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PSYCHOLOGICAL DIFFERENTIATION AS A
DETERMINANT OF FRIENDSHIP CHOICE

by

KIT L. WONG

A dissertation submitted to the Graduate
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Abstract

PSYCHOLOGICAL DIFFERENTIATION AS A DETERMINANT
OF FRIENDSHIP CHOICE

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Two hypotheses relating psychological differentiation to friendship choice were evaluated. The first postulated a similarity effect, such that persons were expected to choose friends similar to themselves in field dependence. Second, relatively field-dependent individuals were expected to be more often chosen as close friends than relatively field-independent individuals.

Sixty college women from three different socially-autonomous dormitory units served as subjects. The field-dependence-independence dimension of cognitive style was assessed by the Portable Rod-And-Frame Test and the Group Embedded-Figures Test. Some aspects of personality were tapped by two paper-and-pencil measures (Schutz's FIRO-B and Gough's Adjective Check List). An estimate of verbal intelligence was provided by the most recent Scholastic Aptitude Test scores. Subjects named their three closest friends in rank order from those residing in their own living units, and answered detailed questions about the nature of these friendships. Finally, they rated each friend on the Adjective Check List.

Concerning the first hypothesis, correlations revealed a significant similarity effect for field-dependence-independence, which remained after removing a similarity effect due to verbal aptitude. However, the similarity effect of field-dependence-independence was less potent than those of age and religion, although it appeared to be more potent than similar personality factors as measured by FIRO-B and ACL. Regarding the second hypothesis, field-dependence-independence was the only significant predictor of the number of times a subject was chosen as close friend.

Most subjects reported that their closest friendships had a socio-emotional, rather than a cognitive, task-oriented basis. Since the desirable traits of field-dependent individuals tend to be on the socio-emotional dimension, their greater likelihood of being chosen as close friends is consistent with the nature of the friendships reported. It was concluded that a full account of the influence of field dependence on a particular individual's selection of a particular close friend includes both the effects of similarity in field dependence and the degree of likeability associated with the individual's position on the field dependence dimension.

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Table of Contents

<u>Chapter</u>	<u>Page</u>
I Introduction.....	1
Literature Review	3
Likeability Factor Studies	3
The Attitude Similarity-Attraction Relationship	5
Basic Research	5
Moderating Effects of Personality Variables	6
Empirical Law of Attraction	7
Studies in "Real Life" Situations	8
Conclusion	9
The Personality Similarity-Attraction Relationship	9
Complementarity Principle	9
Similarity Principle	10
Methodological Problems	12
Conclusion	14
Moderating Factors	15
Psychological Differentiation	17
Nature of Field Dependence	17
Personality Correlates of Field Dependence	19
Studies on the Field Dependence-Attraction Relationship	22
Hypotheses of This Study	25
Hypothesis 1	25
Hypothesis 2	28
II Method	30
Subjects	30
Materials	34
Group Embedded-Figures Test	34
Portable Rod-And-Frame Test	35
Sociometric Technique	35
The Friendship Questionnaire	36
Fundamental Interpersonal Relations Orientation- Behavior Scale	37
Adjective Check List	37
Procedure	39
III Results	42
The Nature of Friendship	42
Degree of Closeness	43
Amount of Time Spent Together	43
Activities -- How Often and With Whom	44

Friendship Values	46
Summary	51
The Similarity-Attraction Relationship	51
Rationale for Statistical Treatments	51
Similarity-Attraction Relationships for All	
Major Variables	52
Similarity Effects for Other Subject Variables:	
Religion and Academic Class	55
Could the Similarity Effect of Field Dependence	
Be Accounted for by Other Factors?	56
Could the Results of This Study be Due to Demand	
Characteristics?	62
Conclusion	63
Desirability Effect	63
Personality Correlates of Field Dependence	64
IV Additional Analyses	68
The Roommate Study	69
First-Year Versus Upperclass Subjects	71
Individual Living Units	72
Differential Friendship Choice Patterns of	
FI and FD Subjects	78
Catholic Versus Non-Catholic Subjects	80
V Discussion	87
Rationale for the Findings	87
Generalizability of the Data	92
Limitations of the Study	95
Summary	97
Appendixes	99
A. Friendship Questionnaire	99
B. Post-Evaluation Questionnaire	104
C. Means and Standard Deviations for Tests	
Administered	105
D. Division of Subjects Into Thirds on the	
Field-Dependence Continuum	106
References	108

List of Tables

<u>Table</u>	<u>Page</u>
1. Percentage of Subjects Checking a Certain Degree of Closeness with First, Second, and Third Friends	43
2. Subjects' Estimation of the Average Number of Hours Spent with First, Second and Third Friends	44
3. Percentage of Subjects Engaging in Various Activities	45
4. Percentage of Subjects Engaging in Various Activities Under Different Conditions	47
5. Friendship Values	50
6. Differences Among Living Units on Field Dependence, Verbal Aptitude, and Personality Variables	53
7. Correlations Between Scores for Subjects and First Friends for Field Dependence, Verbal Aptitude, and Personality Variables	54
8. Association Between Subjects' and Friends' Religion	57
9. Association Between Subjects' and Friends' Academic Class	57
10. Intercorrelations Among Field Dependence, VSAT, and Age ...	58
11. ANOVA on Mean Field Dependence and Verbal Aptitude of Three Religious Groups	58
12. Correlations Between Subjects and First Friends on Field Dependence and VSAT Before and After Partial Correlations	60
13. Correlations Between Sociometric Status and Field Dependence, Verbal Aptitude, and Personality Measures	65
14. Correlations Between Field Dependence and Verbal Aptitude and Personality Measures	67
15. Intraclass Correlations on Field Dependence of "Stayers" and "Splitters" and the Difference Between Correlations ...	70
16. Correlations on Field Dependence and VSAT for Subjects Versus First Friends Within First-Year and Upperclass Groups	72

17.	Correlations Between Subjects and First Friends on Field Dependence, VSAT and Age for Individual Units	73
18.	χ^2 - Test on Relative Frequency of Religious Preference of the Three Living Units	74
19.	Academic Class of Subjects by Individual Units	75
20.	Correlations Between Sociometric Status and Field Dependence, VSAT and Age Among Subjects for the Individual Units	76
21.	Majors of Subjects by Individual Units	77
22.	Differences Among Living Units in Age	77
23.	Association Between Subjects' and First Friends' Field Dependence for Each Field Dependence Group	78
24.	Choice of First Friends With Same or Different Field Dependence for Each Field Dependence Group	79
25.	Relationship Between Subjects' and First Friends' Field Dependence by Individual Units	81
26.	Similarity Effect and Desirability Effect of PRFT, GEFT and VSAT Within Catholic and Non-Catholic Groups	82
27.	Difference in PRFT, GEFT, VSAT, and Sociometric Status Between Catholic and Non-Catholic Groups	83
28.	Number of Catholic Versus Non-Catholic Subjects Within First-Year and Upperclass Groups	86

CHAPTER ONE

Introduction

Friendship can provide people with some of their deepest satisfactions in life. Without friends, one is likely to feel lonely and alienated. One need only note the many schizoid individuals seeking counselling at the college mental health centers to understand the importance of friendship.

Friendship is particularly important in college years. While adolescence is a time when youth learn peer mores, young adulthood is a period when they try to formulate their own values by talking with their friends about their various experiences.

The friendship phenomenon, of such central importance in any individual's life history, naturally has great intrinsic interest, and has been the subject of a great deal of research. Psychologists, who have given it the dry title, "interpersonal attraction," have greatly increased their output in this area over the past decade.

The basic question seems simple enough: Why does one person like another? As will be seen in the review of the literature to follow, this simple question is actually a complicated one. It is no doubt true that some people are simply more likeable than others, and that traits can be found which will predict this general level of likeability to some degree. However, just as beauty is in the eye of the beholder,

it seems clear that, to understand interpersonal attraction, we must consider the characteristics of both the attracted individual and the object of that attraction. Thus, the likeability of the object must be taken into account. In addition, as will be seen below, similarity between the attracted individual and the object person has to be examined in order to understand the friendship choice phenomenon. Finally, the situation in which the interaction occurs is an important determinant of friendship choice.

Psychological differentiation seems to be a particularly suitable variable for the investigation of the interpersonal attraction phenomenon. Not only has its measurement been demonstrated to have reliability and validity, but it also has been found to be a basic orientation which pervasively affects other personality, social and intellectual characteristics of an individual. The purpose of the present study is to investigate the relationship between psychological differentiation and interpersonal attraction.

Literature Review

The literature on interpersonal attraction is to be reviewed in three parts (a) studies which attempted to identify characteristics associated with popularly-chosen individuals (b) studies which attempted to identify relationships between both parties of the attraction and (c) studies which specifically dealt with the relationship between psychological differentiation and interpersonal attraction.

Likeability studies. Wright (1968) defined likeability as "something about personality, interpersonal needs, preferred modes of adaptation...that has a marked effect upon the process of differential interpersonal attraction" (p. 132).

In general, likeability studies represent attempts to identify characteristics associated with likeable individuals. Likeability is often measured by popularity scores derived from sociometric measures or degree of liking as indicated by rating scales. Liking scales range from single criteria (e.g., asking the subjects to rate all others on a scale of 0 to 100 on how much they enjoyed associating with other members of the group, as employed by Wright and Bidon (1966), to multiple scales (e.g., Byrne's paradigm (1961, 1962) employing several 7-point scales requesting the subjects to pass judgment on various aspects of the target person's personality, such as intelligence and adjustment). While among children, the person liked is usually also chosen as a leader (Dreyer, McIntyre, and Dreyer, 1973), for adults, the person respected as leader may differ from the person liked as friend, and respect and liking seem to represent two independent variables in interpersonal attraction (Kiesler and Goldberg, 1968).

For some studies, information regarding personality characteristics

was obtained from subjects' ratings of the characteristics of the individuals they indicated they liked. This practice has been criticized for being subject to halo effect, and the use of outside judges was recommended (Gronlund, 1959). However, as outside judges are not as likely to have the opportunity to obtain in-depth information on another person from a few hours of observation, many studies have utilized information on the personality characteristics revealed by the individual himself, through the use of personality measures designed to tap traits in a covert manner. For example, Edwards' (1954) Personal Preference Profile, using a forced-choice technique, was designed to control the social desirability factor while yielding a personality profile on the individual. While some studies (e.g., Lott, Lott, Reed, and Crow, 1970) presented descriptive findings on liked and disliked persons, using adjectives from Anderson's (1968) Personality Trait Words, other studies used tests (such as FIRO-B, Schutz, 1958) which described personality according to a theoretical framework.

An overview of the findings on attraction-related characteristics suggests that these fall into three main categories: (a) personal characteristics, such as happiness (Lindzey and Urdan, 1954), good looks (Cavior, 1971), and intelligence (Gronlund, 1959), (b) interpersonal characteristics, such as social interest (Wright, 1965), social skills (Jones, 1973), tolerance and empathy (Hogan and Mankin, 1970), and (c) non-personal characteristics, such as socio-economic background and propinquity (Gronlund, 1959). No matter how one slices attraction-related characteristics, all of them seem to be related to need gratification, whether it be in the form of providing consensual validation (Festinger, 1954), information utility, stimulation and ego support

(Wright, 1969), or the hope that valued traits may rub off on one (Murstein, 1971).

The attitude similarity-attraction relationship.

BASIC RESEARCH

In the field of attitude similarity and attraction, Donn Byrne and his colleagues have probably been the most influential. Byrne (1961, 1962), starting his series of studies in 1959 at the University of Texas, used a basic paradigm in which subjects were asked to make evaluative judgments about a bogus stranger whose attitudinal responses were prearranged to agree with those of the subject by a certain percentage. The evaluative judgments used in the research derived from scales of subject's liking for the stranger and the desirability of the stranger as a co-worker. Subsequent research employed additional ratings, such as judgments of the strangers' intelligence, knowledgeability about current affairs, adjustment and morality. Attraction research using attitude similarity consistently showed a positive linear relationship between agreement and attraction. Such findings were obtained, not only with college students (Byrne, 1961, 1962; Byrne and Nelson, 1965; Byrne and Wong, 1962), but with children from grades 4 to 12 (Byrne and Griffitt, 1966a), and with populations including hospitalized patients and job corpsmen (Byrne, Griffitt, Hudgins and Reeves, 1969). Similar results were again obtained when mode of presentation was varied from the use of an absent "bogus stranger" to a face-to-face stooge situation (Byrne and Griffitt, 1966b). In addition, Lamberth and Byrne (1971) eliminated the possibility that the experimental approach to interpersonal attraction might involve simply acquiescence to the demand characteristics

of the situation, by showing that variations in demand characteristics failed to affect the similarity-attraction relationship.

MODERATING EFFECTS OF PERSONALITY VARIABLES

Attitude similarity and interpersonal attraction relationships have been found to be relatively unaffected by the moderating influences of personality factors. Factors such as authoritarianism, self-concept, repression-sensitization, dogmatism and cognitive complexity have all been found to be independent of the similarity-attraction relationship (Baskett, 1966; Byrne, 1969; Franklin, 1971). Furthermore, Weiner (1970) explored other factors such as those measured by the Marlowe-Crowne Social Desirability Scale (Crowne and Marlowe, 1964), the Test Anxiety Questionnaires (Sarason and Gordon, 1953), the Edwards Social Desirability Scale (Edwards, 1957), the D-30 Depression Scale (Dempsey, 1964), and the Leary Interpersonal Check List (Leary, 1957), and found that only the Dominance-Submission scale of the Leary Interpersonal Check List had a small moderating effect on the attitude-similarity and attraction relationship. This, Weiner (1970) concluded, was of doubtful value in view of the marginal sample size, the magnitude of the correlation and the significance level. Similarly, Jackson and Mascaro found no significant effect of the need for certainty (1971a) or of attitude extremity (1971b) on the functional relationship between attitude and interpersonal attraction.

Posavac (1971) was able to uncover a somewhat weak but significant moderating effect. By correlating Marlowe-Crowne social desirability scores of 30 subjects with the "similarity coefficient" (r between similarity and attraction), he found a significant relationship which, he concluded, indicated that the more subjects expressed need for approval,

the more they preferred strangers who agreed with them.

Weiner (1970) expressed bewilderment as to rarity of personality variables which moderate the attitude similarity and attraction relationship. He said that since the Byrne paradigm assumed that reinforcement in general, and not only attitudinal stimuli in particular, produced an attraction response, it was surprising that personality factors failed to discriminate different reward value and thus mediate interpersonal attraction. The failure to find personality variables which moderate the similarity-attraction relationship is all the more surprising, because the estimated median correlation between attitude similarity and interpersonal attraction was only .65, according to Weiner, indicating that well over half the attraction variance was unaccounted for. Jackson and Mascaro (1971a) proposed the explanation that attitude similarity was so powerful that individual differences among the subjects did not produce any significant variation in attraction. However, the problem is not so simply disposed of as will be made apparent in later discussion.

EMPIRICAL LAW OF ATTRACTION

Encouraged by the ubiquitous finding of a linear relationship between attitude similarity and attraction, Byrne and Nelson (1965) formulated the "empirical law of attraction," which stated that attraction is a linear function of positive reinforcement. This empirical law of attraction was later modified by Byrne and Rhamey (1965) to state that attraction is a positive linear function of the sum of the weighted positive reinforcements divided by the total number of weighted positive and negative reinforcements received. By adding weights to reinforcement, Byrne and Rhamey made allowance for reinforcements of different values.

This modification was made as a concession to Aronson and Worchel's (1966) challenge that favorable personal evaluation was a much more potent reinforcing feedback than attitude similarity.

Far from coming to the conclusion that the consistent finding of a relation between attraction and attitude similarity can be represented in an empirical law of attraction, Murstein (1971) questioned whether the results were not due to the unusual and unnatural conditions surrounding the studies such as the elimination of all other possible determinants of attraction but attitude similarity. A better study of the similarity-attraction relationship, he proposed, would be done by testing the relation in "real life" situations.

STUDIES IN "REAL LIFE" SITUATIONS

On the one hand, Byrne, Ervin and Lamberth (1970) demonstrated that in a real life situation, attitude similarity on a questionnaire could predict attraction in a 30-minute "coke" date. Independently, Newcomb's (1963) study of two 17-man living groups over a 4-month period found that from the beginning of the 5th week mutual attraction became related to actual attitude similarity, the attitudes having been measured before the subjects were acquainted.

On the other hand, when Banikiotes, Russell, and Linden (1971) explored the interpersonal attraction behavior of male undergraduates in an actual living group, they found that, different from the results obtained in the laboratory situation where attraction was related to the proportion of items agreed upon, in real life situations, similarity-attraction effects were carried by only one item (on political philosophy) of the total set given, with all others being non-discriminating.

Another approach to the study of attitude similarity and attraction

in life-like situations was undertaken by Ray (1970), who studied small group interaction of women chosen to have extreme scores on authoritarianism on the Parental Attitude Research Instrument (PARI) (Schaeffer, 1958). By using sociometric techniques taken at different sessions over a four-week period, she found that attraction was unrelated to actual attitude similarity at any stage of the discussion process, but was related only to perceived similarity.

CONCLUSION

A fair conclusion from the preceding studies seems to be that similar attitude is of some importance as a determinant of first impression as long as other possible determinants are either eliminated or minimized. When these other factors are allowed to operate as in a "real life" situation, the role of similar attitude is weakened but not eliminated.

The personality similarity-attraction relationship. Compared to research on attitude similarity and attraction, similarity in personality factors and interpersonal attraction is a more complex area, as will become apparent from the following review. An important segment of the literature in the 1950's and 1960's concerning the personality similarity-attraction relationship deals with the controversy between the similarity principle and the complementarity principle.

