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An Investigation of General Sense of Humor: Its Relationship to Personality

Richard Joseph Haberle
Loyola University Chicago

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An Investigation of General Sense of Humor:

Its Relationship to Personality

by

Richard Joseph Haberle

A Dissertation Submitted to the Faculty of the Graduate School of Loyola University in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

June

1960
Life

Richard Joseph Haberle was born in Milwaukee, Wisconsin, April 23, 1928. He was graduated from Messmer High School, Milwaukee, Wisconsin, June, 1946; from Loyola University, Chicago, Illinois, February, 1951, with the degree of Bachelor of Science; and from Loyola University, Chicago, Illinois, February, 1953, with the degree of Master of Arts. Undergraduate preparation in psychology was obtained at Marquette University, Milwaukee, Wisconsin, from 1946 to 1948, and at Loyola University, Chicago, Illinois, from 1948 to 1951.

He was a clinical psychology intern from 1953 to 1954 at the Lake County Mental Hygiene Clinic, Gary, Indiana. From 1954 to 1955 he was employed as a clinical psychologist at the Marquette University Guidance Center, Milwaukee, Wisconsin. Following his induction into the United States Army, he served as chief clinical psychology specialist in the Psychiatry and Neurology Division, United States Disciplinary Barracks, Fort Leavenworth, Kansas, from 1955 to 1957. He returned to Marquette University in 1957 to be employed as a clinical psychologist in the Marquette Guidance Center and to teach on a part-time basis in the Department of Psychology.
Acknowledgments

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Chapter I
Purpose

The psychological phenomenon which is designated by the word humor has intrigued some of the greatest philosophical and literary minds in history. Attempts to explain the nature of humor philosophically are legion, and among these attempts one finds such distinguished names as Aristotle (8), Plato (164), Kant (171), Schopenhauer (178), and Spencer (187). When one reviews the philosophical literature on the subject, it becomes apparent that little consensus exists regarding the exact nature of the humor process.

A similar lack of agreement is found among the many theories of humor which have appeared in psychological literature since the beginning of the twentieth century. In spite of the continuing interest of contemporary psychologists and other behavioral scientists in humor phenomena, it is surprising to note that empirical attempts to investigate humor are meager. Fewer than one hundred studies of humor which can properly be regarded as being truly empirical in nature have been reported in the literature. In view of the frequency with which the subject has appeared in the theoretical literature during the last sixty years, the relative dearth of empirical studies on humor would appear to result not from lack of interest in the phenomenon, but rather from the exceedingly complex nature of humor and the difficulties involved in the identification and control of the relevant variables.

The empirical research on humor which has been done falls into three general groups. One group of studies involves the investigation of the nature
of different kinds of humor stimuli and their differential effects upon humor response. A second group of studies has been concerned with an analysis of the psychophysiological elements of the humor response itself, and with attempts at measuring these elements. The third, and largest, group of studies has concentrated upon the various possible variables within the human organism which may be responsible for the appreciation or lack of appreciation of humor stimuli. The present study falls within this latter category.

The problem of this study is two-fold: the investigation of the relationship between general sense of humor and level of psychosocial adjustment; the investigation of the relationship between general sense of humor and particular personality characteristics.

For the purposes of this study, "general sense of humor" will be described as the characteristic, total, integrated response habitually made by an individual in reaction to a heterogeneous variety of humor stimuli. Previous research on the relationship between sense of humor and personality has sought to find correlates between preference for a specific kind or theme of humor (i.e., sexual, aggressive, nonsense humor, etc.) and specific personality characteristics, such as introversion, extraversion, repressed hostility, etc. There are no published studies attempting to find the relationship of one's generalized appreciation of all kinds of humor to personality characteristics.

A "sense of humor" is generally thought of as one's customary reaction to all kinds of humor stimulation in the course of his daily life, rather than his reaction to preferred specific kinds or themes of humor. When an individual has a reputation for having a "good sense of humor" the usual expectation is that he will regard many different situations as being humorous. The
person with a reputation for having a "poor sense of humor" is regarded conversely as a person who finds very few things as humorous and responds only to limited types of humor stimulation. This study will differ from previous humor research primarily in its emphasis upon this generalized humor responsiveness and its relationship to personality. The hypothesis that people really do possess this generalized reaction to a variety of humor stimuli is implicit in the majority of studies on humor. It is furthermore supported empirically by several studies which will be discussed in the review of the literature.

