of wanting to communicate with others but of not knowing how or of being afraid to try.

7. Seems in good contact with own feelings and reveals them from time to time. Seems genuinely motivated toward self-honesty which can be shared with others, but sometimes appears uncomfortable with this goal. Expresses more about self than reactions to others.

8. Is actively involved in sharing thoughts and feelings about self and others in rich interactions. Although not always it appears the person seems to be highly motivated toward being self-disclosing and seldom appears uncomfortable with this goal.

USE THE SPACES BELOW TO WRITE THE NAMES OF YOUR GROUP MEMBERS INCLUDING THE LEADER(S) AND YOURSELF(S) ASSIGN TO EACH ONE A RATING BY ITS NUMBER.

APPENDIX D

LEADER SCALE FOR RATING MANNER OF PROBLEM EXPRESSION

Leader Rating Scales

1. Leader Name _____

2. Group Size _____ (Average attendance)
   Number

3. How many hours has the group met? _____ hours

4. How often do they meet?_____daily, _____weekly, _____monthly, _____other

5. Check the actual or estimated stage of life of the group that the questionnaires are being administered:

Group Life

_____ 1 EARLY - during or between the first 2 or 3 meetings of the group

_____ 2 MIDDLE - during or between the group sessions that fall in about the center of the group's existence

_____ 3 LATE - During or between the last 2 or 3 sessions of the group

_____ 4 END - after the group sessions are completed

6. What is your judgment regarding the general inter-personal interaction level of the group:

   By Interaction Level - we mean the degree to which members are willing
   1) to confront and challenge one another and give personal, direct and specific feedback
   2) to disclose themselves - express emotions and personal problems
   3) to risk involvement in group process and new role taking
   4) to learn how to learn in the group situation

_____ HIGH Interaction Level

_____ MEDIUM Interaction Level

_____ LOW Interaction Level

7. Would you consider any of your group members to be in need of psychiatric assistance (psychotic or seriously neurotic)? If so, would you write their name (s) on the separate blank sheet at the end of this booklet. The names on the blank sheet of paper will be seen only by the experimenter, will be destroyed immediately,and kept strictly confidential. Their data will not be included in this study.

LEADER

SCALE FOR RATING THE

MANNER OF PROBLEM EXPRESSION

Adapted from van der Veen and Tomlinson

Dimension

This scale describes the way a person specifically talks about his problems. It is not a sickness-health scale. Healthy persons can be at any stage on the scale, depending upon what they say about their problems.

Stages

Stage 1

The individual does not talk about his problems, i.e., wrongs, difficulties, confusions, conflicts, complaints, etc.

Stage 2

The individual talks about problems or problem situations, but does not talk about his direct involvement in a problem situation or event.

Stage 3

The individual talks about his "direct involvement" in a problem situation or event, but does not talk about his own reactions in or to the problem situation. "Direct involvement" means the group member includes himself in the problem situation as he describes the problem. This means being a part of a situation in a specific manner as opposed to a general state of affairs that has no specific effect on the actions of the individual. The latter would suggest either no involvement or indirect involvement.

Stage 4

The individual talks about his "own reaction" in or to the problem situation, but does not talk about the contribution of his own reactions to the problem. "Own reaction" means the group member talks about his own feelings or behavior in reaction to the problem.

Stage 5

The individual talks about the "contribution" of his own reactions to the problem, but does not talk about his own understanding of his feelings, experiences, or attitudes. "Contribution" refers to the part played by the individual in making the problem.

Stage 6

The individual talks about his own understanding of his feelings, experiences, or attitudes, but does not talk about an actual resolution of the problem situation in terms of changes in his feelings, experiences, or attitudes. "Understanding" refers to the group members talking about his comprehension of the meaning of his own feelings, reactions, and behavior. The individual may indicate that he understands

them a little or a great deal, but it doesn't matter how much. What is important is that he is talking about his understanding of himself.

Stage 7

The individual talks about an actual resolution of the problem situation in terms of changes in his feelings, experiences, or attitudes. "Actual" means that the individual talks about a resolution that, for him, has really occurred or is occurring.

The Rating Task

Rate each member of your group according to the problem expression stage he typically or generally operates on in the group, by checking the appropriate square below:

Group Member Name	Stages 1	2	3	4	5	6	7
	Does not talk	Talks but no involvement	Involved but no reaction	Reaction, but no contribution	Contribution but no understanding	Understanding but no resolution	Talks about resolving
1. _____							
2. _____							
3. _____							
4. _____							
5. _____							
6. _____							
7. _____							
8. _____							
9. _____							
10. _____							
11. _____							
12. _____							
13. _____							
14. _____							
15. _____							

APPENDIX E

CONFIDING-IN RANKING SCALE

Confiding-In Peer-Group Rankings

Rank each person in your group (not including the leader) according to how willing you would be to confide in or tell something very personal to that person. Begin with the individual to whom you would most likely confide , and end with the individual to whom you would least likely share something very personal.

Place the name of each person in your group in a blank below.