COMPLEMENTARITY PRINCIPLE

The chief proponent of the complementarity principle was Winch (1955, 1967). Winch's work was in the area of mate selection and refers mostly to bipolar need dimensions such as nurturance-receptivity and dominance-submission. Winch (1967) proposed, "In mate selection each

individual seeks within his or her field of eligibles for that person who gives the greatest promise of providing him or her with maximum need gratification" (p. 756). This maximum gratification can be obtained by need complementarity which can be divided into two kinds. "Type One" complementarity pertains to compatibility of different strengths of the same need. For example, a person high in dominance might find another low in dominance more compatible than one high in dominance. "Type Two" complementarity pertains to compatibility of two reciprocally-related needs of the same strength, as for example, a person high in dominance would be more liable to find a partner high in deference compatible. Winch found support for his complementarity principle in an experiment based on the assessment of the intensity of needs derived from two in-depth interviews and a projective test (TAT) by two independent analysts. However, as admitted by him (Winch, 1967), his findings have not been replicated by others. Winch attributed this to the fact that other studies used objective paper-and-pencil tests to measure needs instead of in-depth interviews, had different populations, or studied needs other than those specified by him. He cited Kerkoff and Davis' (1962) study as the only one using a paper-and-pencil test (Schutz's FIRO-B, 1958) which supported his work. On balance, it seems that support for the complementarity principle is rather weak in view of the few studies supporting it, versus a much larger number of studies supporting its opponent, the similarity principle (e.g., Banta and Hetherington, 1963; Berman, 1966; Kaufman and Zener, 1967; Rosenfeld and Jackson, 1965).

SIMILARITY PRINCIPLE

Izard's studies (1960a, 1960b, 1963) have often been cited in support of the similarity principle. In one of Izard's studies (1960a),

over 200 students from a high school and a private college were asked to list their closest personal friends in rank order. They were given the Edwards (1954) Personal Preference Schedule, a forced-choice personality inventory that measures 15 manifest needs originally proposed by Murray (1938). Comparison of personality profiles showed that pairs of friends were significantly more similar than pairs established by random assignment. Furthermore, mutual friends showed significant correlations on Exhibition, Deference and Endurance, while randomly-paired subjects did not show significant correlations on these needs. Izard stated that his results tended to rule out both Winch's Type One and Type Two complementarity. Later, Izard (1963) replicated his own study and found that while his previous results were supported on a similar population (college freshmen) they were not confirmed with a different population (college seniors), which he attempted to explain by stating that "perhaps the more 'mature' person has less need to see his personality characteristics reflected in his friends" (p. 599).

Pierce (1970) pointed out a common methodological error found in most need similarity/complementarity studies. He stated, "The measure of needs is taken after the friendship has occurred and the causal direction of any obtained correlation cannot be determined with certainty. While the most reasonable explanation for such a relationship would seem to be that need similarity and complementarity 'cause' the friendship, it can be argued that friendship has affected the needs of friends" (p. 231). In order to avoid such a pitfall, Pierce measured the needs of college students prior to their entrance, using the Jackson Personality Research Form A (1965, 1967) which yields scores on 20 Murray-type needs. At the end of the freshman year, he asked them to

name two freshmen they most liked. On 39 pairs of mutual-choice friends, Pierce found significant but modest correlations of needs between friends and non-significant correlations between subjects randomly matched. Furthermore, Pierce concluded that the significant needs the similarity of which led to attraction fell into two broad categories: (a) "turning towards people" (included in this group were needs for succorance, affiliation, nurturance, social recognition and exhibition) versus "turning away from people" (e.g., needs for autonomy, aggression and deference), (b) "order" (e.g., needs for order and for cognitive structure), versus "impulsivity" (the need for change).

While many studies have attempted to investigate need similarity/complementarity and interpersonal attraction employing the Murray needs incorporated in the Edwards (1954) Personal Preference Scale, several studies used a less elaborate instrument (FIRO-B) devised by Schutz (1958), which divides interpersonal behavior into three dimensions: inclusion, control and affection. Estadt (1964) found that compatibility in the control area was most important in one's choice of friends. He stated, "Whether the relationship is one of superior-inferior, peer or close personal friends, it is the delicate balance of power, of controlling others and being controlled by others that is critical" (p. 2099).

METHODOLOGICAL PROBLEMS

Evidence in support of the similarity principle is not as neat as the above studies might have led one to expect. In fact, as pointed out by Wright (1968), representative studies (Banta and Hetherington, 1963; Reilly, Commins, and Stefic, 1960; Murstein, 1961), all using the Edwards Personal Preference Schedules, yielded diverse results. The inconsistency of the findings has caused Wright (1965) to doubt the wisdom of the

continuation of the research on the similarity principle. He (1965) stated: "The above findings suggest that the often hypothesized relationship between personality and interpersonal attraction is a tune that has been overplayed. Perhaps the analytic procedure commonly used in these studies...has made it difficult to distinguish between fact and artifact, producing, as Cronbach puts it, 'a rash of results which are interesting, statistically significant and exasperatingly inconsistent' (1958, p. 353)" (pp. 133-134).

Specifically, Wright (1968) pointed out three methodological errors in the study of need similarity. One error Wright pointed out is the overgeneralization of the effects of similarity or complementarity on attraction. To take a hypothetical case, suppose all choosing subjects, who are divided into high and low groups on a personality variable, tended to choose friends who are high on one variable and low on another variable. For half of the subjects, this is automatically a choice in the direction of similarity and the similarity effect thus created will be enough to carry the relationship to statistical significance. A second methodological error pointed out by Wright (1968) was the use of dyadic indices which obscure the real nature of traits, leading to unpar-simonious interpretation. For example, one of the compatibility indices proposed by Schutz (1958) is derived by finding the difference in subject A's expressivity and subject B's receptivity, or vice versa, on a need area. This compatibility index has been used by Kerchkoff and Davis (1962) as cited previously as an indication of need complementarity. However, upon closer examination, a low compatibility index can be derived when both subjects score in the same general range of expres-sivity and receptivity, thus in fact indicating that similarity and not

complementarity of needs is related to compatibility. On the other hand, a high compatibility index can be obtained when one or both members score in the extreme ranges on expressivity or receptivity. This can be interpreted to mean that couples in which one or both partners have extremely pervasive personality needs run into difficulties in their relationship, and not necessarily meaning that couples with non-compatibility needs do not progress towards permanence. A third error cited by Wright is the use of comparison between mutually-choosing pairs and randomly-matched pairs. Using Izard's (1960a) study which was cited previously in support of the similarity principle, Wright pointed out that it was possible that "balanced" persons were liable to be over-chosen and to be put together in mutual-choice pairs, and they would tend to be more alike than those not chosen and left over to be matched randomly. To prove his point, Wright replicated Izard's study and reshuffled all the members of the mutual-choice group. Four out of five comparisons still resulted in strong statistical support for the similarity principle, although after reshuffling, the pairs were essentially randomly paired and not necessarily mutually chosen. Thus the point seems to be well demonstrated that people possessing some generally likeable traits are often chosen, forming mutual-choice pairs and creating an artificial impression that the mutual-choice pairs liked each other because of the similarity principle.

CONCLUSION

It seems that despite the fact that more findings support the similarity principle than the complementarity principle, many methodological problems regarding these studies have raised doubts about the existence of a direct uncomplicated relationship between similarity and

and attraction. Marlowe and Gergen (1968) noted, "Social interaction, like the concept of personality, has theoretical merit only as a generic term. Greater specificity regarding the exact nature of social interaction being studied in each individual instance is much in need if understanding of the relevant process is to be achieved" (p. 622). Murstein (1971) also suggested that interpersonal attraction should be studied in a more individualized context, with more emphasis on identifying factors moderating the similarity-attraction relationship, such as role, situations, personality of the perceived, as well as the traits perceived.

MODERATING FACTORS

Studies of factors moderating the personality similarity-attraction relationship will be reviewed briefly. Undesirable traits have been found to be a moderating factor. For example, in an article entitled "When similarity breeds contempt," Taylor and Mettee (1971) reported that with pleasant behavior, the confederate was better liked when she was similar than dissimilar. However, with obnoxious behavior, she was disliked more when she was similar than dissimilar. Similarly, Banikiotes (1970) and Banikiotes, Russell and Linden (1971) provided strong evidence to indicate that high Neurotics as measured by Eysenck Personality Inventory (Eysenck and Eysenck, 1968) liked other high Neurotics significantly less than expected by chance. Wright (1969) introduced a "difficult-to-maintain variable" which refers to personality factors impeding the progress of friendship. Perhaps, negative traits such as high neuroticism (Banikiotes, Russell, and Linden, 1971) and high dominance (Lindzey and Urdan, 1954) belong to the difficult-to-maintain category. When two individuals possess the same difficult-to-

maintain traits, it is conceivable that their woes may be doubled.

Regarding personality traits of the perceiver which moderate these relationships, some evidence suggests that individuals possessing differing amounts of a variable differ in their propensity to be attracted to similar-others (Phares and Wilson, 1971). For example, Rychlack (1965) demonstrated that high nurturance subjects preferred high succorance neighbors, while low nurturance subjects showed no particular preference for either high- or low-succorance neighbors. Sex of a person has also been found to be a moderating factor. Duck (1973) demonstrated that women looked for similarity in construct system in choosing same-sexed and opposite-sexed friends, while men subjects did so only when choosing men friends and not when choosing women friends.

Among contextual variables moderating the similarity/complementarity and attraction relationship, role occupies a place of importance. Winch (1967) theorized that dominance and submissiveness possessed by husband and wife respectively is likely to lead to attraction while the reverse is not true. Rychlack (1965) established that characteristics related to attraction varied according to whether they are possessed by an employer or a neighbor. He found that selectors who showed a high need for order were found to prefer a superior with a low need for change over one with a high need for change, but the same selectors were prone to make the opposite discrimination when choosing a neighbor.

Duration of a relationship also determines whether certain characteristics are found attractive. Thus, Hendrick and Brown (1971) established that both extraverts and introverts preferred extraverts in contexts such as a party, having an ideal personality, and being a leader. Extraverts were preferred as leaders because they are usually perceived

as pleasant and outgoing, and therefore more rewarding than introverts in on-going relationships. On the other hand, both introverts and (to a large extent) extraverts were found to prefer introverts over extraverts as reliable friends who would be honest and ethical, probably because introverts are generally perceived as stable and reliable and thus more rewarding than extraverts in long-term relationships.

Psychological Differentiation.

NATURE OF FIELD DEPENDENCE

The field-dependence-independence dimension of cognitive style represents an individual's perceptual and cognitive ability to differentiate figures from grounds. Over more than two decades of research initiated by Witkin and his associates (Witkin, Lewis, Hertzman, Machover, Meissner, and Wapner, 1954; Witkin, Dyk, Faterson, Goodenough, and Karp, 1962), this perceptual and cognitive ability has been found to correlate with other aspects of the individual's psychological functioning. Specifically, Witkin and his associates (1962) have demonstrated that the degree of differentiation with which an individual experiences his self (e.g., his body and his identity) is consistently related to the degree of differentiation with which he structures his controls and defenses on one level, as well as to the extent to which he experiences his world (e.g., his perception, cognition, conation and social interaction) on another level. Implicit in the differentiation hypothesis is the assumption that the relatedness of functioning of intrapsychic areas reflects a central tendency, or "commonality," which is the extent of the individual's psychological differentiation.

Psychological differentiation is a developmental concept. Akin to Werner's orthogenetic principle (1948), it states that psychological development proceeds from a state of globality and lack of differentiation to a state of increasing differentiation and hierarchical integration. Longitudinal studies of development of field-dependence-independence covering the 8 to 24 year period show a marked and continuous increase in field independence between 8 and about 15 years (Witkin, Goodenough, and Karp, 1967), reaching plateau in young adulthood. Towards old age, there is a return to field-dependence (Comalli, 1965; Schwartz and Karp, 1967). Along with the fact that field dependence changes over the life span, an individual's relative standing among his age peers on the field-dependence dimension is quite stable (Witkin, et al., 1962).

Consistent sex differences have repeatedly been found in the field-dependence dimension, in that men as a group tend to be more field independent than women as a group (Witkin, Oltman, Raskin, and Karp, 1971). An interesting observation is that although the sex difference in field dependence is not noted before the age of eight, characteristics associated with field independence have been found to be appreciated in boys at age five as evidenced by the field-independent boys' receiving higher sociometric status than field-dependent boys in play situations. Likewise, characteristics associated with field dependence have been found to be more socially acceptable for girls, as evidenced by the field-dependent girls' receiving higher sociometric status than field-independent girls in play situations (Dreyer, McIntire, and Dreyer, 1973).

Several approaches have been made to probe into the origin of psychological differentiation. Its development has been found to be associated with early socialization experiences which hamper or foster achievement of separate autonomy (e.g., Dershowitz, 1966). Investigation of constitutional factors associated with field-dependence-independence also suggest that these characteristics may play a role (Witkin and Oltman, 1967), while investigation of the possible role of genetic contributions in the development of cognitive style is being explored (Witkin, 1972). The evidence so far obtained suggests that the development of the field dependence dimension is a result of an interplay of nature and nurture.

Personality Correlates of Field Dependence

Consistent with the differentiation hypothesis, greater or lesser differentiation in perceptual and cognitive functioning has been found to be related to other areas of psychological functioning. For example, it has been found that field-dependent individuals tend to use defenses which represent massive and undifferentiated blotting out of experience, such as repression and primitive denial, while field-independent persons tend to use isolation, which is a defense representing separation of affects from intellect. As isolation is not a typical defense mechanism used by the less differentiated individuals as a group, it is no surprise that Witkin, Lewis, and Weil (1968) found that field-dependent patients tended to exhibit more emotional "spill-over" than field-dependent patients.

Goodenough (in press) has recently reviewed a number of studies from which refinements in the theoretical concept of the personality

correlates of field dependence can be derived. For example, field-dependent individuals' relative readiness to change their opinions in deference to authoritative sources (Linton and Graham, 1959), which previously was interpreted as a sort of "jelly fish" quality, is now reinterpreted to indicate a desire to seek disambiguating information, and not as a need to seek social approval. In fact, Witkin and Goodenough (1976) cite a study by Mausner and Graham (1970) which indicated that field-dependent subjects were responsive to informational input when it was appropriate for them to do so, while field-independent subjects were not responsive to informational input even when it was appropriate for them to do so. Thus, the field-dependent individuals' changeability is now seen as their flexibility regarding the give-and-take aspect of cognitive information; and, as such, would be conducive to smooth interpersonal functioning.

Besides cognitive responsiveness, field-dependent individuals have also been found to be both emotionally and socially responsive to others when compared with field-independent individuals. For example, they tend to stand closer to others when they talk (Justice, 1970), to exhibit less physical distancing gestures such as arm and leg crossing. (Greene, 1972) and to disclose more about themselves in their conversations (Sousa-Poza, Rohrberg, and Shulman, 1973), giving the general impression that they are open about themselves. In addition, they were found to be more benevolent in their evaluation of others (DiStefano, 1969; Gruenfeld and Arbuthnot, 1968; Klau, 1973) and to exhibit more behavior representing "hostility-in" instead of "hostility-out" (Greenfield, 1969; Witkin, Lewis and Weil, 1968). Furthermore, their communication mode suggests that they are more in tune with others, as evidenced by their greater facility in

adapting their rate of speech to that of others (Marcus, 1970), and in their greater emotional participation in others' communications (Westbrook, 1974).

In contrast, the interpersonal characteristics of field-independent individuals, such as "not sensitive to social undercurrents," "glosses over the value and meaning of the individual," and "unaware of stimulus value" (e.g., Loveless, 1972), are not likely to give the impression that they are particularly attuned to others. In short, it would appear that the interpersonal characteristics of field-dependent individuals tend to give others the impression of their acceptance by not asserting their separateness, but rather by listening and responding to others, and by sharing their emotions.

Besides being different in personality characteristics, field-dependent individuals have also been found to differ from field-independent individuals in academic interests. Witkin (1972) concluded his review of the studies of the academic interests of college students by saying, "...a consistent finding of most of these studies is that more field-independent students favor domains in which analytical skills are called for whereas more field-dependent students avoid such domains. Examples are the sciences (physical and biological), mathematics, engineering, technical and mechanical activities, etc. Equally clear is the strong preference of more field-dependent students for domains that feature interpersonal relations and in which day-to-day work requires involvement with people. Examples are social sciences, rehabilitation counselling, elementary school teaching..." (p. 16).

Studies on the Field Dependence - Attraction Relationship

With its many correlates in the areas of social interaction, the field-dependence-independence dimension of cognitive style would seem to hold promise as a variable of importance in the study of attraction behavior. Several studies have been carried out in this domain, with varying emphases. One broad category of data is relevant to the "main effect" question: At which point in the continuum are individuals rated as most liked? These investigations are concerned with what traits cause individuals to be seen as relatively more attractive by the average observer. In the case of the field-dependence-independence dimension, one might expect relatively more field-dependent individuals, with their greater interest in and need for social stimuli, to exhibit behaviors which would tend to increase their attractiveness to others. The extreme field-independent person, on the other hand, might be so task-oriented as to appear cold and distant in interpersonal situations.

A second category of data bears on the existence of a possible "interaction effect": Is there some similarity principle operating, such that persons of similar field dependence are more attracted to each other than are persons of different field dependence? In the second case, the similarity of interests, communicative modes and personality among individuals who are relatively close together on the cognitive style continuum may contribute to a similarity-attraction relationship, over and above any main effects observed. Each way of examining the data is required in order to be faithful to the actual situation being studied, since in fact interpersonal attraction by definition involves two partners, and the characteristics of both the partners must almost certainly be important in determining the final attraction outcome.

In the first category, the most directly relevant study was conducted by Iscoe and Carden (1961). Sixth-graders were administered a sociometric questionnaire and the Embedded-Figures Test, with the results being analyzed separately by sex. It was found that the most popular boys were field-independent, while the most popular girls were field-dependent, a pattern which seems consistent with cultural stereotypes. Essentially similar results have also been reported by Dreyer, McIntyre and Dreyer (1973) with a kindergarten sample asked to choose a play partner. However, when these children were asked to choose a work partner in a classroom task, they tended to choose boys over girls, regardless of cognitive style. Such results emphasize the need to take careful account of sex differences when attempting to assess the role of cognitive style in interpersonal attraction.