Some philosophers have regarded sense of humor as essentially a negative attribute, but the majority of them have taken the position that humor and laughter operate to the benefit of the individual. In common thinking, a person with a "good sense of humor" is thought of as being popular and socially adjusted, while the person with a "poor sense of humor" is regarded as being a "stick in the mud," a "grouch" and, in general, an unpleasant individual. This belief also appears in the psychological literature. In spite of the differences among the various theories of humor, the common assumption, implicit or explicit, is that normality and healthiness of humor in psychological functioning.

In spite of the marked consensus that a person's sense of humor is related to his level of adjustment, this hypothesis has not been empirically investigated. As will be seen in the review of humor research, many other commonly held assumptions about humor have been questioned and investigated. It is, therefore, rather surprising that there is so little research data either supporting or refuting the assumption that a good sense of humor is related to good social adjustment.
It is the general purpose of this study to investigate this assumption. More specifically, this study is designed to investigate the question, "do people who have a good general sense of humor differ significantly from those who have a poor general sense of humor with respect to psychosocial adjustment?" In the event that the data would support a negative conclusion, a revision of current theoretical thinking about humor would be in order. On the other hand, if the obtained data would support an affirmative conclusion it could form the basis for future investigations designed to find ways of using response to humor as an index of psychological adjustment.

Although much of the previous humor research has concentrated upon the relationship of sense of humor to personality variables, it has been confined to attempts to find relationships between preference for a specific kind or theme of humor and specific personality characteristics. The present study will seek to investigate this area of inquiry in a different way. As such, a second purpose of the study will be an investigation of the relationship between general sense of humor and specific personality characteristics. It will seek an answer to the question, "do people who have in common a good general sense of humor also possess other personality characteristics in common which differentiate them from people who have a poor general sense of humor?"

This study will not be so ambitious as to seek data on which a comprehensive theory of humor can be built. Rather, the purpose will be to obtain data which can be integrated with previous findings and also can form the basis for future humor research. As one reads the literature on the subject, one is struck by the impression that there has been too much premature theoretical speculation about humor without sufficient empirical data on which to base a
theory of humor. It is the hope of this investigator that the data obtained from this study will provide additional empirical evidence in this largely unexplored but highly important area of human psychological functioning.
Chapter II

Review of the Literature

The earliest published attempt to obtain empirical data on humor was done by Hall and Allen (92) in 1897. They received 3,000 replies to questionnaires requesting subjects to describe all situations which they considered humorous. These situations were then classified into 11 categories which they believed represented all the various types of humor. They then presented a resume of previous theories of humor and attempted to relate them to their data. They concluded that all of the previous theories of humor were inadequate and speculative, but they felt that humor was a promising area for research.

As psychologists began an empirical approach to the investigation of humor phenomena, during the early part of the twentieth century, it soon became apparent that no easy explanation of the essential nature of the humor process would be forthcoming. These early investigators were faced with a large number of possible relevant variables such as sex, age, intelligence, education, nationality, socioeconomic level, cultural background and personality dynamics which could be crucial factors in the way in which people respond to humor stimuli. Each of these variables has been investigated, to a greater or lesser extent, and a review of these studies should be considered before a more detailed discussion of the problem of the present study is undertaken.

In spite of the commonly accepted assumption that males and females differ in sense of humor, significant differences between the sexes generally have not been found in the empirical research. In studies of children some sex
differences have been reported and these will be cited in the discussion of age as a possible variable in humor. With regard to adults, however, studies by Eysenck (66) (67), Ghoah (76), Haim (97), Landis (127) and Onwakes (157) (158) have not found significant differences between males and females, with regard to either the number, or the kinds of things considered funny. There is a general opinion in the literature that females are less inclined to admit that they appreciate humor about sex, but again statistically significant differences between males and females have not been found. Ghoah (76) found that as the women in his study became more at ease in the research situation, they laughed much more readily at sexual jokes than they did at the start of the study.

In the research which has touched upon the relationship between sex differences and humor appreciation, only one investigator has found statistically significant differences between adult males and females in their response to humor stimuli. Wells (206) asked graduate students in college to indicate their reaction to samples of humorous literature taken from books on high school reading lists. These samples had been sorted by four literary "authorities" into four classifications: slapstick, absurdity, satire and whimsy. It was found that the males listed slapstick and absurdity literature as humorous more often than the females did, while the females demonstrated a significantly greater appreciation of satire and whimsy literature. A major weakness in this study is that the classification of the stimulus material into the four categories was such that differences in literary style, rather than differences in type or theme of humor, could just as well have been responsible for the obtained preferential sex differences.