The First person I would most likely confide in is _____ (Name) 1

The second person I would most likely confide in is _____ 2

third ..... _____ 3

fourth ..... _____ 4

fifth ..... _____ 5

6th ..... _____ 6

7th ..... _____ 7

8th ..... _____ 8

9th ..... _____ 9

10th ..... _____ 10

11th ..... _____ 11

12th ..... _____ 12

13th ..... _____ 13

14th ..... _____ 14

15th ..... _____ 15

16th ..... _____ 16

17th ..... _____ 17

18th ..... _____ 18

19th ..... _____ 19

20th ..... _____ 20

21st ..... _____ 21

22nd ..... _____ 22

APPENDIX F

LIST OF THE ORIGIN OF ITEMS IN THE SUBJECT SELF-REPORT SELF-DISCLOSURE INVENTORY

APPENDIX F

LIST OF THE ORIGIN OF ITEMS IN THE SUBJECT SELF-REPORT SELF-DISCLOSURE INVENTORY

Item Number from Subject Self-Report Self-Disclosure Inventory	(X - signifies that the Item is included in the Scale indicated)		
	Jourard Scale	Taylor Scale	Plog Scale
1	X	X	X
2	X	X	X
3	X	X	X
4	X	X	X
5	X	X	
6		X	
7		X	X
8	X	X	
9	X	X	
10	X	X	
11	X	X	
12		X	
13		X	
14	X	X	
15			X
16	X	X	
17	X	X	
18	X	X	
19	X	X	
20		X	
21		X	
22		X	
23			X
24			X
25		X	
26	X	X	
27	X	X	
28	X	X	
29	X	X	
30	X	X	
31		X	
32	X	X	
33	X	X	
34			X

Item Number	Jourard Scale	Taylor Scale	Plog Scale	
35		X	X	
36		X		
37		X		
38		X		
39		X		
40	X	X	X	
41		X	X	
42		X		
43		X		
44		X		
45		X		
46		X		
47		X		
48	X	X	X	
49	X	X		
50	X	X		
51	X	X		
52			X	
53		X		
54		X		
55		X		
56	X	X		
57	X	X		
58		X		
59		X		
60			X	
61		X	X	
62			X	
63		X		
64		X		
65	X	X		
-				
-				
95			X	
96			X	
—	——	——	——	
67	29	58	21	Totals

NOTE: All of the Jourard Items have Taylor Intimacy Ratings.
Only seven of the Plog Items do not have Taylor Intimacy Ratings.
All Taylor Items have Intimacy Ratings.

APPENDIX G

STATISTICAL DATA

Table G.1

Means of Sixty-Eight Items Used in Factor Analysis

1	39.4271	2	16.3646	3	2.9167	4	1.8021
5	3.3646	6	4.2188	7	1.5417	8	1.4688
9	1.3021	10	0.9479	11	2.4792	12	5.7813
13	4.9375	14	5.2188	15	5.3958	16	5.8646
17	1.7708	18	1.7500	19	1.3021	20	1.4167
21	0.7188	22	1.7396	23	48.5521	24	13.6250
25	422.4792	26	296.6771	27	810.0833	28	929.5833
29	24.9063	30	24.5833	31	29.9375	32	27.7813
33	25.9479	34	21.4479	35	20.0521	36	28.1563
37	23.6042	38	19.8438	39	21.6146	40	21.0208
41	31.1667	42	27.5313	43	24.8645	44	20.2396
45	20.0625	46	26.1250	47	19.2188	48	18.2604
49	13.7604	50	13.6042	51	26.0417	52	20.6979
53	18.2813	54	18.5833	55	18.2292	56	27.2604
57	23.3542	58	21.4479	59	22.1771	60	22.2083
61	29.0208	62	25.7813	63	24.4167	64	22.6146
65	22.0104	66	31.2396	67	27.2813	68	25.5208

Table G.2

Standard Deviations of Sixty-Eight Items
Used in Factor Analysis

1	32.1950	2	9.9259	3	0.7862	4	0.6711
5	1.6653	6	1.5014	7	0.4983	8	0.5943
9	1.1004	10	0.9505	11	1.6893	12	2.4715
13	1.7489	14	1.7690	15	1.6233	16	1.6177
17	0.7427	18	0.6770	19	0.5795	20	0.6236
21	0.6724	22	0.7671	23	26.5867	24	3.8385
25	63.1923	26	43.3797	27	128.5804	28	146.9081
29	5.6219	30	5.6893	31	2.1253	32	4.6552
33	5.9937	34	6.1218	35	6.2323	36	3.0425
37	6.1652	38	6.8637	39	6.8349	40	7.0029
41	4.0560	42	6.8783	43	8.1017	44	6.1454
45	5.9753	46	3.0932	47	6.7023	48	7.0449
49	4.8018	50	4.5859	51	4.1781	52	6.7177
53	7.1716	54	5.2394	55	5.4092	56	3.0695
57	6.0380	58	6.3276	59	6.7961	60	6.6504
61	2.4323	62	5.6351	63	6.1283	64	7.4657
65	7.3958	66	3.8345	67	6.9323	68	7.8169