Turning to the second category of data, involving analyses of the interactions between the field dependence of the chooser and the chosen, several studies offer relevant evidence. Greene (1972), in a study of client-therapist attraction, administered an embedded-figures test and obtained articulation-of-body-concept ratings of figure drawings from both therapists and clients in a clinic setting. It was found that clients participating in a matched pair (both client and therapist were field-dependent or field-independent) felt that they had achieved a better rapport with their therapists than did clients in mis-matched pairs (field-dependent client and field-independent therapists or vice versa). It is interesting also to note that no main effects were found on the various rapport indices, either for therapists or client cognitive style.

DiStefano (1969) studied teacher-student interactions with similar results. High school students and their teachers were administered an embedded-figures type of test and, after approximately seven months of contact, were asked to evaluate each other on a variety of scales. While some main effects of cognitive style were noted, the most striking findings were interactions consistent with the similarity principle. Teachers and students who were similar in cognitive style rated each other more favorably than did those who were relatively more dissimilar.

The importance of considering the situation in which attraction is assessed, as well as the characteristics of the participants, is indicated by the results of a study by Oltman, Goodenough, Witkin, Freedman, and Friedman (1975). The study focussed on the interpersonal attraction which followed from preselected pairings of college women on either extreme of the field dependence-independence cognitive style and differing in attitudes on certain controversial issues. In this situation, where conflict was build in from the outset, the usual similarity principle did not apply. Rather, those dyads containing either one or two field-dependent members showed relatively high attraction, while those dyads made up of two field-independent subjects showed significantly lower mutual attraction. Apparently the social skill and orientation of the field-dependent subjects led to their behaving in such a way as to minimize the negative affective consequences of conflict, while when two field-independent subjects argued, both were unwilling to "give in," resulting in mutual dislike. It is of interest to note that these findings make clear the inadequacy of any simple similarity principle in accounting for attraction.

Hypotheses of This Study

The preceding literature review yields ample information to allow the formulation of two hypotheses regarding the relationship between cognitive style and interpersonal attraction. The evidence that there are indeed basic differences in cognitive approach, personality characteristics and academic interests between the field-dependent and the field-independent groups satisfy the basic requirement towards the formulation of differential friendship-choice patterns. The first hypothesis makes a prediction based on the similarity principle, that field-dependent and field-independent individuals are likely to have friends with similar cognitive style. The second hypothesis makes a prediction based on the likeability factor, that field-dependent people are more likely to have a higher sociometric status than the field-independent people. The working hypotheses and their rationale are to be explicated in the following.

Hypothesis 1. There will be a low positive correlation between the field dependence scores of the subjects and their chosen friends.

Despite many exceptions, the evidence considered so far in regard to attitude similarity and personality similarity suggests that the similarity-attraction relationship is probably applicable to the field-independence dimension of cognitive style as well. The formulation of the expectation that people of similar cognitive style are likely to be attracted to each other is also based on exchange theory.

Exchange theory of interpersonal attraction has been independently proposed by Thibault and Kelly (1959) and Homans (1961). Secord and Backman (1964) summarized the theory very succinctly, "The activity on the part of one person that contributes to the gratification of the

needs of another is considered a reward. Costs include punishments incurred and deterrents in interacting with another person, such as fatigue, anxiety, and fear of embarrassment, as well as rewards foregone because of the interaction. The reward-cost outcome must be at least slightly above some minimum level of what the person feels is due (before attraction occurs). This (comparison level) is influenced by past experiences in the relation and in comparable relations, perceptions of what others like oneself are obtaining, and perceptions of costs and rewards obtainable in alternative relations" (p. 258).

Based on the exchange theory, similarity of interests among individuals of similar cognitive style is expected to reduce the cost of interaction, on the ground that common interests are likely to lead to greater opportunity for interaction and greater familiarity with the other person; and, familiarity with another person enables the individual to know what is expected from the interaction, thus reducing the cost of having to constantly adjust to the unexpected. Reward of the relationship based on common-interest activities is derived from the companionship they provide, as well as from the satisfaction of having one's need for comparison (Festinger, 1954) gratified.

It is expected that similarity in cognitive style contributes to the reward aspect of friendship. Field-independent individuals, who tend to be original and reconstruct the cognitive field, are most likely to appreciate other field-independent individuals with similar propensities, and depreciate field-dependent individuals for their global perception. On the other hand, while field-dependent individuals may admire field-independent individuals' ability to restructure the stimulus field, they may still find that they can understand, appreciate and communicate

better with other field-dependent individuals, for they may both have the same tendency to react to the world in an emotional rather than in a rational manner.

On the personality dimension, it is most likely that field-independent individuals appreciate other field-independent individuals' task-oriented virtues (e.g., punctual), and find field-dependent individuals' non-task-orientedness frustrating. On the other hand, field-dependent individuals are likely to find that they have a lot in common with other field-dependent individuals in their "toward people" orientation, and are likely not to be sympathetic towards field-independent individuals' tendency to put task over interpersonal relations.

Gratifying as similar-cognitive style relationships are likely to be, they are not without cost. Field-independent subjects, being relatively more impervious to external influences, are liable to have more conflicts with other field-independent individuals with similar characteristics. Similarly, two field-dependent individuals, with greater tendency for emotional "spilling-over" than field-independent individuals, may also have their share of difficulties in interaction among themselves. The cost of relating to similar-others may lead one to search for relationships with individuals of another cognitive style. Furthermore, there may be rewards of relating with different-others, for the stimulation value the relationship provides, as well as the beneficial value for role structuring. Thus, some difficulties of relating to individuals of similar cognitive style, in addition to rewards of relating to individuals of another cognitive style, would contribute to the tendency to relate to different-others.

In summary, the first hypothesis is formulated as a result of rewards minus costs, yielding a prediction of low positive correlation between the subjects and their close friends in field dependence.

Hypothesis 2. Field-dependent subjects will be more often chosen as close friends than field-independent subjects.

This hypothesis is best accounted for by conceptualizing the reward and cost aspects of the personality characteristics along the "respect, task-oriented" dimension and the "liking, socioemotional" dimension of interpersonal attraction (Kiesler and Goldberg, 1968). Personality correlates of the field-independent subjects (e.g., analytic ability, relatively greater use of intellectualization, goal-directedness) seem to be highly respected in this culture. Field-independent subjects, possessing more of these qualities than field-dependent subjects, tend to be more highly respected than field-dependent subjects, who are seen as being more global in their cognitive ability as well as possessing more tendency for emotional "spill-over."

On the other hand, personality correlates of the field-dependent individuals (e.g., openness and acceptance of others) appear to be very attractive qualities on the socioemotional dimension. The literature reviewed by Goodenough (in press) already discussed in the previous section gave support to this contention, citing studies which found field-dependent individuals better liked than field-independent individuals in the adult population.

Openness and acceptance of others are particularly attractive traits, perhaps because they enable their possessors to be perceived as liking the other person. Recall that in the personality-attraction research, Byrne and Griffitt (1966b) conceded to Aronson and Worchel's

(1966) challenge and admitted that the perception of another person's liking oneself is three times as potent in inducing attraction as the perception of the other person's agreeing with oneself, despite the fact that the latter factor has already been found ubiquitously powerful (Byrne, 1969). Perhaps the fact that the perception of being liked is even more potent than the perception of being agreed with is due to the fact that the reward of the former is more direct and emotionally reinforcing, while that of the latter is reinforcing on a cognitive level, via consensual validation.

To recapitulate the rationale for Hypotheses 2 on the respect dimension, personality characteristics of the field-independent subjects are liable to be more rewarding than characteristics of the field-dependent subjects. On the socioemotional dimension, characteristics associated with the field-dependent subjects are likely to be more rewarding than those of the field-independent subjects. The aim of this study is to investigate the close friendship of college women students living in dormitories. It is expected that the context under which this study is conducted, namely, living units, as well as the sex and closeness factors, would exert a greater pull on the socioemotional factor over the respect, task-oriented factor as a determinant of interpersonal attraction. As personality correlates of field dependence seem to be more attractive on the socioemotional dimension than personality correlates of field independence, it is hypothesized that field-dependent subjects are likely to be more often chosen as close friends than field-independent subjects.

CHAPTER TWO

Method

Subjects

Sixty resident women college students in a medium-sized Eastern college served as subjects. They lived in three different dormitories, and all students from a given dormitory came from the same floor. The physical settings on each floor were practically identical. Fourteen small single or double rooms were arranged on either side of a long corridor, with a coin telephone and a water fountain on opposite ends. Each floor housed a rather large bath area, where many social encounters took place when the residents were brushing their teeth, etc. More prolonged socialization occurred in the individual rooms. Some residents kept their doors open when they were in their rooms, and their friends informally dropped in for a visit. Each floor was a rather autonomous unit, with its own governing body, and with its socializing very much confined to members of the same floor. Socializing again occurred around meals, when the residents walked over in small informal groups to a centralized cafeteria.

The residents on each of the three floors were treated as separate experimental units. To avoid selection bias, an effort was made to solicit the participation of all residents of the entire floor by offering a reward of \$40.00 to the floor council if all members

participated. As it turned out, although the 3 floors were contracted to participate in toto, some members did not appear for the study. The number of non-participants on floors designated as A, B and C were 3, 3 and 2, and the number of participants were 18, 21 and 21 in the respective units.

Of the 8 non-participants, 4 were Seniors, who indicated that they were too busy preparing for finals and applying for jobs, as the experiment took place shortly before their graduation. The other 4 non-participants were Black. Informants reported that certain amount of racial tension existed in the dormitories, which seemed to be a reasonable account for the Black students' unwillingness to be involved in a friendship study with White students. Consequently, all subjects in this study were White, with the exception of an Ethiopian student whose entire friendship circle was White.

The college was mostly attended by students from 3 adjacent states. The majority of subjects (70%) came from the state where the college is located; however, none of them came from the same home town.

Subjects ranged in age from 17 to 21, with the majority at ages 18 (33.3%) and 20 (38.1%). Almost half of the subjects were first-year students (48.3%), while Juniors ranked second with about one-fourth of the subjects (23.3%). This class distribution was not representative of the entire women student population of the college, where the number of second-, third-, and fourth-year students progressively increased until Seniors were 4+ times as numerous as the first-year women students (according to the survey conducted by the college in May, 1973). That more first-year students resided in dormitories than those in other classes was probably due to the fact that when a student made friends,

she was more likely to live off campus with them, or to join sororities and live there. The result was that students who were relatively new to the college, such as first-year and transfer students, were the majority of the residents in the college dormitories. Fifteen percent of the subjects were transfer students.

No attempt was made to inquire into the socio-economic background of the subjects. However, from the fact that the college costs lie between those of the state colleges and the more exclusive schools, it can be inferred that most subjects came from middle class backgrounds. Further, the investigator was informed that many parents of the students of that college had non-professional occupations; and, in fact, many of the students were first-generation college attendees.

The subjects seemed to have rather definite academic goals in mind. Despite the fact that a large proportion of subjects were first-year students, 91.7% of all subjects had already decided on a major, and only 8.3% remained undecided. Their majors also seemed to reflect that their career goals lay in occupations they could enter immediately after college graduation. Thus, roughly 1/3 of the subjects majored in Elementary and Secondary Education, 1/3 in Business Administration, and only 1/3 in Liberal Arts.

Assignment to the 3 dormitories was made on a random basis. The external characteristics of the subjects in the 3 units did not seem to differ greatly from each other, except that there were more transfer students in floor B (29.6%) than floor A (11.1%) and C (4.8%), while there were fewer first-year students in floor B (19.0%) than in floors A (61.1%) and C (66.7%).

In summary, 60 women students from 3 different dormitory floors in a medium-sized Eastern co-educational college served as subjects in groups of 18, 21 and 21. In general, the subjects in this study seemed to be representative of the residents of the college. They consisted of individuals who were relatively new to the school and those not so new but who liked dormitory living. The existing dormitory environment seemed to be conducive to friendship formation. Further, the involvement of 3 dormitory floors in different dormitories which might have distinctive characteristics ensured a representative sample.

Only women students were used as subjects of this study, because evidence has shown that friendship choices differ in men and women (Duck, 1973), and within-sex choices have a different basis than cross-sex choices (Cavior, 1971). The subjects from the 3 different floors were treated as separate experimental units, in part because a unit of approximately 20 people is most desirable. It is small enough for the subjects to know each other well, yet large enough for them to be able to name 3 close friends. Further, such treatment was warranted and desirable because of the autonomous social functioning of the individual floors. Although confining the subjects' choice of friends to members of the same floor might be limiting in some cases, the possible confounding effect of propinquity was reduced more than it would be if the subjects were allowed to choose friends from the entire dormitory.

Eliminated also in this study, although inadvertently so, was the ethnic factor, in that none of the Black residents consented to participate in the study. Further eliminated was the hometown factor, as it turned out that none of the subjects came from the same hometown although all of them came from neighboring states.

Not eliminated were such factors as academic year (and its related factor, age), and religious backgrounds. These might affect friendship-choice, aside from cognitive style and other intellectual and personality factors which are the major emphases of this investigation.

Materials

Cognitive style was measured by the Group Embedded-Figures Test (GEFT) (Oltman, Raskin, and Witkin, 1971), and the Portable Rod-And-Frame Test (PRFT) (Oltman, 1968). Interpersonal attraction was measured by a sociometric technique originated by Moreno (1953). In addition, a questionnaire was included in this study, in which the subjects were requested to name their three close friends in order of preference, as well as to account for the nature of the relationship. Descriptive information on the subjects was also collected in the questionnaire.

Several aspects of personality were assessed by the Fundamental Interpersonal Relations Orientation-Behavior Scale (FIRO-B) (Schutz, 1958) and the Adjective Check List (ACL) (Gough, 1965).

The relationship between cognitive style and interpersonal attraction was compared with that between personality and intelligence and interpersonal attraction. An approximation to intelligence was represented by the verbal scores on the Scholastic Aptitude Test (VSAT).

In the following, a brief description will be given of each test.

Group Embedded-Figures Test. The GEFT is a timed, group-administered, paper-and-pencil test, consisting of 18 complex figures in the test proper from which subjects are asked to outline specified simple figures. Score on the test consists of the number of correct items out of a total of 18. According to the manual (Witkin, Oltman, Raskin,

and Karp, 1971), the Spearman-Brown reliability of the GEFT is .82. Validity coefficients were obtained by correlating GEFT scores with the standard EFT and with the Portable Rod-And-Frame Test and Articulation-Of-Body-Concept scale. These correlations were substantial enough to lead the authors to conclude that "The GEFT may prove to be a useful substitute for the EFT when individual testing is impractical" (Witkin, Oltman, Raskin, and Karp, 1971, p. 29).

Portable Rod-And-Frame Test. The PRFT is an individually-administered test. The apparatus is a box-like structure confining the subject's vision to the inside, which consists of a rod and a frame on a white background. The rod and the frame can be tilted independently of each other; four possible combinations of tilt can be arranged. The subject is presented with 8 trials, consisting of repetitions of each combination, and is asked to indicate when the rod appears upright as the investigator adjusts the rod gradually. Score on the test is the sum over the 8 trials of the degrees of difference between the subjects' perceived upright position of the rod and the objective upright. The PRFT has been found to show high split-half reliability (.95) and high correlation with the standard RFT (.89) (Oltman, 1968). In addition, Oltman found that PRFT scores were correlated .60 with the standard version of the Embedded-Figures Test (Witkin, et al., 1971).

Sociometric technique. The sociometric technique, originated by Moreno (1953), has been extensively reviewed by Mouton, Blake and Fruchter (1960a). They concluded that, although interpersonal relationships cannot be expected to be completely constant, the choices a person gives on one occasion are likely to be duplicated on a second

administration using the same criterion. Further, the number of choices a person receives is also relatively constant over time. Various studies indicating the validity of sociometric data were also discussed, including positive relations between sociometric status and, e.g., productivity and leadership, and negative relations with various undesirable traits, including accident-proneness and frequency of disciplinary offenses.

The sociometric technique used in this study consisted of presentation to the subject of a list of the names of all the participants of the study living on the same dormitory floor as the subject, and requesting her to choose among them her first, second, and third close friends. "Close friend" was not objectively defined, but was left to the subject's subjective judgment. An attempt to obtain the criteria of close friend used by the subject was made via a questionnaire inquiring into the degree of closeness with each friend, as well as the daily average number of hours of association with each other, and the kinds of activities commonly engaged in.

The Friendship Questionnaire. Besides questions on the nature of the relationship between the subject and her close friends, the questionnaire also included some questions about the subject herself, such as her major, interests and her year at school, etc. Two questions were also included about her roommate situation, asking if she had a roommate and if so, would she intend to room with the same person again, assuming that she would be attending the same school next year.

Fundamental Interpersonal Relations Orientation - Behavior Scale.

FIRO-B is a 54-item paper-and-pencil personality inventory. It attempts to evaluate the subject's characteristic behavior in relating to others in order to reveal the strength of the individual's needs in the areas of inclusion, control and affection. Each need area is divided into an expressed and wanted aspect, representing whether the subject likes to act out the behavior or have the behavior directed towards him or her. The subject is asked to indicate on each item, via a 6-point scale, to what extent he or she wants to express and to receive each of the three behavioral categories. Six scores, ranging from 0-9, can be obtained on the expressed and wanted aspects of the three need areas. Different combinations of the six scores of the individual and those of his or her friend can be made to yield various indices of compatibility of their relationship.

According to its author (Schutz, 1958), concurrent validity of FIRO-B is satisfactorily established by demonstrating significant relationships with certain criteria regarding, e.g., political attitudes, occupational choice, and conformity behavior. As FIRO-B scales are all Guttman scales, reliability is established by the demonstration of an average reproducibility, or cumulative property of its items, between .93 and .94. Test-retest reliability over a one-month interval is reported to be satisfactory. Schutz (1958) stated, "The probability of an individual's jumping from a high to a low, or a low to a high (on any scale), is extremely slight - about 10%" (p. 79).