The age factor, as a variable in humor appreciation, has been the subject
of a large number of studies. Most of these have concentrated upon the development of smiling, laughing and humor response between the chronological ages of two and ten years of age. Studies by Enders (61), Gregg (61) (82), Hester (100), Justin (108), Kenderline (112), Kimmens (115) (116), Walker (199), Washburn (203), and Wilson (208) all have yielded data which suggests a regular traceable pattern of humor development. All of these studies generally agree that as the normal child advances in age, he comes to consider an ever greater number and variety of situations as humorous. The development of humor responses, during this age range, appears to follow this trend:

1. During the second and third year the child's laughter is aroused primarily by his own activities, especially if they occur in a social situation. Toward the end of this period the child begins to laugh at the antics of others, even if he himself is not directly involved. Justin (108) interprets this as an indication that at this level, the child has reached a point in his social development where he can identify with others and gain vicarious pleasure from their activities.

2. Toward the end of the third year and the beginning of the fourth, the child begins to respond with smiling and laughter to oddities, such as the unusual, the exaggerated, and the grotesque as they occur in concrete situations. Wilson (208) believes this to be closely akin to laughter at incongruity which is thought to be so important to adult humor.
3. During the fifth and sixth year the child begins to laugh at play on words, like puns, rhymes and changes in the order of words. It is also during this period that the child begins to laugh at situations in which convention is violated and dignity upset.

4. Between the seventh and tenth years, derision humor gains prominence. In addition to all of the foregoing situations which arouse laughter, at this age level the child increasingly laughs at embarrassing predicaments of others. During this period there is also increased response to purely verbal humor stimuli.

This developmental trend still must be regarded as inconclusive, since the studies of this age range are based upon observation of children in natural situations and little quantified data is available. There is, however, a high degree of consensus among the many studies of humor development in this two to 10 age range. Two of the investigators suggest the possibility of sex differences during this period, but neither found these differences to be statistically significant. Both Justin (108) and Kimmens (118) note that there is a tendency for girls to laugh more frequently than boys at the three and four year levels, but that by the age of six or seven there is little, if any, difference between them.

It thus appears that up to the period of adolescence there is consistently an increase in the number and variety of stimulus situations which are capable of evoking humor responses from the child as he increases in age. After the onset of adolescence, however, the importance of the age factor as a variable
in humor appreciation is not so well agreed upon. In the study by Wells (206), which was cited in the discussion of sex differences, the male preference for slapstick and absurdity literature, and the female preference for satire and whimsy literature became progressively greater with increasing age. The sex differences found in her study were minimal at the seventh grade level, greater at the ninth grade level, and statistically significant at the twelfth grade and college levels. These findings may be attributable to either increasing age, increasing education, or both. Again, it is not known whether these variables accounted for differences in humor preference or preference for literary style.

In a study of humor preferences of high school students at each of the four year levels, Omske (159) found that the age of the subjects was not a significant variable in what they considered humorous. The humor preferences varied neither significantly nor consistently with year of high school. In another study by Omske (157) a mixed group of high school and college students was studied for their humor preferences. She found an apparent preference among older and better educated students for more subtle and sophisticated jokes. This tendency was neither statistically significant nor consistent, however, and even if it had been, the question would still arise as to whether this tendency was attributable to increasing age or increasing education.

Hester (100) studied the humor preferences of pre-school children, girls in the seven to ten year age range, and college students. For the two younger groups she found the same general developmental humor trend previously discussed. For the college group, however, humor preferences were not found to be related to differences in age.
Almost all of the studies of the age variable in humor appreciation suffer from serious methodological deficiencies. In addition, the factor of increasing education with increasing age is a consistently contaminating variable. There is virtually no evidence available in the published research on the importance of either the age or the education variables in the humor preferences of adults beyond the college level. What is needed greatly is research on the humor appreciation of adults of varying ages with educational level held constant, and on the humor preferences of adults of varying educational levels with the age variable held constant. Until such research is carried out, the importance of these two variables in adult humor appreciation remains an open question. In lieu of this research, those who undertake to study the relationship of humor to other variables should take care to select subjects who are homogeneous in age and education.

It has long been assumed that people of varying intellectual ability differ from each other in what they regard as funny. The common stereotypes are that people of low or mediocre intelligence prefer coarse and slapstick comedy while those of high intelligence prefer subtle, sophisticated and satirical comedy. In spite of what appears to be the obvious importance of cognitive factors in humor appreciation, most investigators who have dealt with the question, or who have relevant data, agree that little relationship has been found to exist between intelligence and humor preference or generalized sense of humor. The belief that a relationship does exist is so firmly entrenched, however, that some of these investigators are skeptical about their findings and prefer to accept the belief rather than their own data.