Adjective Check List. The ACL is a paper-and-pencil personality inventory, consisting of 300 adjectives commonly used to describe attributes of a person. It may be administered to an individual to elicit

his or her self-evaluation or her or his evaluation of another person. A list of 300 adjectives was developed by Gough in 1952. In 1958 Heilbrun developed a number of experimental scales for the ACL based on Murray's (1938) need-trait system. Gough and Heilbrun have since prepared several additional scales and devised a system of standard score conversion for the 24 scales now available.

Six-month test-retest reliabilities of the list of words ranged from .01 to .86. Low reliability in this regard is suggested by the authors (Gough and Heilbrun, 1965) as a differential function of personality; e.g., subjects with cheerful, informal and energetic characteristics are presumed to be less labile than subjects who are awkward, prejudiced and resentful, etc. The test-retest reliability of scales taken at a 10-week interval ranged from .45 to .90, and were considered adequate. A 5 1/2-year test-retest reliability of a group of medical students showed high coefficients for certain scales, such as self confidence, dominance and exhibition, and low coefficients for lability (.25) and succorance (.26). The authors suggested that the results of these latter scales should be interpreted with caution.

In order to establish validity for the ACL, Heilbrun found that the coefficients of correlation between ACL and the MMPI (Hathaway and McKinley, 1943) and Edwards (1954) Personal Preference Schedule were slightly higher than those between ACL scales and intellectual and cognitive measures, which were uniformly low. Nevertheless, the Gottschadt Figures Test correlated at the .05 level with some scales of ACL, such as favorable adjectives (.25), lability (.24), personal adjustment (.24), intraception (.22) and succorance (-.28). Gough and Heilbrun attempted to control response sets such as acquiescence and social desirability by

providing standard scores to which raw scores can be converted. Because of low correlation coefficients between the 23 ACL standardized scales with ACL number of adjectives checked, and because of the much lower than typical coefficients between all ACL scales and Edwards' (1957) social desirability scale, the response sets of acquiescence and social desirability were considered controlled.

Procedure

The personality measures used in this investigation depend on the openness of the subjects; thus, the subjects' willingness to be frank was of utmost importance. One of this investigator's efforts to enlist the subjects' cooperation was made via assuring the subjects of the confidentiality of their responses. Confidentiality was maintained by having only the subjects' code numbers appear on all test booklets and by the investigator's assuring the subjects that no information about them would be available to anyone except the investigator. While only code numbers appeared on all of subjects' materials, the subjects' names and numbers were recorded on 3 x 5 cards, kept separately. This investigator had also been able to establish a certain credibility with the subjects, as she was known to be leading some counselling groups at the college, in which confidentiality had been observed.

All testing was done towards the end of the school year so that all students had an opportunity to be well acquainted with other members of their living unit.

The subjects were tested in 3 groups, each group being the natural living unit to which the subjects belonged. Each group received parallel treatments.

Each group was given two testing sessions. The first was a group testing session, where all participants of the same floor took their tests together. During the second session, the subjects took the rest of the tests in groups of four. Both sessions took place in a large lounge in the respective dormitories where the particular group of the subjects resided.

All the testing materials appropriate for the particular session were put in a manila envelope, together with a pencil and an eraser. The manila envelope and a clip board were placed on a chair. Before the subjects entered the room, chairs were arranged at considerable distance from each other, so that the subjects could not see each other's responses. The investigator and an assistant were in the room, to give help if needed, as well as to oversee the smooth running of the testing session.

During the first session, the friendship questionnaire, the GEFT and the FIRO-B were given. To allow for the fact that some subjects might not be able to arrive on time, the subjects were instructed to work on the friendship questionnaire independently upon arrival. After all the subjects had arrived, the investigator administered GEFT, according to standardized procedures. FIRO-B was also taken independently by the subjects after they had finished the GEFT.

During the second session, the Portable Rod-And-Frame Test and the Adjective Check List were given to groups of four subjects. While one subject was being given the PRFT individually by the investigator, other subjects were working on the ACL independently, where they were asked to rate themselves and their 3 closest friends. Each session took approximately one hour.

After the completion of all the tests, the subjects were asked to write a few lines on what they thought the investigator expected to find in her study.

Lastly, the subjects were also asked to give signed permission for the investigator to obtain their SAT scores, taken previously in their respective high schools.

CHAPTER THREE

Results

The Nature of Friendship

Before presenting the main results, some evidence for the validity of the sociometric choices should be given, since the significance of the study rests on the assumption that real-life friendship relations are being tapped. As mentioned earlier, the exact nature of the friendship relation was deliberately left unspecified to the subjects. However, a questionnaire was administered which dealt with a number of aspects of friendship, in order to determine the basis on which the choices were actually made. The questionnaire elicited subjective estimates of felt closeness to each of their choices, as compared to all past and present friends, amount of time spent together and the exclusivity of that time in a number of different activity areas, and the value derived from those associations. As will be seen below, the questionnaire results were generally consistent with a common sense conception of friendship, with felt closeness varying directly with the rank of first, second, and third choice friend. The data from the questionnaire thus support the view that the choices made by the subjects were not simply haphazard responses given by people operating under the artificial restraints of the research setting, but that they were valid expressions of pre-existing real-life relationships.

Degree of closeness. Degree of closeness between a subject and her first, second, and third friends was measured by her indicating on a 4-point scale the perceived degree of closeness with each friend, when compared with all other friends she had, at the time of testing and in the past. The results (Table 1) show that 85% of the subjects indicated that their relationship with their first friends was close or extremely close, and that their felt degree of closeness decreased from first friends to third friends, both of which provide some validation that the investigator's request for close friends was complied with.

Table 1

Percentage of Subjects Checking a Certain Degree of Closeness With First, Second and Third Friends

(N = 60)

	Casual	Moderately Close	Close	Extremely Close
First Friend	1.7%	13.3%	25.0%	60.0%
Second Friend	6.7	36.7	40.0	16.6
Third Friend	28.3	51.7	15.0	5.0

Amount of time spent together. The subjects were asked to indicate the number of hours (to the nearest 1/2 hour) per day they spent with their first, second, and third friends. This question turned out to be an ambiguous one as the subjects were unclear whether to include sleeping hours if their friends were also roommates, and they responded according to their individual interpretation. The results in Table 2 present the average number of hours the subjects indicated that they spent with their chosen friends. On the first line, the average

number of hours is given exactly as the subjects stated. On the second line, the responses given for roommates were excluded, and the averages are given only for those responses not involving roommates. As can be seen, the data on all responses differ from those excluding roommates by being greater in trend only. That the subjects indicated that they spent more time with first than with second and third friends remains the pattern. That the subjects indicated that they spent on the average at least 5 to 7 hours per day with their first friends when they were not rooming together again attests to the closeness of the friendship.

Table 2

Subjects' Estimation of the Average Number of Hours
Spent with First, Second, and Third Friends

	First Friend	Second Friend	Third Friend
Including Roommates ^a	7.0 ₁ hr.	4.6 hr.	3.8 _d hr.
Excluding Roommates	5.7 ^b	3.9 ^c	3.4 ^d

^a_n = 60
^b_n = 41
^c_n = 49
^d_n = 53

Activities - how often and with whom. Eleven kinds of activities commonly engaged by college students were presented to the subjects, who were asked to indicate on a 3-point scale the frequency with which they engaged in each activity with their first, second, and third friends. Furthermore, they were asked to indicate whether they engaged in each activity dyadically or in a group.

The results are presented in Table 3 in order of frequency, with the activities more often endorsed by the subjects presented first, and

Table 3

Percentage of Subjects Engaged in Various Activities

Activity	Frequency			Chi-Square (4)
	Almost Never	Some-times	Very Often	
Personal Talk				
First Friend	0%	10.0%	90.0%	
Second Friend	6.6	46.7	46.7	56.1**
Third Friend	13.3	63.4	23.3	
Impersonal Talk				
First Friend	0	21.7	78.3	
Second Friend	1.7	33.3	65.0	67.8**
Third Friend	28.3	26.7	45.0	
Eat Together				
First Friend	1.7	23.3	75.0	
Second Friend	10.0	36.7	53.3	23.9**
Third Friend	28.3	26.7	45.0	
Social Activities				
First Friend	13.3	36.7	50.0	
Second Friend	31.7	43.3	25.0	14.6*
Third Friend	35.0	41.7	23.3	
Study Together				
First Friend	43.3	35.0	21.7	
Second Friend	63.4	23.3	13.3	10.5*
Third Friend	66.7	28.3	5.0	
Cultural Activities				
First Friend	26.7	55.0	18.3	
Second Friend	45.0	46.7	8.3	15.0*
Third Friend	60.0	33.3	6.7	
Watch Television				
First Friend	31.7	50.0	18.3	
Second Friend	41.6	51.7	6.7	n. s.
Third Friend	41.7	41.7	16.6	
Sports				
First Friend	33.3	50.0	16.7	
Second Friend	50.0	43.3	6.7	10.9*
Third Friend	56.7	40.0	3.3	
Extra-Curricular Activities				
First Friend	63.3	25.0	11.7	
Second Friend	68.3	26.7	5.0	n. s.
Third Friend	80.0	20.0	0	
Informal Games (e.g., Pinochle)				
First Friend	56.7	40.0	3.3	
Second Friend	66.7	25.0	8.3	13.4*
Third Friend	83.4	13.3	3.3	
Formal Games (e.g., Chess)				
First Friend	85.0	11.7	3.3	
Second Friend	91.6	6.7	1.7	n. s.
Third Friend	98.3	1.7	0	

* $p < .05$.** $p < .01$.

those least frequently endorsed presented last. As can be seen, those activities (i.e., personal and impersonal talk, eat together, and social activities) where 50 and more percent of the subjects endorsed as very often engaged in with their first friends focus on social interaction, while those activities endorsed by less than 25 percent of the subjects (i.e., study together, cultural activities, watch TV, etc.) focus on a specific activity primarily and on social interaction secondarily.

Perhaps, another distinction between the more frequently-engaged-in activities is personal importance. Thus, tête-a-têtes are personally more important than games, which are casual leisure time activities. As one subject stated in response to an open-ended question, "The friends in a dorm take the place of your family when problems or needed comfort arises." Thus, personal talks serve as vehicles where one resolves problems and obtains comfort.

The kind of activity probably determines the size of the group simultaneously sharing the activity. Thus (Table 4), intimate personal talks are shared dyadically while cultural activities and sports are shared in a group.

First friends generally exceed second and third friends in the frequency with which the activity is engaged in as well as in the exclusiveness with which the activity is engaged in.

Friendship values. In the friendship questionnaire 12 questions were included in order to find out the subjects' perception of the kinds of values their friends provide. Nine of these questions were borrowed from Wright's (1969) Acquaintance Description Form, exploring areas such as "ego support value," "utility value" and "stimulation value." Three other questions were added to the friendship questionnaire to elicit the

Table 4

Percentage of Subjects Engaging in Various Activities
Under Different Conditions

Activity	With Whom				Chi-Square(4) ^a
	Dyad-cally	Half-and-Half	In a Group	Did Not Apply	
Personal Talk					
First Friend	76.7%	20.0%	3.3%	0.0%	
Second Friend	58.4	23.3	13.3	5.0	64.3**
Third Friend	48.4	30.0	13.3	8.3	
Impersonal Talk					
First Friend	18.3	53.4	28.3	0.0	
Second Friend	10.0	43.3	46.7	0.0	n. s.
Third Friend	1.7	13.3	71.7	13.3	
Eat Together					
First Friend	11.7	25.0	61.6	1.7	
Second Friend	1.7	16.7	76.6	5.0	10.6*
Third Friend	1.7	13.3	71.7	13.3	
Social Activities					
First Friend	13.3	33.4	50.0	3.3	
Second Friend	3.3	20.0	61.7	15.0	14.6*
Third Friend	0.0	16.7	66.6	16.7	
Study Together					
First Friend	50.0	11.7	10.0	28.3	
Second Friend	30.0	13.3	15.0	41.7	n. s.
Third Friend	23.3	23.3	16.7	36.7	
Cultural Activities					
First Friend	6.7	31.7	53.3	8.3	
Second Friend	5.0	15.0	61.7	18.3	n. s.
Third Friend	5.0	16.7	48.3	30.0	
Watch Television					
First Friend	18.3	21.7	48.3	11.7	
Second Friend	6.7	28.3	46.7	18.3	n. s.
Third Friend	8.3	18.3	51.7	21.7	
Sports					
First Friend	5.0	30.0	53.3	11.7	
Second Friend	8.3	16.7	55.0	20.0	n. s.
Third Friend	8.3	15.0	50.0	26.7	
Extra-Curricular Activities					
First Friend	13.3	10.0	45.0	31.7	
Second Friend	13.3	10.0	41.7	35.0	n. s.
Third Friend	5.0	15.0	38.3	41.7	

(continued)

Table 4 (continued)

Informal Games					
(e.g., Pinochle)					
First Friend	6.7	16.7	55.0	21.6	
Second Friend	3.3	23.3	41.7	31.7	n. s.
Third Friend	1.7	15.0	45.0	38.3	
Formal Games					
(e.g., Chess)					
First Friend	15.0	18.3	30.0	36.7	
Second Friend	8.3	20.0	28.3	43.4	n. s.
Third Friend	3.3	16.7	35.0	45.0	

^aSubjects who endorsed "Did Not Apply" were not included in calculation of 3 X 3 Chi-Squares.

*p < .05.
 **p < .01.

subjects' responses as to how much they felt that their friends were similar to them in attitude, interest and personality. The subjects were asked to rate on a 4-point scale (almost never, seldom, usually and almost always) to each of the 12 questions. The average value the subjects gave to questions are presented in rank order in Table 5.

Consistent with the results of the previous subsection where the subjects indicated that the most frequently-engaged-in activity between themselves and their friends was personal talks, the most highly rated friendship value for all friends was "to listen sympathetically."

Second in ranking is the "ego-support value" of friendship, such as respecting subjects' ideas, appreciating their ability, or in general bolstering their self-esteem. Ranked also very high is the "utility value" of friendship, such as running errands for the subjects when necessary, and in general being very helpful.

In comparison, the subjects did not appreciate their friends for being stimulating (e.g., offering provocative thoughts, asking challenging questions, or offering new suggestions for activities) as much as they appreciated their being supportive or helpful. "Stimulating value" of friendship ranked in the lower half of all the friendship values.

Similarity in personality was rated lower than similarity in attitudes and interests, a finding consistent with those reviewed in the literature. In general, subjects consistently indicated that they perceived their first friends as providing more reward than their second and third friends. Thus, while all of the 12 friendship values were perceived as on the average "usually" and "almost always" provided by the subjects' first friends, only 8 and 4 of those values were perceived as such about their second and third friends respectively.

Table 5
 Friendship Values
 (N = 60)

Friendship Values	<u>First Friend</u>		<u>Second Friend</u>		<u>Third Friend</u>	
	Rank Order	Mean Value	Rank Order	Mean Value	Rank Order	Mean Value
Listens sympathetically	1.0	3.72	1.5	3.47	2.0	3.18
Respects my ideas	2.0	3.60	1.5	3.47	1.0	3.28
Runs errands	3.0	3.55	3.0	3.40	3.0	3.12
Appreciates my ability	4.0	3.52	4.0	3.28	6.0	2.92
Common Interests	5.0	3.43	11.0	2.85	11.0	2.60
Common Attitudes	6.0	3.38	9.5	2.97	10.0	2.75
Provocative Thoughts	7.0	3.37	8.0	3.05	5.0	2.95
Puts me at ease	8.0	3.33	5.0	3.13	4.0	3.08
Challenging Questions	9.5	3.30	7.0	3.08	9.0	2.80
New Suggestions	9.5	3.30	6.0	3.15	7.5	2.88
Helps me succeed	11.0	3.25	9.5	2.97	7.5	2.88
Similar Personality	12.0	3.17	12.0	2.75	12.0	2.58

Note. - Subjects' responses from 1 to 4 (almost never, seldom, and almost always) to each item were summed and divided by 60, to give the mean value.

Summary. The results in this section reveal that close friendships among women college residents are subjectively perceived as being very or extremely close (as indicated by 85% of subjects), as involving spending a lot of time together (at least 5.7 hours per day), most of which (90%) is engaged in personal talks, sometimes with a group of others, but mostly (76.7%) alone with their close friends. Pursuant to this close friendship, the subjects indicated that they appreciate their close friends' listening sympathetically to them; and, in general being supportive and helpful more than being stimulating and challenging. The results further suggest that what one's friends can directly do for one is a more potent attraction than their being similar, whose reward value is perhaps less direct. Thus, a picture generally emerges that as young women leave home to go to college and face new challenges of gradually establishing their independence, they need close friends who would be supportive and enable them to develop their individuality, and not to be overly active and different and usurp their individuality.

The Similarity-Attraction Relationship

Three major groups of questions are to be answered in this section:

(a) Are there significant correlations between subjects and their sociometric choices in cognitive style, verbal aptitude and personality factors? (b) Are there significant correlations between subjects and their sociometric choices in other subject variables such as religion and academic class? (c) Could the similarity effect of cognitive style be due to other factors?

Rationale for statistical treatments. Pearson product-moment r 's were used in assessing the similarity-attraction relationships. All 60

subjects residing in the three different units were treated as one group. This is based on the reasoning that although the subjects' friendship choices were constrained by the investigator's instruction to choose friends from individuals in the same unit as the subjects, the constraint does not in fact deviate from reality where no one has the choice of all other persons in the whole universe as friends. However, inasmuch as treatment of all 60 subjects as one group may have obscured the friendship choice patterns of the individual units, the sociometric pattern within each living unit will also be examined, but in a later section.

The means for cognitive style, verbal aptitude and personality variables for each individual unit were compared by one-way ANOVA, and were found to be not significantly different from each other with the exception of Autonomy and Change (Table 6). For all variables except the latter two correlations were therefore run for the total group. For the latter two variables, in order to adjust for the differences between the means, scores were first standardized within each living unit and then correlations using these adjusted scores were computed across all 60 subjects.

Similarity-attraction relationships for all major variables.

Significant correlations were found between subjects and their first friends on all of the cognitive style and some of the other major variables, measured by 1-tailed test with 58 degrees of freedom. As shown in Table 7, scores of subjects and their first friends were significantly correlated for PRFT and GEFT. In addition, subjects and their first friends were also significantly correlated for Verbal SAT, which measures verbal aptitude.

Table 6

Differences Among Living Units on Field Dependence,
Verbal Aptitude, and Personality Variables

	Unit A (n = 18)		Unit B (n = 21)		Unit C (n = 21)		F (2,57)	
	Mean	S. D.	Mean	S. D.	Mean	S. D.		
Field Dependence								
PRFT ^a	39.06	27.71	60.57	57.69	46.57	32.40	1.34	n. s.
GEFT ^b	9.39	4.88	10.43	5.23	11.71	4.97	1.05	n. s.
Verbal Aptitude								
VSAT	446.11	121.30	442.81	89.79	488.48	96.94	1.27	n. s.
FIRO-B								
Inclusion(e + w)	10.80	4.00	11.10	4.30	11.90	3.40	<1	n. s.
Inclusion (e - w)	.33	2.50	.52	3.33	-.14	2.22	<1	n. s.
Control (e + w)	6.60	3.00	5.60	3.00	7.50	4.00	1.66	n. s.
Control (e - w)	-.89	3.64	-.38	3.14	-1.24	3.20	<1	n. s.
Affection (e + w)	10.90	4.10	10.20	4.90	12.20	3.80	1.17	n. s.
Affection (e - w)	-1.28	1.96	.24	1.58	-1.33	1.49	<1	n. s.
ACL ^c								
No. of Adjectives								
Checked	38.70	8.80	42.50	9.40	44.30	11.80	1.52	n. s.
No. of Unfavorable								
Adjectives	54.70	9.80	51.10	10.90	54.40	15.90	<1	n. s.
Autonomy	54.80	9.40	53.80	9.80	48.00	10.00	3.52	p < .05
Change	54.60	8.80	51.60	8.60	46.60	10.20	3.71	p < .05

^aHigher PRFT scores indicate greater field dependence.

^bHigher GEFT scores indicate greater field independence.

^cThese four ACL scales were the only ones for which significant correlations were found between subjects and their first friends. After adjustment for mean differences among the three living units, the correlations for Autonomy and Change were no longer significant.

Table 7

Correlations Between Scores for Subjects and First Friends for
Field Dependence, Verbal Aptitude, and Personality Variables

(N = 60)

Variables	Correlations, Subjects vs. First Friend
Field Dependence	
PRFT	.29*
GEFT	.30**
Verbal Aptitude	
VSAT	.29*
Personality Variables	
FIRO-B ^a	
Inclusion (e + w)	.13
Inclusion (e - w)	.02
Control (e + w)	.13
Control (e - w)	-.01
Affection (e + w)	.06
Affection (e - w)	.26*
ACL	
Number of Adjectives Checked	.24*
Number of Favorable Adjectives	-.11
Number of Unfavorable Adjectives	-.21*
Abasement	.12
Achievement	.04
Affiliation	.06
Aggression	-.01 _b
Autonomy	.15 _b
Change	.17 _b
Counseling Readiness	.09
Defensiveness	-.01
Deference	.18
Dominance	.01
Endurance	.03
Exhibition	.16
Heterosexuality	-.10
Intracception	.07
Lability	-.11
Nurturance	-.04
Order	.12
Personal Adjustment	-.12
Self Confidence	.10
Self Control	.03
Succorance	.17

* $p < .05$, one-tailed test.

** $p < .01$, one-tailed test.

^aThe interchange index (e + w) for a need area is the sum of the items endorsed which indicate a wish to express and a wish to receive behavior relevant to that area. The originator index (e - w) indicates the predominance of expressive over receptive needs in a particular area.

^bCorrected for mean differences between living units.

In contrast, none of the "Interchange Indices" (i.e., the combined measurement of the expressed and wanted aspects) in FIRO-B's need areas of Inclusion, Control and Affection were significant. However, the "Originator Index" for Affection (i.e., the extent to which the need to express affection exceeds the need to receive affection) showed a significant correlation between subjects and first friends. Two ACL scales were also found significantly correlated. While subjects and their first friends were positively correlated in Number of Adjectives Checked (measuring surgency and drive, according to the ACL manual), they were negatively correlated in Number of Unfavorable Adjectives Checked (measuring impulsive lack of control over the hostile and unattractive aspects of one's personality). This suggests that individuals are attracted to similar-others in ego-syntonic traits (e.g., energy deployment) while to dissimilar-others in ego-alien traits (e.g., lack of control). This result is consistent with other findings in the literature.

Subjects and their first friends were also found to correlate significantly on two ACL scales: Autonomy and Change. However, these correlations became insignificant after they were adjusted for the differences in the means of the three individual units.

Results for second and third friends were uniformly non-significant for all of the above variables and will not be discussed.

Similarity effects for other subject variables: religion and academic class. More potent than the cognitive style, verbal aptitude and personality variables in producing similarity effects were other subject variables such as religion and academic class (and its related

factor, age; r (58) between academic class and age was .95, $p < .001$). As can be seen from Table 8, subjects tended to choose others of similar religion not only as first friends, but also as second friends. Table 9 further shows that subjects tended to choose others of the same academic class not only for first friends and second friends, but for third friends as well.

Could the similarity effect of cognitive style be accounted for by other factors? The preceding sections show that the similarity-attraction relationships exist for cognitive style and for some of the other major variables. One might question whether the similarity effect for cognitive style could be indirectly caused by similarity effects for other variables. In order to answer this question, analyses were made, first, to find out the correlations between field dependence and those major variables not relevant to field dependence (e.g., age and VSAT); and secondly, whether the similar field dependence-attraction relationship holds after the significant correlations are partialled out by second-order partial correlations. Table 10 shows the intercorrelations among field dependence, VSAT and age. As can be seen, besides the expected significant correlation between the two field dependence measures, the only other variable significantly correlated with GEFT was VSAT. Age and either measure of field dependence were not significantly correlated. Neither was religion (Table 11); one-way ANOVA revealed that the mean field dependence of the three religious groups (Catholic, Protestant and Jewish) were not significantly different from each other.

Table 8

Association Between Subjects' and Friends' Religion

Subjects' Religion	First Friends' Religion				Second Friends' Religion				Third Friends' Religion					
	J ^a	P	C	Total	J	P	C	Total	J	P	C	Total		
J	9	3	3	15	J	6	6	3	15	J	4	2	9	15
P	4	1	7	12	P	1	0	11	12	P	2	2	8	12
C	3	8	22	33	C	3	6	24	33	C	1	6	26	33
	16	12	32	60		10	12	38	60		7	10	43	60
	$\chi^2(4) = 15.62$				$\chi^2(4) = 18.41$				$\chi^2(4) = 6.00$					
	$p < .01.$				$p < .01.$				n. s.					

^aJ = Jewish, P = Protestant, and C = Catholic.

Table 9

Association Between Subjects' and Friends' Academic Class

Subjects' Academic Class	First Friends' Academic Class					Second Friends' Academic Class					Third Friends' Academic Class				
	1	2	3	4	Total	1	2	3	4	Total	1	2	3	4	Total
1	24	2	3	0	29	20	1	8	0	29	20	4	5	0	29
2	0	6	2	1	9	0	3	5	1	9	1	4	3	1	9
3	3	8	3	3	17	3	6	8	0	17	8	2	6	1	17
4	1	2	2	0	5	0	3	2	0	5	1	0	3	1	5
	28	18	10	4	60	23	13	23	1	60	30	10	17	3	60
	$\chi^2(9) = 41.90$					$\chi^2(9) = 31.82$					$\chi^2(9) = 18.91$				
	$p < .001.$					$p < .001.$					$p < .05.$				

Table 10

Intercorrelations Among Field Dependence, VSAT and Age

(N = 60)

	Age	PRFT	GEFT
Age			
PRFT ^a	-.06		
GEFT ^b	.18	-.34**	
VSAT	.30*	-.05	.42

^aHigher PRFT scores mean greater field dependence.

^bHigher GEFT scores mean greater field independence.

*p < .05, 2-tailed.

**p < .005, 1-tailed.

Table 11

ANOVA on Mean Field Dependence and Verbal Aptitude of Three
Religious Groups

	Catholic (n = 33)		Jewish (n = 15)		Protestant (n = 12)		F(2,57)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
Field Dependence								
PRFT	60.18	50.38	37.93	22.38	33.17	27.17	2.65	n.s.
GEFT	10.00	4.97	10.87	5.11	11.25	5.33	.56	n.s.
Verbal Aptitude								
VSAT	451.18	103.56	472.93	108.97	467.00	100.41	.26	n.s.

Since VSAT was significantly correlated with GEFT, it was partialled out from the relationship between subjects' and their first friends' field dependence by second-order partial correlations. As can be seen from Table 12, after subjects and first friends' VSAT scores were partialled out, subjects and first friends were still significantly correlated for both field dependence measures.

Similarly, the correlations between both field dependence measures and VSAT were partialled out from the relationship between subjects and first friends' VSAT by second-order partial correlations. Again, subjects and their first friends were significantly correlated on VSAT even after their relationships with the various field dependence measures were partialled out (Table 12).

From the preceding, it can be concluded that the similar field dependence-attraction relationship is not dependent on the similar VSAT-attraction relationship, nor that the latter is dependent on the former, but that both variables are potent determinants in their own right.

For additional interest, each field dependence measure was partialled out from the other in examining the similarity-attraction relationships. The results in Table 12 show that subjects and their first friends were still significantly correlated in both PRFT and GEFT even after each field-dependence measure was partialled from the other. If it were true as was suggested by Goodenough (personal communication) that there was no part of the field-dependence variance that was tapped by PRFT and not by GEFT, or vice versa, then the significant correlations between the subjects and their first friends after partial correlations is probably due to non-field-dependence variance. It is not clear what

Table 12

Correlations Between Subjects and First Friends on Field
Dependence and VSAT Before and After Partial Correlations

(N = 60)

Variables Remaining	Variables Partialled Out ^a	Correlations, Subjects Versus First Friends	
		Before Partial Correlation	After Partial Correlation
PRFT	VSAT	.293*	.298**
GEFT	VSAT	.304**	.254*
VSAT	PRET	.298**	.302**
VSAT	GEFT	.298**	.249*
PRFT	GEFT	.293**	.396***
GEFT	PRFT	.304**	.236*

^aIn each case, the scores for both subjects and first friend were partialled out by second-order partial correlations. First-order correlations which entered into the calculations for PRFT were:

PRFT_{subject} vs. PRFT_{first friend} = .29,

PRFT_{subject} vs. VSAT_{subject} = -.05,

PRFT_{subject} vs. VSAT_{first friend} = .02,

PRFT_{first friend} vs. VSAT_{subject} = .02,

PRFT_{first friend} vs. VSAT_{first friend} = -.03,

VSAT_{first friend} vs. VSAT_{subject} = .30.

(continued)

Table 12 (continued)

First-order correlations which entered into the calculations for GEFT were:

GEFT_{subject} vs. GEFT_{first friend} = .30,

GEFT_{subject} vs. VSAT_{subject} = .42,

GEFT_{subject} vs. VSAT_{first friend} = .21,

GEFT_{first friend} vs. VSAT_{subject} = .14,

GEFT_{first friend} vs. VSAT_{first friend} = .43,

VSAT_{first friend} vs. VSAT_{subject} = .30.

* $p < .05$, 1-tailed, $df = 56$.

** $p < .025$, 1-tailed, $df = 56$.

*** $p < .01$, 1-tailed, $df = 56$.

those variances are at this point. It can be argued that the similarity effect found in this study is due to non-field-dependence variance. However, while there is always such a possibility, before any pervasive personality factors can be identified which are correlated with PRFT or GEFT and not with field dependence, which may account for the similarity effect, field dependence remains the most likely determinant of friendship choices.

Could the results of this study be due to demand characteristics?

The subjects were most cooperative throughout the study, as was demonstrated by the fact that there was no missing data despite the many tasks imposed on them. One might wonder, however, if their cooperativeness might not have led them to bias their responses in order to meet the investigator's expectations. In order to explore if this was the case, the investigator asked the subjects to express their expectations of the hypotheses proposed for the study in a post-evaluation questionnaire.

Analysis of the responses to the open-ended questionnaire show that most subjects expected the investigator to prove either similarity (24% of responses) or complementarity (4.5%) or both similarity and complementarity (18.2%) in personality factors relating to interpersonal attraction. Although a small number (16.7%) expected that the investigator was interested in perception, no subject expected that she was interested in finding relationship between similar field dependence and friendship choice. Their anticipation in relation to perception was that perhaps a person's ability to perceive depth in spatial areas was related to her ability to perceive depth in personality areas, or that

the investigator was interested in finding out whether a subject's self perception is related to other persons' perception of her, etc. That no subject expected that the investigator was looking for a relationship between similar field dependence and friendship choice suggests that the findings in this study are not due to demand characteristics. An even stronger argument for this conclusion is that cognitive style was determined by objective measurements, and that it was not likely that the subjects falsified their scores to be similar to their friends, even if they could hypothesize that the similar cognitive style-attraction relationship was sought.

Conclusion. Having ruled out that the similarity effect in field dependence found in this study could be due to a number of other possible factors such as VSAT and demand characteristics, it would appear that the data do support the first hypothesis of this study: that subjects and their first friends are indeed significantly similar in both field dependence measures. It should be pointed out that the similarity effect only applies to the first and therefore closest friends, and not to second and third friends.

Desirability Effect

The second hypothesis of this study predicted a significant relationship between field dependence and sociometric status, in that field-dependent subjects were expected to be more often chosen as close friends than field-independent subjects.

Pearson product-moment r 's were used to determine the relationship between subjects' field dependence and sociometric status, i.e., the number of times the subjects were chosen as first, second, and third close friends.

The rationale used for treating all 60 subjects as one group in evaluating the similarity effect is also applicable here in evaluating the desirability effect. An individual's sociometric status is always limited to the group with which she associates, and in this respect the investigator's request that the subjects choose friends from among their own living unit does not constitute a drastic violation of the normal circumstances. Again, because the three living units have been found not to differ significantly on all major variables with the exception of Autonomy and Change (Table 6, p. 53), the three groups were treated together without further modifications. While Autonomy and Change were different, correlations between those scales and sociometric status within the living units were so low that no further analyses were done with those variables.

As can be seen in Table 13, field-dependent subjects were found to have higher sociometric status than field-independent subjects, based on PRFT. Field-dependent subjects were also found to be more popular than field-independent individuals based on GEFT, although the correlation did not reach statistical significance.

None of the other major variables besides PRFT yielded any significant correlation with sociometric status (Table 13). Thus it would seem that field dependence is a more potent variable than VSAT, FIRO-B and ACL in predicting sociometric status in this study.

Personality Correlates of Field Dependence

With FIRO-B self-ratings (Table 14), only the "originator index" (i.e., the differential of the "express" over the "wanted" aspect) in the need area of control was found to be significantly correlated with

Table 13

Correlations Between Sociometric Status and Field Dependence,
Verbal Aptitude, and Personality Measures (N = 60)

Variables	Correlations with Sociometric Status
Field Dependence	
PRFT	.33***
GEFT	-.13
Verbal Aptitude	
VSAT	.10
Personality Variables	
FIRO-B ^a	
Inclusion (e + w)	.09
Inclusion (e - w)	-.04
Control (e + w)	-.08
Control (e - w)	.04
Affection (e + w)	-.20
Affection (e - w)	.06
ACL	
Number of Adjectives Checked	-.02
Number of Favorable Adjectives	-.06
Number of Unfavorable Adjectives	.10
Abasement	-.13
Achievement	-.07
Affiliation	-.02
Aggression	.13
Autonomy	.10
Change	-.03
Counseling Readiness	.04
Defensiveness	-.13
Deference	-.05
Dominance	.08
Endurance	-.08
Exhibition	.12
Heterosexuality	-.04
Inteception	-.09
Lability	-.09
Nurturance	-.02
Order	-.14
Personal Adjustment	-.08
Self Confidence	.10
Self Control	-.13
Succorance	-.01

*** $p < .005$, one-tailed test.

^aThe interchange index (e + w) for a need area is the sum of the items endorsed which indicate a wish to express and a wish to receive behavior relevant to that area. The originator index (e - w) indicates the predominance of expressive over receptive needs in a particular area.

GEFT. With the ACL (Table 14), only three scales were found to relate with some measure of cognitive style at a two-tailed, .05 level of significance. They were: Number of Adjectives Checked, Order and Counseling Readiness. In view of the small percentage of significant correlations (4/60, or 6.7%) and the fact that no personality scale was found to be significantly correlated with both field dependence tests, it is considered that essentially FIRO-B and ACL have not been consistently shown to have any important relationship to the underlying cognitive style dimension. One possible reason that neither FIRO-B or ACL was associated with field dependence is that field dependence may tap different levels of personality functioning.

ACL scales such as Autonomy might have been expected to correlate with field-independent characteristics, but a closer examination of the particular adjectives making up the scale, including "aggressive," "argumentative," "hostile," and "undependable," portray an abrasive interpersonal style not necessarily relevant to the type of autonomy which is implied by the field-independent mode of functioning. This is not to say that an empirically-derived ACL scale related to field-dependence-independence could not be derived. A side exploration of the study suggests that adjectives such as "logical," "rational," and "deliberate" have been more often endorsed by field-independent subjects, while adjectives such as "affectionate," "sympathetic," and "absent-minded" have been more often endorsed by field-dependent subjects. Of interest is that more field-independent subjects endorsed "pessimistic" which is a cognitive attitudinal trait, while more field-dependent subjects endorsed the corresponding trait "gloomy," which appears to be a global affect. Some interesting leads could be pursued in a study specially designed to investigate these issues.