In studies by Gregg (61) and Endera (64) children in the two to four age
range were observed in spontaneous play, and instances of laughter were tabulated for each child. Both studies found that frequency of laughter of children in this age range bears little relationship to Kuhlmann I.Q. Justin (108) studied children in the three to six year range and, instead of simply observing the children at play, she presented them with humorous pictures and stories. Records were kept of smiling, laughing and bodily activity in response to each of the stimuli for each child. Children under six were given the Minnesota Preschool Test, and six year olds were given either the Stanford or Kuhlmann revisions of the Binet. Correlations between I.Q. and both frequency and duration of humor response, at each age level, revealed low but positive coefficients which decreased with increasing age. The obtained correlations were \(+.40\) at three years, \(+.23\) at four years, \(+.21\) at five years, and \(+.12\) at six years.

Owenske (158) compared the humor preferences of two groups of high school students who differed markedly in tested intelligence. The one group was made up of students with an I.Q. of 110 or below, and the other group was composed of students with an I.Q. of 121 or above. The brighter group demonstrated a slight tendency to prefer one rather sophisticated joke, concerning pre-natal conditioning, more than the lower intelligence group did, but this was not a significant difference. With regard to all of the other jokes, the two groups did not differ in their joke preferences and it was concluded that intelligence fails to show itself as a determining factor in either humor preference or the ability to comprehend the jokes used in that study.

In studies of the intelligence factor in the humor preferences of adults, only three of the investigators obtained data which suggests that intelligence
may be a relevant variable in humor appreciation. Kambouropoulou (109) had female college students keep laughter diaries for one week in which they recorded all of the incidents which caused them to laugh during that time. A rank order correlation of +.20 was found between academic grade standing and the number of humor instances reported by the students. It was concluded that the better students produced longer humor diaries. It was not determined, however, whether the better students really laughed more frequently than the poorer students or whether they were simply more conscientious in recording the laughter provoking incidents in their diaries. These same subjects were then asked to rank, in order of humor preference, a series of jokes which had been classified into four categorical types through an inspectional analysis of the items. A rank order correlation of +.30 was found between academic grade point standing and preference for "nonsense" jokes. It was concluded that better students prefer nonsense humor, but no other relationships were found between academic standing and preference for jokes in the other categories.

Cattell and Lubresky (40) investigated the possible relationship between the intelligence of college students, as measured by \( A_C.E \) scores, and preference for jokes in the 13 cluster categories which had been developed through factor analysis in a previous investigation (39). It was found that \( A_C.E \) scores correlated +.33 with preference for "derision-superiority" jokes and it was concluded that brighter people tend to prefer derision humor. No other relationships were found, however, between \( A_C.E \) ability scores and preferences for jokes in the other twelve categories.

Overlade (160) contends that there is a relationship between intelligence
and humor appreciation because he found a correlation of +.35 between ACE scores and scores on his humor test. The humor test consisted of a series of jokes where the body of the joke was presented, along with four possible "punch lines," or endings, for each joke. In preliminary work, Overlack had determined which ending was the "funniest" for each joke by finding the majority opinion of a group of subjects similar to those who took part in the main body of his experiment. These latter subjects were then asked to choose the ending which they considered most humorous for each joke, and the more their choices were in harmony with the opinion of the "standardization" group the higher score they achieved of the humor test. If the obtained correlation is interpreted in this light, it would appear that the brighter subjects were more likely to have humor preferences similar to what the majority of people considered funny than was true of the less intelligent subjects. It is difficult to interpret exactly what this finding means, but it is clear that it does not demonstrate a relationship between intelligence and either the number or the kind of things considered funny.

In other studies of the humor preferences of college students, Hester (100), Landis and Ross (127), Byrne (33) and Stump (191) have found that intelligence is not a determining factor in the appreciation of humor stimuli. Under the weight of this accumulated evidence, even such investigators as Mone (119) and Wynn-Jones (211), who stress the theoretical importance of intelligence in humor appreciation, concede that its operation is masked by dynamic personality variables. It should be emphasized, however, that most of these studies have been based on subjects who are relatively homogeneous with respect to intelligence, such as high school students and college
students. It is still quite possible that if a comparison were made of the humor preferences of people who differ from each other by twenty or more I.Q. points, real differences might be found.