Table 14

Correlations Between Field Dependence and Verbal Aptitude
and Personality Measures (N = 60)

Variables	PRFT	GEFT
Verbal Aptitude		
VSAT	-.05	.42**
Personality Variables		
FIRO-B		
Inclusion (e + w)	.02	.01
Inclusion (e - w)	.18	-.09
Control (e + w)	-.09	.04
Control (e - w)	.02	.28*
Affection (e + w)	-.09	-.09
Affection (e - w)	.18	-.09
ACL		
Number of Adjectives Checked	-.11	.31*
Number of Favorable Adjectives	-.19	.11
Number of Unfavorable Adjectives	.10	-.04
Abasement	.00	-.04
Achievement	-.18	.12
Affiliation	-.00	-.01
Aggression	.01	.07
Autonomy	.07	.10
Change	-.16	.11
Counseling Readiness	.04	.34**
Defensiveness	-.18	.04
Deference	.03	-.15
Dominance	-.09	.09
Endurance	-.20	-.09
Exhibition	.00	-.02
Heterosexuality	-.05	-.04
Intracception	-.16	.23
Lability	-.05	.20
Nurturance	-.02	-.13
Order	-.30*	.10
Personal Adjustment	-.16	.11
Self Confidence	-.06	.15
Self Control	-.14	-.01
Succorance	.09	-.04

*p < .05.

**p < .01.

CHAPTER FOUR

Additional Analyses

The data were further analyzed in a number of ways. (a) The roommate analysis comparing the similarity of cognitive styles between "stayers" and "splitters" provides an additional test of the similarity effect by using a different criterion for interpersonal attraction. (b) The first-year subjects versus upperclass subjects analysis attempts to test the similarity and likeability effects of field dependence at different stages of friendship. (c) The analysis of data within the individual living units. (d) The finding of both the similarity and likeability effects suggest that the cognitive style of the choosers can be a moderating factor in the similarity-attraction relationship. Thus, the difference in friendship choice in relation to subjects' cognitive style was explored. (e) The effect of religion was further examined.

These additional analyses differ from the main part of the study in that while the present investigation was not designed specifically to explore these additional areas, the data collected for the main study happen to lend themselves to extra explorations. Inasmuch as this study was not specifically designed to explore these areas and therefore not all the precautions have been taken in their explorations, (e.g., precluding contaminating factors or including a larger sample), the results

obtained in the following can only be taken as suggestive and must be verified in future studies.

The Roommate Study

Different from the main study where interpersonal attraction was determined by subjects' indications of their closest friends, the roommate study poses a more stringent criterion that the subjects must be able to live satisfactorily with their roommates on a day-to-day basis.

In order to define "stayers" and "splitters," two items were included in the friendship questionnaire asking if the subjects have a roommate and, assuming that they were coming back to the same college next year, whether they would like to room with the same person again. The "stayers" are defined as those pairs of roommates who independently indicated that they would like to room with the same person again. The "splitters" include those pairs of roommates in which either one or both partners indicated that they no longer wished to room together. Using these classifications, it was found that of the 22 pairs whose roommates were in the study, 11 pairs were stayers and 11 pairs were splitters.

In order to determine the similarity effect among stayers and splitters, intraclass correlations were used, rather than product-moment r 's. Intraclass correlation is appropriate for roommate pairs, where the assignment of either subject in the pair to X or Y computational groups is entirely arbitrary.

The intraclass correlations for stayers and splitters are given in Table 15. As can be seen, intraclass correlations between stayers and splitters were significantly different from each other for GEFT. In

Table 15

Intraclass Correlations on Field Dependence of
"Stayers" and "Splitters" and the Difference
Between Correlations

Field Dependence	"Stayers" (n=11)	"Splitters" (n=11)	Difference in z'	C.R.
PRFT	.430	.400	.036	.077
GEFT	.520*	-.500	1.126	2.388**

Note. - Of the 60 subjects, 49 had roommates, 5 of which did not participate in this study. This leaves a total of 44 subjects, or 22 pairs, who are in this roommate study.

* $p < .05$, 1-tailed.

** $p < .01$, 1-tailed.

contrast, for the PRFT, not only were intraclass correlations for stayers and for splitters not significantly different, but the correlation for splitters was positive, contrary to expectation.

Although no hypothesis was made to the effect that splitters were expected to be negatively correlated in cognitive style, the rather high albeit non-significant PRFT correlation between splitters was not consistent with the similarity principle. The finding that the correlation between splitters was positive for the PRFT yet negative for the GEFT suggests that the splitters may have negative correlations between their PRFT and GEFT scores. To explore this possibility, a scatter plot was made of the relationships between PRFT and GEFT for both stayers and splitters. The result shows that indeed there were more pairs of splitters whose PRFT and GEFT were discrepant than in the stayers group. However, the difference between stayers and splitters in their PRFT-GEFT correlations was not significant. Therefore, it cannot be concluded that splitters tend to vary more from one cognitive style measure to

another, and other explanations are yet to be found. Because of the small sample size (11 pairs), the correlation would be expected to be unstable and sensitive to sampling error. Should the same result be obtained with a larger sample, a more serious search should be made to determine its causes.

First-Year Versus Upperclass Subjects

Since many studies show that the stage of friendship is a factor moderating the similarity effect (e.g., Duck, 1973; Rosenfeld and Jackson, 1965), it would seem that friendship choice patterns of first-year versus upperclass subjects would warrant some consideration.

The subjects of this study were 29 first-year and 31 upperclass students. As can be seen from Table 16, upperclass subjects indeed tended to choose similar-others on both PRFT and GEFT. In contrast, only on GEFT and on VSAT were first-year subjects significantly correlated with their first-choice friends. Further, when VSAT was partialled out from first-year subjects and their first friends' GEFT, their correlation on GEFT was reduced to $\underline{r} = .309$, and its level of significance dropped below .05. Similarly, when GEFT was partialled out from the first-year subjects' and their 1st friends' VSAT, the correlation in VSAT was also reduced ($\underline{r} = .226$), and became non-significant.

The following data suggest that similar field-dependence is a more potent variable in friendship choice for upperclass than for first-year subjects, whose friendship choices seem to be determined neither by similar field dependence nor by similar verbal aptitude alone, but by the overlapping variance of both.

Table 16

Correlations on Field Dependence and VSAT
For Subjects Versus First Friends Within
First-Year and Upperclass Groups

	PRFT	GEFT	VSAT
First-Year Subjects (n=29)	-.094	.337 ^{a*}	.327 ^{b*}
Upperclass Subjects (n=31)	.484**	.333*	.163

^aAfter VSAT was partialled out from the correlation between the subjects and their first friends on GEFT, that correlation dropped to .309, $.05 > p < .10$, 1-tailed.

^bAfter GEFT was partialled out from the correlation between the subjects and their first friends on VSAT, that correlation dropped to .226, which was not significant at the .05 level.

* $p < .05$, 1-tailed.

** $p < .005$, 1-tailed.

Individual Living Units

One may recall that the analyses in this study were performed on all 60 subjects with the 3 units combined as one group, and not as three replications, although the subjects' friendship choices were confined to the individual living units. It has been proposed that this type of analysis is justified on the ground that the 3 units do not differ statistically on the major variables. However, inasmuch as the treatment of all the subjects may have obscured the choice patterns of friends in the individual units, analyses of friendship choice patterns will be made in this section by the individual living units separately.

Correlations between subjects and first friends on major variables for the individual units are presented in Table 17. As can be seen the correlations for Unit C for field dependence were consistently lower than for Units A and B.

Table 17

Correlations Between Subjects and First Friends On
Field Dependence, VSAT and Age for Individual Units

	PRFT	GEFT	VSAT	AGE
Unit A ^a	.364	.315	.165	-.026
Unit B ^b	.308	.468*	.296	.567**
Unit C ^c	-.227	.018	.362	.925**

^a_n = 18.

^b_n = 21.

^c_n = 21.

*_p < .025, 1-tailed.

**_p < .005, 1-tailed.

Although the negative correlation for PRFT for Unit C by itself was not significant, nevertheless the differences from the positive correlation for Unit A and Unit B were significant at .05 level, and would warrant some exploration.

An examination has been made in an effort to determine if there were characteristics unique to Unit C which may have accounted for the difference in its friendship-choice pattern. A X^2 -test of the religious preference of the three units revealed no significant difference (Table 18). Nor did analyses of variance comparing all major variables (viz.,

cognitive style, VSAT, FIRO-B and ACL) reveal any significant difference except on two scales of ACL: Autonomy and Change (Table 6, p. 53).

Subjects in Unit C rated themselves as less prone to change and having a lower need for autonomy than those rated by subjects in Units A and B.

Table 18

χ^2 Test on Relative Frequency of Religious Preference of the Three Living Units

	Catholic	Protestant	Jewish	
Unit A	8	4	6	18
Unit B	13	5	3	21
Unit C	12	3	6	21
	33	12	15	60

$$\chi^2(4) = 6.02, \text{ N.S.}$$

Further exploration revealed that the friendship choices in Unit C were predominantly based on similarity in age which had a bimodal distribution in this group. This fact may have overshadowed the potency of similarity in cognitive style. As can be seen from Table 17, the correlation between subjects' and their first friends' age was .925 in Unit C (significant at .005, 1-tailed), which was considerably higher than those in Unit A and in Unit B.

Whether the fact that the subjects in Unit C rated themselves lower on Autonomy and Change is also related to their predominant reliance on similar age in choosing friends cannot be determined at this point. A higher percentage of the subjects in Unit C (67%, Table 19) were 1st-year students; and, 1st-year students have been found to prefer friends of similar age. However, the possibility still exists that individuals who rate themselves relatively low on the needs for Change and Autonomy may have a tendency to rely more on similar

demographic features (e.g., age) than on similarity in less salient features (e.g., cognitive style) in choosing their friends, perhaps in relation to their relatively formal and conservative friendships. It is possible that only when people begin to relax can they overlook superficial characteristics and seek friends who are compatible on the non-demographic features.

Table 19

Academic Class of Subjects By Individual Units

	First-Year		Second-Year		Third-Year		Fourth-Year	
	No.	%	No.	%	No.	%	No.	%
Unit A ^a	11	61.1	1	5.5	6	33.3	0	0
Unit B ^b	4	19.0	8	38.0	5	23.8	4	19.0
Unit C ^c	14	66.7	0	0	6	28.6	1	4.8
Total	29	48.3%	9	15.0%	17	28.3%	5	8.3%

^a_n = 18.

^b_n = 21.

^c_n = 21.

Parallel to the similarity effect, Table 20 also shows that the relationship between GEFT and sociometric status (the likeability factor) for Unit C was different from those of Units A and B. Similarly, although non-significant, the correlation between sociometric status and VSAT for Unit C was higher than those for Units A and B. These data suggest that the subjects in Unit C show a tendency to value more field-independent and verbally brighter friends than those in Units A and B.

Table 20

Correlations Between Sociometric Status and
Field Dependence, VSAT and Age Among
Subjects for the Individual Units

	Sociometric Status Versus			
	PRFT ^a	GEFT ^b	VSAT	Age
Unit A ^c	.353	-.238	.032	.070
Unit B ^d	.460**	-.411*	.101	.160
Unit C ^e	.121	.343	.203	.035

^aHigher scores denote relative field dependence.

^bHigher scores denote relative field independence.

^c_n = 18.

^d_n = 21.

^e_n = 21.

*_p < .05, 1-tailed.

**_p < .025, 1-tailed.

Perhaps the slight tendency to prefer more field-independent and verbally brighter friends in Unit C is somewhat related to a slightly more intellectual atmosphere in the residence. Thus, as can be seen in Table 21, a somewhat higher percentage of subjects in Unit C major in Accounting and Mathematics than in Units A and B, these two being the more difficult majors in the college.

Table 21

Majors of Subjects by Individual Units

	Unde- cided		Ed. (El. & Sec.)		Lib. Arts		Acc. Math.		Bus. Ed.		Fine Arts	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Unit A ^a	1	5.6	7	38.9	3	16.7	0	0	6	33.3	1	5.6
Unit B ^b	2	9.5	5	23.8	6	28.6	3	14.3	5	23.8	0	0
Unit C ^c	2	9.5	4	19.0	7	33.3	6	28.6	2	9.5	0	0
Total	5	8.3	16	26.7	16	26.7	9	15.0	13	21.7	1	1.7

^a_n = 18.

^b_n = 21.

^c_n = 21.

Along with these findings, subjects in Unit C received a higher mean VSAT than those of Unit A and Unit B, although their differences did not reach statistical significance (Table 6, p. 53).

The correlations indicate the hypotheses are most strongly supported in Unit B (Table 17, p. 73; Table 20, p. 76). This unit was significantly older (Table 22) than Units A and C, and one might speculate that older students may form friendships on different bases than students who are new to college life.

Table 22

Differences Among Living Units in Age (Months)

Unit A (n = 18)		Unit B (n = 21)		Unit C (n = 21)		F(2,57)
Mean	S.D.	Mean	S.D.	Mean	S.D.	
233.28	12.03	242.33	10.47	234.19	12.91	3.60 p < .05.

Differential Friendship Choice Patterns of Field-Independent and Field-Dependent Subjects

The simultaneous finding of a similarity effect (subjects tended to choose similar-others) and a likeability factor (more field-dependent subjects chosen than field-independent subjects) suggests the existence of an interaction effect, in which choosers' cognitive style differentially affects the similarity-attraction relationship. Inspection of the associations between the choosers' cognitive style and their first friends' cognitive style (Table 23) when field dependent (FD), intermediate (INT), and field-independent (FI) are defined as approximately thirds of the cognitive style distribution of all 60 subjects, indeed reveals the field-dependent subjects tended to choose similar-others as first friends, while intermediate and field-independent subjects tended to choose others of adjacent cognitive styles. Statistical analysis

Table 23

Association Between Subjects' and First Friends'
Field Dependence For Each Field Dependence Group

		PRFT							GEFT		
		First Friends'							First Friends'		
		FI	INT	FD					FI	INT	FD
Subjects'	FI	3	12	6	21	FI	6	9	3	18	
	INT	8	2	10	20	INT	10	4	8	22	
	FD	5	6	8	19	FD	3	2	15	20	
		16	20	24	60	19	15	26	60		
		$\chi^2(4) = 10.65$				$\chi^2(4) = 17.62$					
		$p < .05.$				$p < .01.$					

by 3 X 2 Chi Square Test (Table 24) supports the finding that field-dependent subjects tended to choose similar-others while intermediate and field-independent subjects tended to choose dissimilar-others.

Table 24

Choice of First Friends With Same Or Different
Field Dependence Scores For Each Field Dependence Group

		PRFT			GEFT		
		First Friends'			First Friends'		
		Same	Diff.		Same	Diff.	
Subjects'	FI	3	18	21	6	12	18
	INT	2	18	20	4	18	22
	FD	8	11	19	15	5	20
		13	47	60	25	35	60
		$X^2(2) = 6.94$			$X^2(2) = 14.58$		
		$p < .05.$			$p < .001.$		

This difference was significant at the $p < .001$ level with the GEFT, and at the .05 level with the PRFT.

In the preceding analyses, the classification of FD, INT and FI was determined by dividing the cognitive style continuum of all 60 subjects into three groups which were as equal as possible. The rationale was that in the absence of established norms, classification based on the entire sample is a better approximation to the population than classification based on divisions within each individual living unit. However, it has been argued that since the concept of field dependence is relative, and that since the subjects' choices were only open to those who were more or less field dependent than they were in the same

living unit, the definition of field-dependent, intermediate, and field-independent individuals should be based on the individual units. To illustrate the effect of this alternative way of classifying scores, they were also classified within individual units. The results based on PRFT and GEFT as classified within the individual units are given in Table 25. From these tables, it can be seen that the results are much less clear when the sample is subdivided in this way. The combination of all subjects into a larger total sample, and the use of cut-off points based on that more representative large sample, may account for the visibility of trends in the combined data which disappear into the "noise" when the total group is shown in individual units.

Catholic Versus Non-Catholic Subjects

Because religion has been found to be a potent determinant of friendship choice (Table 8, p. 57), the friendship choices of Catholic subjects were analyzed separately from those of non-Catholics (Tables 26, 27 and 28) in order to obtain a better understanding of the similar field dependence-attraction relationship in general. As can be seen from Table 26, the similarity and desirability effects of field dependence were found within the Catholic group. It further shows that both effects were carried by the Catholic group and not by the non-Catholic group, although the lack of findings in the latter could be due to statistical artifacts (e.g., small sample, combining two religions, small field dependence range, etc.), and is not indicative that they will be the same in future studies where those artifacts are eliminated.

Data in Tables 26 and 27 enable us to answer a few questions. First, could the similar field dependence-attraction relationship found

Table 25

Relationship Between Subjects' and First Friends'

Field Dependence By Individual Units

PRFT

		Unit A				Unit B				Unit C			
		First Friends'				First Friends'				First Friends'			
		FI	INT	FD		FI	INT	FD		FI	INT	FD	
Subjects'	FI	2	3	1	6	0	4	3	7	1	4	2	7
	INT	2	1	3	6	2	3	2	7	3	1	3	7
	FD	1	3	2	6	1	0	6	7	4	2	1	7
		5	7	2	18	3	7	11	21	8	7	6	21

GEFT

		Unit A				Unit B				Unit C			
		First Friends'				First Friends'				First Friends'			
		FI	INT	FD		FI	INT	FD		FI	INT	FD	
Subjects'	FI	4	0	2	6	0	6	1	7	2	3	1	6
	INT	0	3	2	5	3	1	3	7	3	1	3	7
	FD	1	1	5	7	0	0	7	7	5	1	2	8
		5	4	9	18	3	7	11	21	10	5	6	21

Note. - Classification of FD, INT and FI is determined on the cognitive style distribution by the individual units.

Table 26

Similarity Effect and Desirability Effect of PRFT,
GEFT and VSAT Within Catholic and Non-Catholic Groups

	PRFT		GEFT		VSAT	
	Simi- larity Effect	Desira- bility Effect	Simi- larity Effect	Desira- bility Effect	Simi- larity Effect	Desira- bility Effect
Catholics (n = 33)	.46**	.36*	.47 ^a **	-.23	.47 ^b **	-.09
Non-Catholics (n = 27)	-.23	.04	.08	.09	.47**	.09

^aAfter VSAT was partialled out from the correlation between the subjects and their first friends on GEFT, that correlation dropped to .33, significant at .05 level.

^bAfter GEFT was partialled out from the correlation between the subjects and their first friends on VSAT, that correlation dropped to .31, significant at .05 level.

The correlations for Catholics used for the above second-order partial correlations were: r between \underline{Ss} ' GEFT and first friends' GEFT = .46, r between \underline{Ss} ' GEFT and their own VSAT = .50, r between \underline{Ss} ' GEFT and first friends' VSAT = .51, r between first friends' GEFT and \underline{Ss} ' VSAT = .21, r between first friends' GEFT and their own VSAT = .44, r , between \underline{Ss} ' VSAT and first friends' VSAT = .47.

r between \underline{Ss} ' PRFT and VSAT among Catholics was -.06 (n.s.), and therefore no partial correlations were performed.

* $p < .025$, 1-tailed.
** $p < .005$, 1-tailed.

Table 27

Difference in PRFT, GEFT, VSAT and Sociometric Status Between Catholic and Non-Catholic^a Groups

	Catholic (n = 33)	Non-Catholic (n = 27)	<u>F</u> (1,58)
PRFT			
Mean _b	60.18	25.32	
S.D. _b	50.38	24.24	5.30 ^{c*}
GEFT			
Mean	10.00	11.26	
S.D.	4.98	5.13	.93
VSAT			
Mean	451.18	470.30	
S.D.	103.56	103.29	.51
Sociometric Status			
Mean	3.42	2.48	
S.D.	2.00	1.60	3.93

^aThe Jewish and Protestant subjects were combined in the non-Catholic group.

^bF-test of difference between the variance of the Catholic and the non-Catholic groups on PRFT shows that F(32,26) = 4.32, significant at .01 level.

^cThe Catholic versus non-Catholic analyses are post-hoc analyses; and, the significance of the F(1,58) test should be viewed with reservation. The F(2,57) test which treated the differences on field dependence among the 3 religious groups instead of collapsing the Jewish and the Protestant groups (Table 11, p. 58) shows that the Catholics' mean PRFT did not significantly differ from those of the other 2 groups.

*p < .05, 2-tailed.

with the whole sample be due to the preference of Catholics to befriend other Catholics (Table 8, p. 57)? The fact that the field dependence-similarity effect still existed when the friendship choices of only the Catholic subjects were considered (Table 26) indicates that the results for the total group were not simply an artifact of Catholic subjects' tendency to befriend other Catholics. Data in Table 27 show that although Catholics have been found to be more field dependent as measured by the PRFT than non-Catholics according to a post-hoc analysis, the distribution of Catholics on the PRFT continuum was so wide that Catholics did not have to choose friends who were similar to them on PRFT. Thus it cannot be said that the field dependence-similarity effect found in the whole sample is an artifact of Catholics' choosing Catholics. However, it was the case that the field dependence-similarity effect for the sample as a whole was contributed to mainly by the Catholic subjects' tendency to choose similar-others on field dependence. Before any theoretical interpretation is made, it would be important to replicate the findings to make certain that was not simply due to sampling variation in this particular Catholic group.

The second question asked is whether the field dependence-desirability effect found with the whole sample could be due to the possibly higher sociometric status of the Catholic subjects, who showed some tendency to be more field dependent on PRFT than non-Catholics (Table 27). Again the data of the present analyses enable us to answer this question negatively. When only the sociometric status of Catholic subjects were examined, the more field-dependent individuals were still found to be more often chosen than the field-independent individuals.

Third, could the fact that the similarity and desirability effects were stronger within the field-dependent than the field-independent subjects (Table 25, p. 81) be due to the friendship-choice pattern of Catholics, who tended to be more field dependent than non-Catholics on PRFT according to a post-hoc analysis (Table 27)? The answer is that while the argument might apply to field-dependent individuals as measured by PRFT, it is not valid with field-dependent individuals as measured by GEFT, because Catholics were not found to be more field dependent on the GEFT. Yet, the discriminate friendship-choice pattern of the field-dependent individuals versus that of the field-independent individuals was found to be stronger with GEFT than with PRFT (Table 25, p. 81). Thus, the possibility that the stronger similarity and desirability effects in field-dependent individuals was caused by the friendship-choice patterns of Catholic subjects does not have strong support.

Analysis (Table 28) of the relationship between religion and academic class shows that each was orthogonal to the other, suggesting that the unique friendship-choice patterns of the first-year versus the upperclass subjects was independent of that between Catholics and non-Catholic subjects. Further explorations of these phenomena in future studies would seem both fruitful and interesting.

Table 28

Number of Catholic Versus Non-Catholic^a Subjects
Within First-Year and Upperclass Groups

	Catholic	Non-Catholic	
1st-Year <u>Ss</u>	17	12	29
Upperclass <u>Ss</u>	16	15	31
	33	27	60

$$\chi^2 = .30, N. S.$$

^aThe Jewish and Protestant Ss were combined in the non-Catholic group.

A similarity effect was found with VSAT for both Catholic and non-Catholic groups (Table 26). Apparently, VSAT is a less complex variable than field dependence, and accordingly its relationship with interpersonal attraction is more straightforward.

CHAPTER FIVE

Discussion

Rationale for the Findings

This investigation was concerned with two hypotheses about the relationship between field dependence and friendship choice -- Hypothesis 1: Individuals will tend to choose friends of similar field-dependence (the similarity principle); and, Hypothesis 2: Field-dependent people will tend to be more often chosen as close friends than field-independent people (the desirability effect). Some support was found for both hypotheses.

It should be recognized that to some degree the two hypotheses in the study are working against each other, in the sense that if the similarity effect were extremely strong, any desirability effect would be greatly attenuated. Conversely, if there were an extremely strong desirability effect, then there would be no room for a similarity effect to operate. This may in part explain the fact that while the correlations were statistically significant, they were rather moderate in size.

The suggestion in the data that the similarity effect was much more clear-cut among the most field-dependent subjects may be a result of the combination of these two effects working simultaneously. From the point of view of a field-dependent subject, another field-dependent individual is attractive for two reasons: First, because she is seen as

being similar to the subject; and, second, because she has the desirable traits of the field-dependent person. Conversely, a field-independent individual would not be attractive to a field-dependent subject, because she is seen as being dissimilar and because she has generally less desirable personality traits. On the other hand, from the point of view of a field-independent subject, the similarity and desirability effects will be operating in opposite directions. The field-independent subject would see another field-independent subject as being similar and to that extent attractive, but because of that individual's less desirable interpersonal traits, she would be seen as less attractive. Conversely, when the field-independent subject considers a field-dependent individual, that individual, while possessing generally desirable interpersonal traits, would lose some of her attraction through being seen as dissimilar to that field-independent subject. The result would be that similarity effect would be considerably weaker among field-independent, than among field-dependent, subjects.

Between the similarity and the desirability effects, the similarity effect seems to be stronger than the desirability effect in the present data. The similarity effect was found with both PRFT and GEFT, which are very different tests, thus suggesting that the results are tapping the underlying dimension, and are not test-specific. The results remain clear even after the verbal aptitude scores of both subjects and the first friends have been partialled out, which further attests to the strength of the relationship. In addition, the similarity effect result was not overshadowed by simultaneously present and very strong effects of similarity in age and religion.

By comparison, the desirability effect was only supported by PRFT; and, although the result for GEFT was in the same direction, it was not significant. While the reason for the partial support of the desirability effect is not clear, it is possible that following Witkin's recent theorizing (personal communication), PRFT taps the self-nonsel self dimension of personality while GEFT is related to the analysis-restructuring dimension; and, as such, PRFT is more sensitive than GEFT to the interpersonal traits related to the desirability effect.

An attempt has been made to identify some of the field dependence components which may be contributing to the similarity and desirability effects by correlating PRFT and GEFT with FIRO-B and ACL. Unfortunately, although some scales were found to relate to field dependence, the results were in general not particularly enlightening (Table 14, p. 67). Therefore, more detailed explanations of the mechanisms involved must come from other sources in the literature.

Among the many variables which could have contributed to the similarity effect, academic and extra-curricular interests definitely play an important role. These have been found to relate to field dependence (Witkin, Moore, Goodenough and Cox, in press), and similarity in interests have been found to produce interpersonal attraction (e.g., Gronlund, 1953). Further, supporting the idea that the similarity in interests associated with field dependence may have contributed to friendship choices is the finding (Table 16, p. 72) that the similar field-dependence attraction relationship was stronger for upperclass students than for first-year students. As upperclass students have more freedom to choose courses related to their interests, while first-year

students are more confined to take required courses, the greater similarity effect found among the upperclass students might be due in part to the likelihood that the students were more apt to be exposed to others with similar interests through course selection.

Regarding the desirability effect, the interpersonal characteristics of the field-dependent individuals which probably contributed to their popularity are their responsiveness to others in the cognitive, social and emotional areas. As young women leave home and live in college dormitories, formulating their new identities as women through numerous heart-to-heart talks with their close friends, they appreciate their friends' being responsive to them rather than being similar to them or being challenging to them (Table 5, p. 50). Thus, the field-dependent friends' responsiveness has probably been found to be more rewarding than the field-independent persons' individualistic tendencies.

That the desirability effect was only found with the PRFT and not with the GEFT might be due to the PRFT's being related to the self versus non-self dimension of field dependence and the GEFT's being related to the articulation dimension of field dependence, according to Witkin's most recent theorizing (personal communication). In this study, GEFT has been found to relate to VSAT, an ability measure. Literature shows that whereas people tend to befriend others of similar ability (Gronlund, 1959), they also become uncomfortable when the others appear too perfect (Aronson, Willerman, and Floyd, 1966), thus suggesting that high ability is not an unmixed blessing in terms of interpersonal attraction. For these reasons, perhaps GEFT has exhibited a similarity effect but not a desirability effect.

One interesting finding of this study is that those activities found not discriminating of close friendships from first to third friends (watch TV, extracurricular activities and formal games, Table 3, p. 45) seem to be primarily engaged in for the sake of the task, while most of the other activities (e.g., personal talk, eating institutional food together) which have been found discriminative of friendship seem to be primarily engaged in for the sake of social interaction. This seems to provide additional support for the notion that socioemotional attributes of the individual, rather than the task-oriented attributes of the individual, are related to close friendship.

In this study, possibly because of the self-selected nature of the subjects, i.e., their living in dormitories suggesting that they prefer collective living, field-dependent and field-independent subjects have not been found to differ in their tendency to participate in social activities, as measured by FIRO-B or ACL, (Table 14, p. 67). Further, so many subjects endorsed many of the shared activities that there was little chance for a difference to appear between field-dependent and field-independent subjects in their choice of activities. However, it might be of interest to investigate in future studies with a larger sample whether field-dependent and field-independent individuals differ in the kinds of organizations they join, e.g., clubs with social versus those with task orientations.

The degree of closeness (i.e., first, second, or third friend) may have different implications for the similarity effect and the desirability effect. As will be recalled, similarity effects were found only with the relationship implied by selection as first friends, and the

reported large amount of time spent together makes similarity an important prerequisite for a sustained relationship. Other friends, less close, might be chosen for a variety of reasons, but because they are less exclusive and intense, similarity may not be as crucial an ingredient.

Desirability, as indexed by the number of sociometric choices as first friend, did not show correlations with other variables, perhaps because the variance was so small. When the sociometric status index reflected the number of choices as first, second, or third friend, the variance was considerably greater, and a significant correlation appeared with PRFT. It may be that when all choices are included in the index, and aside from the variance problem, field-dependent people are more attractive to many subjects, regardless of the subject's own field dependence. While similarity seems essential to the closest of friends, general likeability factors can be pleasing to a large number of people whose relationships may be on a less intense level.

Generalizability of the Data

It was suggested earlier in the discussion that certain characteristics of field dependence (e.g., interests) tend to produce similarity effects in interpersonal attraction, while others (e.g., interpersonal characteristics) tend to produce desirability effects. It is further suggested that contextual demands determine whether the similarity or the desirability effect is prevalent, depending on what characteristics are called for. For example, in a situation in which counsellors had some flexibility as to the choice of insight versus supportive therapy, counsellors and clients matched on cognitive style were found to like each

other better (Greene, 1972). On the other hand, in a situation presumably with an emphasis on insight therapy, field-dependent patients were found to show a higher dropout rate than field-independent patients, suggesting that they did not like their therapists (Karp, Kissin, and Hustmyer, 1970).

The context is particularly relevant to the desirability effect in determining the relative popularity of field-dependent or field-independent individuals. It has been repeatedly pointed out that the socioemotional nature of choices of close friends in this study accounts for the greater sociometric status of field-dependent over field-independent individuals. Implicit in the statement is that where task demands are changed, as for example, where the criterion for sociometric choice is for a work partner, it is possible that relatively more field-independent persons, rather than relatively more field-dependent persons, might receive higher sociometric status. Some suggestive evidence is found in the study by Dreyer, McIntire and Dreyer (1973), where the popularity of field-dependent versus field-independent individuals changed depending on the sociometric criterion of work partner or playmates.

Sex is another contextual variable possibly influencing the relative desirability of field-dependent over field-independent individuals. The socioemotional characteristics related to field dependence are consistent with both the stereotype of women as well as with the choice criterion of close friendship, thus resulting in the significantly greater popularity of field-dependent than field-independent people. With men, the desirability effect of field-dependent individuals as friends may be confounded by the fact that the socioemotional characteristics

are not consistent with the stereotype of men. Some support for this contention is provided by Goodenough's review (in press), which stated that the popularity of field-dependent individuals over field-independent individuals is not as clear-cut for men as for women.

Both the similarity and the desirability effects found in the first two living units used in this study differ significantly from those of the third unit either in trend or in direction, although the correlations themselves in the latter unit are not significant. Because the results of the third unit differ from those of the main study as well as from those reported in the literature, it is presumed that confounding factors may have existed in the third unit, biasing the results. It has been suggested, e.g., on the basis of the bimodal age distribution of that unit, that a much more potent factor, similar age, has overshadowed the effect of similar cognitive style on friendship choice. Further, consistent with the previous proposal that the situational context exerts an influence on the desirability effect, it may be that the slightly more cognitively-oriented atmosphere in the third unit might have affected the friendship choices in the field-independent task-oriented direction. Whereas the appropriateness of these explanations cannot be determined at this point, the possibility of other unspecified factors affecting the similarity and desirability effects cannot be ruled out. In short, the data of this study seem to be generalizable, providing that a similar population seeking close friendship is studied, and barring other more potent factors which could override the effect of field dependence on interpersonal attraction.

Limitations of the Study

A question has been raised concerning the appropriateness of using Pearson's product-moment "r" in the analyses of the data of this study, on the ground that the friendship pairs which entered into the calculation often consisted of mutual-choices (50%), presumably contributing to the variance twice and thus deviating from the statistical model. However, since there was no constraint placed on the subjects' friendship choices, each subject contributed once, and only once, to the variance. Thus, using the product-moment r for the analyses was not inappropriate for that reason.

Another question raised was on the appropriateness of the treatment of all 60 subjects from three separate residences as one group, where the friendship choices were confined to those subjects residing in the same unit as the subject. However, these units did not differ significantly on the major variables, and treatment of all 60 subjects as one group was therefore appropriate. The restraint imposed on the subjects for their friendship choices was not a deviation from real life situations, where no one person is in fact free to choose friends from all people in the universe but is somewhat limited to those with whom she comes in contact.

In spite of the above, it is recognized that the statistical method used in the present study in measuring the effects of field dependence on interpersonal attraction is an approximation at best. Attraction to another person depends on many attributes of the other person, and obviously cannot be determined by field dependence alone, in disregard of the interaction with other variables. Until a more appropriate method for measuring the relationship of field dependence and interpersonal

attraction can be developed, one must make the best use of the data with the understanding of the limitations of the study in mind.

An effort has been made to compensate somewhat for the limitation of this study that significant correlations between subjects and friends on field dependence does not rule out the fact that friendship choice could be due to other factors. Several other major variables conceivably affecting friendship choice have been studied, so that even if the interaction of the other variables with field dependence and interpersonal attraction cannot be determined, at least their effects can be approximated and clarified. The other major variables studied were verbal ability as measured by VSAT, and personality variables as measured by FIRO-B and ACL, religion, and age (and academic class). Race and hometown factors were excluded as they were not relevant for this group of subjects. It has been found that while field dependence was a much less potent variable in determining the similarity effect than age (and academic class) and religion, it was nevertheless a significant determinant, in comparison to personality variables measured by FIRO-B and ACL, which were mostly not significant.

In addition, age was found to be unrelated to field dependence, and so could not have produced the hypothesized results. Although there was an indication that Catholic subjects were more field dependent as measured by the PRFT than non-Catholic subjects on a post-hoc analysis, the Catholic subjects' tendency to befriend Catholics was discounted as the cause of the similarity and desirability effects of field dependence. This was because when the Catholic religion was held constant, the hypothesized results still existed.

Verbal ability as measured by VSAT was found to be related to GEFT, unlike the majority of studies reviewed by Witkin (personal communication). Because of the relationship between GEFT and VSAT, one might ask if the similarity effect found with field dependence might not be due to similarity of verbal ability. This question has been answered by alternatively partialling out VSAT from field dependence and field dependence from VSAT. The results were that although the similarity effect decreased for both GEFT and VSAT, both were still significant after their intercorrelations were partialled out from each other. This suggests that both similarity in field dependence and verbal ability may produce interpersonal attraction independently.

VSAT was found to share 18% of the variance with GEFT (Table 10, p. 58). Because both are speed tests, it is speculated that motivation, energy deployment and speed might be among the common factors. As the VSAT-similarity effect was still significant even after GEFT was partialled out (Table 12, p. 60), perhaps the remaining variance which contributed to the VSAT-similarity effect was the verbal factor. In view of the importance of verbal communication between subjects and their first three friends (Table 3, p. 45), it was no wonder that their shared tendency for greater or less verbal communication might be an important factor in the similar-attraction relationship.