The existence of national differences in humor appreciation has often been hypothesized in the theoretical literature. Such hypothetical differences have sometimes been related to supposed differences in personality types thought to be prevalent in different nations. Thus, people speak of English humor, American humor, and French humor as if they constituted well defined types. As yet, however, investigators have found practically nothing in the empirical data to support these hypothetical formulations. Ghosh (76) and Kimmens (118) have found no significant differences in humor appreciation among national groups in the United States and England. Wolff, et. al. (211) compared the humor ratings of Jews and gentiles in response to a series of jokes, some of which had a Jewish theme. The Jews rated the Jewish theme jokes as being significantly less funny than the gentiles did because they perceived these jokes as being insulting to themselves. The two groups did not differ, however, in their appraisal of the other jokes in the sample which did not have a Jewish theme.

Heim (97) makes the assertion that national differences in sense of humor do exist. In his study the subjects were frequently able to state correctly the national origin of the cartoons and jokes used in the experiment. Although quantitative data which adequately supports this assertion is not given, he claims that humor items of an English and American origin could almost always be recognized, while differences between items of continental origin, such as Germany and France, for instance, were not always recognized. This assertion
by Heim is contradicted directly by the findings of Eysenck (68) who carried out probably the most thorough and well controlled investigation in the field of national differences in humor. He attempted to discover whether comic cartoons of varied national origins could be assigned to their respective countries by subjects who were unaware of their origin. He found that when "external" criteria were present in the cartoon (e.g., a German helmet, traffic on the left side of the road, an American uniform) the degree of success in recognizing the national origin was well above mathematical chance. When only "internal" criteria (e.g., type of humor employed, manner of drawing) could be relied upon, success in recognizing national origin was not above pure chance expectation.

In the same study just cited, Eysenck made a statistical analysis of the themes of certain national humorous journals, like Punch, Razzle, The New Yorker, etc. He found that differences in humor themes between two journals of the same nationality were often far greater than those between journals of different nationalities. Then, using humor items devoid of "external" criteria, he found that there was no significant difference in the ranking of the humorous materials by English and German subjects.

One study by Smith and Vinacke (184) suggests that differences in humor appreciation may occur between people of markedly different cultures. They studied the humor preferences of Chinese, Japanese, and Caucasians in Hawaii, and found statistically significant differences between the humor preferences of the Caucasians, as a group, and the Orientals, as a group. Within the Oriental group, however, the Japanese preferences did not significantly differ from those of the Chinese, and within the Caucasian group the various nationalities did not differ from each other. Thus it may be that people who are raised
in widely different ethnic and cultural environments, like the Orient and the Occident, will differ in humor preferences while national differences within these cultures will be minimal, if they exist at all.

The importance of the socio-economic background of an individual, as a variable in humor appreciation, is an area where very little empirical data is available. In her study of children in the three to six year age range, Justin (106) reports a tendency for children from families in the upper occupational groups to be more responsive to the humor stimuli used in the study, than children from families in the lower occupational groups. This difference constituted only a rough tendency, however, and was not found to be statistically significant. Wells (206), in her study of the humor preferences of pupils in the seventh, eleventh and twelfth grades, found that subjects from the higher socio-economic levels demonstrated a preference for satire and whimsy literature, while those from the lower socio-economic levels preferred slapstick and absurdity literature. The difference was minimal at the seventh grade level and became progressively larger at the eleventh and twelfth grade levels, although this difference was not statistically significant.

Aside from the two studies just cited, there is no published research data relevant to the socio-economic variable. One reason for this may be the great difficulty involved in attempting to isolate this variable. Because socio-economic level of parents tends to bear a positive relationship to the intelligence and education of their children, it is difficult to assess the importance of each of these separate variables in humor appreciation. As a result, investigators in the field of humor at the present time should choose for their subjects people who do not differ very greatly in socio-economic
background.

For many theorists the assumption has been that individual differences in sense of humor are primarily a reflection of individual differences in personality dynamics, and that such variables as the sex, age, intelligence, education, socio-economic background, nationality and culture of the individual are not, by themselves, important independent variables in sense of humor. All of these variables, of course, profoundly influence the dynamic life of the individual, but it may be that it is their differential effects upon the personality, rather than the variables themselves, which are important in humor appreciation. On the basis of the empirical evidence reviewed above, there has been a marked tendency in contemporary humor theory to minimize the importance of these factors as independent variables in the psychology of humor. Correspondingly, the humor research during the last twenty years has tended increasingly to concentrate on personality dynamics in humor appreciation.

One group of studies in this area has concentrated on the attempt to find relationships between preferences for specific kinds of themes of humor and particular personality traits or types. One of the earliest studies in this area, by Kambouropoulou (110), found that "extraverted" subjects had a decided preference for humor involving "superiority" over others. Three years later, however, Landis and Ross (127) found no significant relation between general score on their humor tests and introversion-extraversion as measured by Freyd's I-E Scale. Murray (155), working with a small group of college students, found that people characterized by hostile and critical attitudes toward others are more likely to enjoy disparaging and derision
humor than people in whom these attitudes are not so pronounced. He emphasizes the point, however, that the subjects with these hostile attitudes did not necessarily manifest them in negativistic and hostile overt behavior, but tended to be self-assertive, competitive and of higher scholastic standing than those subjects who did not enjoy the hostile humor. During the same year of the publication of this study, Sears (150) found that ascendant individuals prefer jokes which degrade and direct aggression to others while submissive subjects showed a preference for jokes of a self-degrading type.

Using the California Ethnocentrism Scale, Adelson (1) divided his subjects into two groups labeled "prejudiced" and "non-prejudiced." He found that the "prejudiced" group enjoyed sexual humor and jokes ridiculing physical and psychological defects more than the non-prejudiced group. The two groups did not differ, however, in their enjoyment of "shaggy dog" jokes and those ridiculing authority figures. In a more recent study, Grziwok and Scodel (87) found that subjects who prefer sexual and hostile humor were characterized by a great deal of fantasy aggression, as manifested in TAT stories, and that subjects with low fantasy aggression on the TAT preferred social conformity humor.

In all of these studies on the relationship between enjoyment of hostile humor and personality, it is suggested either implicitly or explicitly that preference for this humor theme is a reflection of covert hostility which the individual usually does not manifest in hostile overt behavior. It is Murray's (155) hypothesis that it is the inhibition of overt hostile behavior by these individuals which leads to an intensification of their hostile feelings and a consequent increase in the enjoyment of hostile humor as a form of release.
Eyre (33) did a study on this specific hypothesis and found evidence which does not support it. In this study a group of neuropsychiatric hospital patients were classified into three groups, according to the ratings of the hospital staff, as to the way in which they handled their hostility. The three groups were designated as the "overtly hostile," the "covertly hostile," and the "non-hostile" (those who did not manifest hostility in either overt or covert ways). These patients were then asked to indicate their humor preferences among a series of mixed hostile and non-hostile cartoons. It was found that the patients who were able to express hostility in either an overt or a covert way showed a much greater preference for hostile humor than subjects who found it difficult to express hostility in any way at all. It was concluded that appreciation of hostile humor is simply an expression of hostility by individuals who are also capable of expressing hostility in other ways.

A major weakness of all of these studies in the subjectivity involved in the selection of the humor stimuli. These various authors designated their humor samples as being comprised of hostile, sexual, superiority, self-degrading, or self-enhancing dynamic content on the basis of face validity. That is, by simple inspection of the items, one or more judges would attempt to ascertain the homogeneous dynamic content of the jokes or cartoons used in the studies. When this procedure is used, the question arises as to whether the selected items are really valid representatives of the homogeneous tendency content the authors claim them to be. To circumvent this difficulty several researchers have employed factor analytic methods as a substitute for this "inspectional" procedure.

The earliest use of factor analysis in humor research was by Eysenck (66)
in 1942. Using eighteen adult subjects, he had them rank 189 jokes of various kinds. The resulting rankings were correlated, and the tables of correlations factor analyzed. Several bipolar factors were extracted, which divided his subjects into humor preference types according to these classifications: (1) liking for sexual as opposed to non-sexual jokes; (2) liking for complex as opposed to simple jokes; and (3) liking for personal as opposed to impersonal jokes. In the latter classification, subjects preferring personal humor enjoyed jokes based mainly on the character of the persons depicted, and those preferring impersonal humor enjoyed jokes based mainly on the humor of the situation. He then gave his subjects a "temperament test" based on a modification of Guilford's research into personality factors, and found correlations between temperamental characteristics and humor preferences. He found that socially shy and emotionally dependent subjects like complex, non-sexual jokes while more aggressive and socially oriented subjects preferred sexual and simple jokes.