In summary, the relationship between field dependence and interpersonal attraction has been examined in some detail in this study. The data obtained seem to indicate that field dependence may indeed be a potent variable determining attraction, producing both the similarity and desirability effects. It has been suggested that perhaps different aspects of field dependence may be more responsible for the similarity

effect and the desirability factor. Further, it is possible that different contextual variables may exert different weights on the desirability effect. Thus, explorations of these possibilities in future studies would seem to be both interesting and fruitful.

Field dependence affects the way an individual perceives the world, thinks about the world, what interests him, what he is like as a person, his inter-personal behavior and his way of coping with stress. So it is not surprising that such an all-pervasive dimension should be an important influence on the process of friendship choice. Of course, in the literature and even within the present study a number of other powerful determinants of friendship choice have been revealed. But the present data make it clear that the field-dependence-independence dimension ranks among the important ingredients in the formation of friendships.

FRIENDSHIP QUESTIONNAIRE

I am interested in finding out on what bases people choose their same-sexed friends. Please feel free to answer all questions openly. Only your code number will appear on your questionnaire. Your answers will be kept strictly confidential.

Part I

You are given a list of names of all the people on your floor. Please do the following on the list.

- (1) Put a check in front of the names of the persons on the list with whom you are good friends, as many as you like.
- (2) Among those names you have just checked, please select 3 persons to whom you feel closer than to the others on the list. Put a circle around them. Please be sure to circle exactly 3 names.
- (3) Do you have a roommate? Yes____; No____. If yes, please answer the following:
 - (a) How did you happen to live with her? (Check one)

I chose her____; She chose me____; We chose each other____;
Assigned____; Other (Please specify)_____
 - (b) If you are coming back to Rider, (or if you are not, imagine that you are), and if you were to live in a dormitory, would you choose the same roommate? Yes____; No____.
- (4) Tell me a little about yourself:--
 - (a) How long have you been attending Rider?_____
 - (b) Are you a transfer student? Yes____; No____.
 - (c) What is your class? Freshman____: Soph.____; Jr.____; Sr.____.
 - (d) Have you decided on a major? Yes____; No____.
If yes, what major?_____
 - (e) List 3 academic areas you find most interesting?--
1. _____ 2. _____ 3. _____
 - (f) List 3 things you enjoy doing most for pleasure:--
1. _____ 2. _____ 3. _____

Part II

I would like some information on each of the 3 friends you have circled in Part I as closer to you than the other people on the list. Please use a separate sheet as provided for each friend.

(1) Her Full Name _____

- (a) How long have you known her? (Check one) Met her this year at Rider _____;
 Met her at Rider before this year _____; Knew her before I came to Rider _____.
- (b) Now, thinking back over all the other friends you have now and in the past, for purposes of comparison, how close a friend is this person to you?
 Casual _____; Moderately close _____; Close _____; Extremely close _____.
- (c) Please try to estimate about how many hours per day you spend in an average week with this friend.
 About _____ hours per day (to the nearest $\frac{1}{2}$ hour)
- (d) I am interested in the activities you engage in with this friend.
 Please furnish the following information.

Kinds of Activities (Name the Specific Activities If Not Already Specified Below)	How Often Together			More Often With Whom		
	Almost Never	Some-Times	Very Often	Just The 2 of Us	With A Gp. Of Others	$\frac{1}{2}$ & $\frac{1}{2}$
1. Talk over personal matters						
2. Talk about external things, e.g., other people, movies, events, politics _____						
3. Watch TV together						
4. Go to meals together						
5. Attend social gatherings, e.g., frat. parties, dances, pub. _____						
6. Attend cultural activities, e.g., concerts, plays, movies						
7. Sports, e.g., bike riding, soft ball, _____						
8. More formal games, e.g., bridge, chess _____						
9. Less formal games, e.g., pinochle, board games, _____						
10. Participate in organized extra-curricular activities, e.g., hall council, drama club _____						
11. Study together (Be sure to name subjects) _____						
12. Others _____						

(1) Her Full Name _____

- (a) How long have you known her? (Check one) Met her this year at Rider _____; Met her at Rider before this year _____; Knew her before I came to Rider _____.
- (b) Now, thinking back over all the other friends you have now and in the past, for purposes of comparison, how close a friend is this person to you? Casual _____; Moderately close _____; Close _____; Extremely close _____.
- (c) Please try to estimate about how many hours per day you spend in an average week with this friend.
About _____ hours per day (to the nearest $\frac{1}{2}$ hour)
- (d) I am interested in the activities you engage in with this friend. Please furnish the following information.

Kinds of Activities (Name the Specific Activities If Not Already Specified Below)	How Often Together			More Often With Whom		
	Almost Never	Some-Times	Very Often	Just The 2 of Us	With A Gp. Of Others	$\frac{1}{2}$ & $\frac{1}{2}$
1. Talk over personal matters						
2. Talk about external things, e.g., other people, movies, events, politics _____						
3. Watch TV together						
4. Go to meals together						
5. Attend social gatherings, e.g., frat. parties, dances, pub. _____						
6. Attend cultural activities, e.g., concerts, plays, movies						
7. Sports, e.g., bike riding, soft ball, _____						
8. More formal games, e.g., bridge, chess _____						
9. Less formal games, e.g., pinochle, board games, _____						
10. Participate in organized extra-curricular activities, e.g., hall council, drama club _____						
11. Study together (Be sure to name subjects) _____						
12. Others _____						

(1) Her Full Name _____

- (a) How long have you known her? (Check one) Met her this year at Rider _____;
 Met her at Rider before this year _____; Knew her before I came to Rider _____.
- (b) Now, thinking back over all the other friends you have now and in the past, for purposes of comparison, how close a friend is this person to you?
 Casual _____; Moderately close _____; Close _____; Extremely close _____.
- (c) Please try to estimate about how many hours per day you spend in an average week with this friend.
 About _____ hours per day (to the nearest $\frac{1}{2}$ hour)
- (d) I am interested in the activities you engage in with this friend.
 Please furnish the following information.

Kinds of Activities (Name the Specific Activities If Not Already Specified Below)	How Often Together			More Often With Whom		
	Almost Never	Some-Times	Very Often	Just The 2 of Us	With A Gp. Of Others	$\frac{1}{2}$ & $\frac{1}{2}$
1. Talk over personal matters						
2. Talk about external things, e.g., other people, movies, events, politics _____						
3. Watch TV together						
4. Go to meals together						
5. Attend social gatherings, e.g., frat. parties, dances, pub. _____						
6. Attend cultural activities, e.g., concerts, plays, movies						
7. Sports, e.g., bike riding, soft ball, _____						
8. More formal games, e.g., bridge, chess _____						
9. Less formal games, e.g., pinochle, board games, _____						
10. Participate in organized extra-curricular activities, e.g., hall council, drama club _____						
11. Study together (Be sure to name subjects) _____						
12. Others _____						

The statements listed on the left are examples of answers people give when asked why they like a particular person. Please write the names of the three closest friends you have chosen in Part I in the spaces "Three Friends' Names." For each statement, fill in a number for each friend which expresses how that statement is usually true of the friend.

- 1 - almost never, or definitely not
- 2 - seldom, or probably not
- 3 - usually, or probably
- 4 - almost always, or definitely

Three Friends' Names

1. _____ 2. _____ 3. _____

Statements

1. She is a good, sympathetic listener when I have some personal problem I want to talk over with someone.			
2. She has a lot of respect for my ideas and opinions.			
3. If I accomplish something that makes me look especially competent or skillful, I can count on her to notice it and appreciate my ability.			
4. She can come up with thoughts and ideas that give me new and different things to think about.			
5. If I am in an embarrassing situation, I can count on her to do things that will make me feel as much as ease as possible.			
6. I can count on her to be ready with really good suggestions when we are looking for some activity or project to engage in.			
7. She is willing to spend time and energy to help me succeed at my own personal tasks and projects, even if she is not directly involved.			
8. She can come up with good, challenging questions and ideas.			
9. If I were short of time or faced with an emergency, I could count on her to help with errands or chores to make things as convenient for me as possible.			
10. I share more interests with her than with most others.			
11. I have more common attitudes with her than with most others.			
12. My personality is quite similar to her in many respects. (Please give examples) _____			

Appendix B
Post-Evaluation Questionnaire

May 8, 1974

Dear Participants:

Thank you very much for helping me with my study!

When you were leaving, many of you wished me good luck and said:
"I hope you will find what you are looking for."

I am very curious about what you think I am looking for. In other words, what do you think are my expectations about the bases of friendship?

I would appreciate your putting down a sentence or two about what you think are my expectations regarding the bases of friendship.

Please use the space below for your answer and return this sheet to me or your floor representatives.

Thanks,

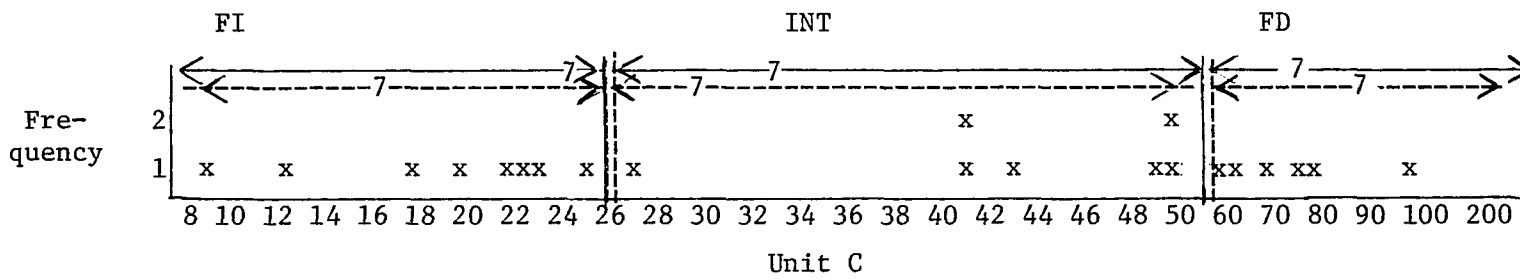
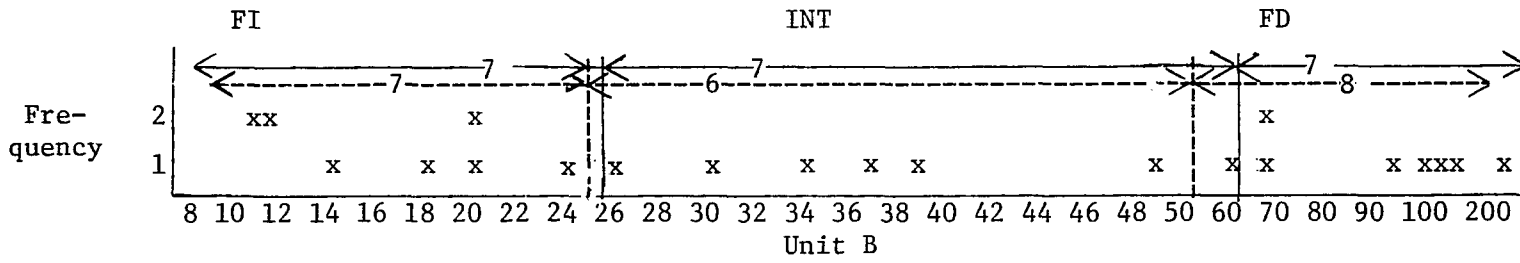
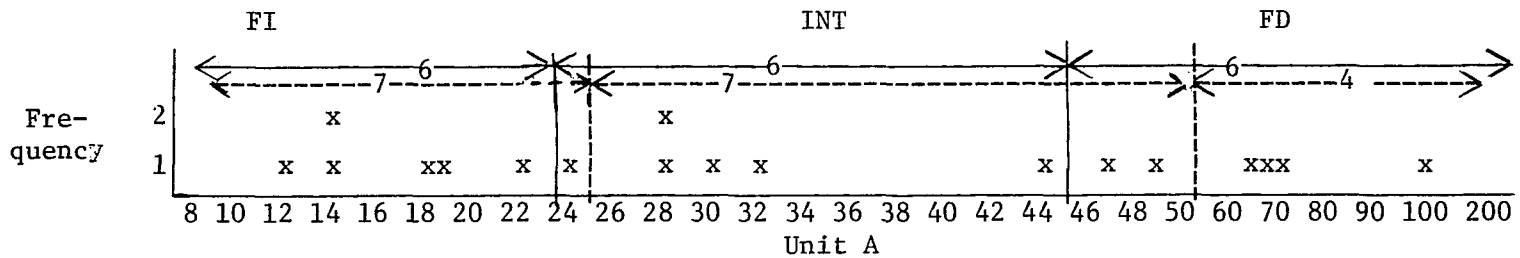
Kit Wong

Appendix C

Means and Standard Deviations for Tests Administered

	\bar{X}	S. D.		\bar{X}	S. D.
PRFT	49.22	42.25	ACL		
GEFT	10.57	5.04	Total Checked	42.00	10.23
VSAT	459.78	103.01	Defensiveness	48.68	10.43
FIRO-B			Favorable	51.55	8.83
Inclusion (e + w)	11.27	3.85	Unfavorable	53.37	12.53
Inclusion (e - w)	.23	2.70	Self-Confidence	48.73	11.40
Control (e + w)	6.57	3.40	Self-Control	47.85	9.88
Control (e - w)	-.83	3.28	Lability	49.88	8.99
Affection (e + w)	11.13	4.31	Personal	47.35	9.00
Affection (e - w)	-.77	1.81	Adjustment		
			Achievement	47.32	10.13
			Dominance	49.17	12.76
			Endurance	46.88	10.24
			Order	48.25	9.39
			Intrception	48.28	8.36
			Nurturance	48.95	9.83
			Affiliation	48.63	9.35
			Heterosexuality	52.70	10.07
			Exhibition	53.10	12.00
			Autonomy	52.05	10.06
			Aggression	51.27	9.18
			Change	50.75	9.69
			Succorance	51.15	11.09
			Abasement	50.57	12.70
			Deference	48.90	10.72
			Counseling	51.07	9.54
			Readiness		

Note. - N = 60.



Note. - Solid line = 1/3 based on individual units.
 Dotted line = 1/3 based on entire sample.

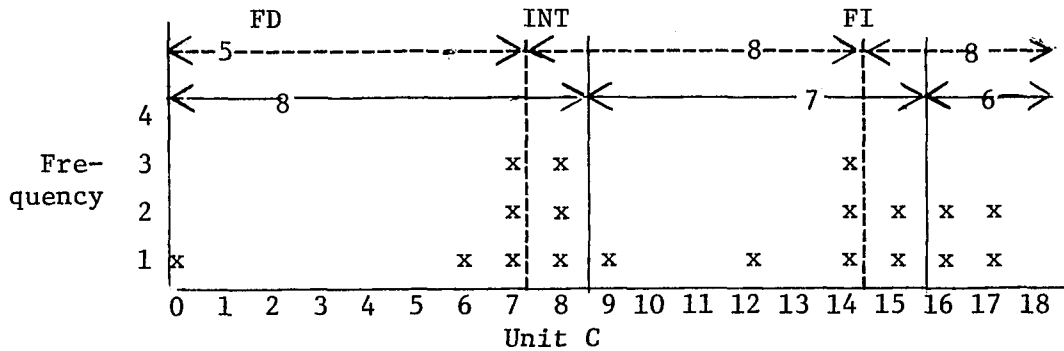
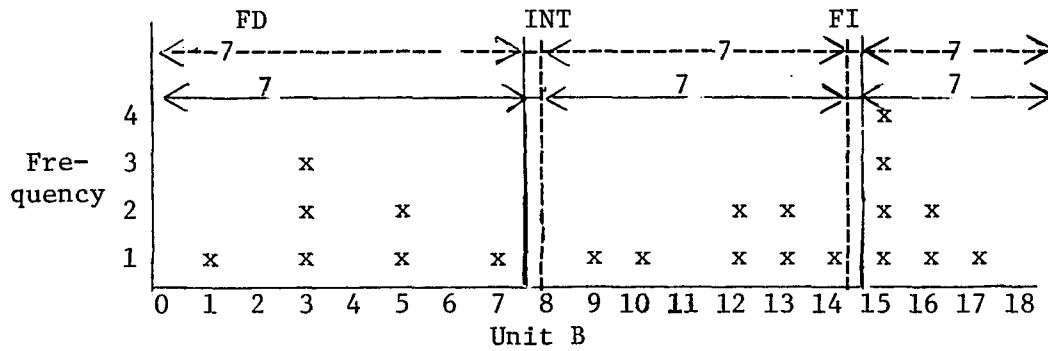
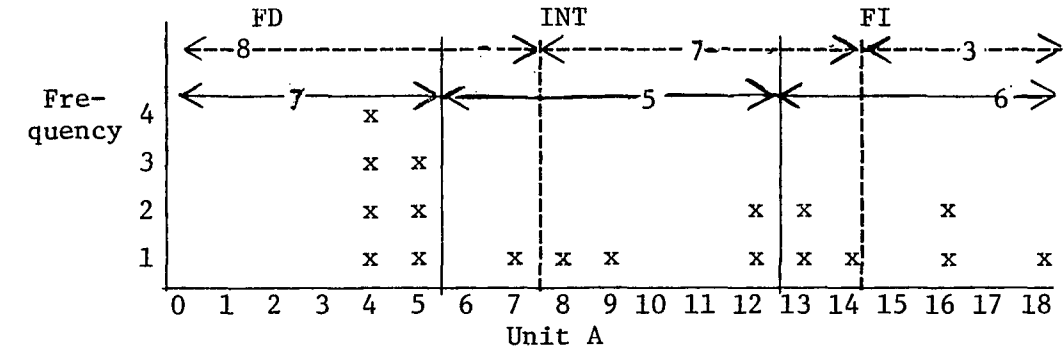
2/60 or 3% changed classification when switching from entire sample to unit-by-unit division.

Division of Subjects Into Thirds On the Field Dependence Continuum

Appendix D

Division of Subjects Into Thirds On the Field Dependence Continuum

GEFT



Note. - Solid line = 1/3 based on individual units.
 Dotted line = 1/3 based on entire sample.

9/60 or 15% of subjects changed classification when switching from entire sample to unit-by-unit division.

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