The first large scale statistical analysis of a sample of humor items was done by Andrews (7) and published a year after Eysenck's pioneering effort. Working with 300 subjects, and using Thurstone's multiple factor technique on 646 humor items, the obtained data suggested six humor factors. These he designated as: (1) derision-superiority, (2) reaction to debauchery, (3) subtlety, (4) play on words and puns, (5) sexual, and (6) ridiculous wisecracks. Andrews asserts that preference for one or more of these humor types is associated with unconscious motivating tendencies in the individual personality, but he made no attempt to relate these preferences to personality characteristics.
Building upon the work of Andrews, Cattell and Luborsky (39) (40) started extensive long-term research in 1947, using factor analytic techniques, and their work is still in progress at the present time. Their first study (39) had as its object the selection of an adequate, representative sample of all kinds of jokes customarily occurring in social interaction, and then the discovery of functional groupings of jokes which share a common dynamic tendency. They began with 100 jokes which had been carefully selected so as to be very diverse, and relatively free of differences in cultural time and place. Fifty male and 50 female college students rated each of these jokes for degree of funniness on a three point scale. Their responses were intercorrelated and 13 well defined clusters appeared which retained their form when the subjects repeated the ratings five months later. The clusters were then examined by inspection in an effort to understand the common dynamic denominators within each cluster of jokes. The labels attached to them represented an attempt to describe the common joke content within each class of jokes. Through this procedure the thirteen joke clusters were described as follows: (1) debonair sexuality, (2) derision-superiority, (3) bringing another bluntly to reality, (4) disregard of convention and social delicacy, (5) anti-authoritarian, or ridicule of customary deference-receiving persons, (6) repressed male passivity or resigned male dominance, (7) sturdy irony and dominance, (8) playfulness, (9) bringing surprise and discomfort to well meaning people, (10) extravert "male fellow" aggression, (11) cynicism, (12) naive self-composure, and (13) unsophisticated and good natured play. Following this, each subject's humor score on each of the clusters was established and a matrix among the clusters was calculated. This was factor analyzed, using the centroid method, and this
procedure yielded five humor factors: (1) good natured assurance, (2) rebellious dominance, (3) sex repression, (4) passive derision, and (5) sophistication. The authors hypothesized that each of these humor factors eventually would prove to be general personality factors.

In a second study (40), Cattell and Luborsky attempted to relate the joke clusters from the previous study to personality traits. Fifty of the subjects from the previous study were selected at random and retested on the same humor material five months later, and at the same time were given two Guilford-Martin Inventories of Personality Factors. It was found that appreciation for six of the joke clusters correlated significantly with some of the Guilford-Martin Personality Factors. A liking for the jokes in cluster one, "sexuality," was found to be significantly related to a happy-go-lucky, carefree disposition and social extraversion. High appreciation of jokes in cluster three, "bringing others bluntly to reality," was associated with an introspective, meditative disposition and a tendency toward feminine interests. Preference for the jokes in cluster five, "anti-authoritarian," correlated significantly with social introversion and shyness. A liking for the jokes in cluster six, "repressed male passivity or resigned male dominance," was significantly related to a tendency toward masculine interests, a carefree disposition, self-confidence, and introspective thinking. High appreciation of the jokes in cluster seven, "sturdy irony and dominance," was associated with self-confidence and social extraversion. Finally, a preference for the jokes in cluster 13, "unsophisticated and goodnatured humor," correlated significantly with a happy-go-lucky and carefree disposition.

On the basis of this initial research, Cattell was encouraged in the
belief that humor reactions and preferences provide a potentially effective and subtle means for personality measurement. Since the publication of these two preliminary studies, Cattell and his collaborators have continued to do research in this area and this culminated in the publication of the IPAT Humor Test of Personality in 1950 (41). Since this test is used in the present study, it will be discussed in greater detail in the section on procedure.

Thus far, in the review of studies on the relationship between sense of humor and dynamic personality variables, only those studies have been discussed which have attempted to find relationships between preference for specific kinds or themes of humor and particular personality traits or types. There is another group of studies which have concentrated upon an investigation of humor response as a form of ego defense mechanism and as a means to psychological stability and adjustment. This group of studies is intimately related to the problem of this investigation.

Among the numerous theories of humor, one of the most consistently popular has been the theory that all forms of humor have as their basis the expression of superiority, hostility and sadism. One of the strongest proponents of this theoretical position is Ludovici (138) who asserts that superiority is the only essential psychological concomitant of laughter. Moreover, Ludovici contends that superiority and aggression are so intimately related that the expression of one involves the expression of the other. In accord with this view, he regards the smile not as an indication of pleasure and friendliness, but as a vestigial snarl or sneer which now is symbolic of a more general attitude of hostility. In a similar vein, Rapp (170) has gone so far as to suggest that all forms of laughter are ultimately an archetype of the cry of
triumph uttered by primitive man after victory over an enemy in physical combat.

The importance of the hostility and superiority theory of humor in contemporary thinking is evident in the numerous studies on the subject by Murray (155), Sears (180), Adelson (1), and Byrne (33) cited previously. On the basis of the evidence from these studies it would be difficult to deny that some people, at least, express superiority and hostility in their appreciation of humor. But to contend that these negative emotions lie at the basis of all humor appreciation for all people appears to be an overgeneralization and an oversimplification.

There appear to be humorous situations where the laughter arises out of sympathy and identification rather than hostility. McDougall (145) has suggested that humor has a self-protective function which saves us from becoming unduly upset over minor misfortunes and difficulties which occur in the daily life of almost everyone. In many embarrassing and awkward situations people will laugh seemingly because if they did not, they would be tempted to cry. When a passenger, heavily laden with packages, enters a bus, trips, and scatters the packages all over the aisle and then laughs, it requires a stretch of the theory to explain the laughter as arising out of superiority or hostility directed either at the self or toward others. In such an embarrassing situation the laughter may well represent a protection against undue distress over the incident. If some people are capable of seeing the humor of such predicaments when they occur to themselves, it is quite possible that they laugh out of sympathy and identification when these same occurrences happen to others. As Flugel (70) has pointed out, much of the laughter at the escapades of Charlie Chaplin appeared to have been in response to the pathos of these
situations and the identification of the audience with Chaplin in his filmed misadventures.

This same self-protective function may be operative when people laugh in reaction to external and internal threat. A typical instance of this is the person who laughs after narrowly escaping a serious automobile accident. Flugel (70) suggests that such laughter arises out of relief from the emotional tension aroused by the perceived danger, and now dissipated because the danger is no longer present. He suggests further that laughter does not always result from any change in the external threat, but frequently arises from a change in the attitude of the person who perceives the threat. An example of this might be the joking which frequently occurs among men in the military during combat training under conditions which, for many, are inherently fear-producing. The noise, confusion, and physical stress of such training causes many men to perceive at first the situation as serious and threatening. Here the joking appears to bolster the realization that the situation is not as threatening as first perceived. If individuals are either unable or unwilling to adopt this humorous defense, they may remain impressed by the seriousness of the situation and not be amused by the humorous banter. The same appears to be true of many other situations in which the element of tragedy remains, but where people are able to protectively, and perhaps only temporarily, keep the seriousness of the situation at bay by humor and laughing. An example of this is a story that came out of the second World War. During a recreation period, a large number of a ship's crew were on deck when a torpedo was sighted, headed directly for the ship. The men were silent as they wondered whether they were to meet with disaster or be saved by the torpedo's missing the ship. Their tension and
anxiety were about to reach panic proportions when one of the crew sent the rest into gales of laughter by quipping, "Does anyone want to buy a good watch?"

It may be that in many verbal jokes the emotional relief is provided by the wording itself, which implies that the situation described is less serious than an actual occurrence at the present time. As an example one can consider the so-called "sick jokes" which poke fun at illness, death and other tragic occurrences. Most of these jokes concern situations which, if they were occurring in reality, would produce horror or sadness in the very people who laugh at them in joke form. To illustrate this, there is the old classic, ". . . and aside from that, how did you enjoy the play, Mrs. Lincoln?" It can be asserted that laughter at such jokes is a manifestation of cruelty and sadism, and for some individuals this may be true. For others, the delight in such humor may arise from the realization that this is a make-believe or unreal situation and, as a consequence, one may make light of it since the very wording of the quip implies a lack of seriousness.

The self-protective function of humor appears to run through Freud's (74) theories on the subject. Briefly summarized, Freud believed that humor gives pleasure by permitting the momentary gratification of some unconscious and unacceptable impulse or wish. It permits this gratification because at the same time it reduces the anxiety which is responsible for the inhibition of the impulse or wish, and which would ordinarily accompany its gratification. By making light of the forbidden impulse, treating it as trivial or commonplace, the joke or cartoon renders the forbidden urge less serious and threatening so that a consequent release of inner tension can occur. The sudden release of
tension comes as a pleasant surprise to the individual, while the unconscious source of the original tension is so disguised in the joke that it is usually not disturbing to normal people. His theoretical position carries with it the belief that there is a denial of the seriousness of reality in all humor. To use Freud's own words (73, p. 5), it's as if the superego were to say to the ego:

"Look here! This is all that this seemingly dangerous world amounts to -- child's play -- the very thing to jest about!"

The hypothesis that all humor represents a relief from tension and anxiety has become as popular as the theory that the desire for superiority and the manifestation of hostility lie at the basis of all humor. Redlich and Levine (173) (13), following psychoanalytic theory, contend that the basic element of all humor is anxiety, and that a joke will be appreciated as being funny only if it arouses anxiety and at the same time relieves it. On the basis of this theory they assert that there are three possible dynamic reactions to humor stimuli. These are: (1) a positive reaction in which the stimuli are regarded as funny if they arouse anxiety and immediately dispel it; (2) indifference if the humor stimuli evoke no anxiety at all, either because the person has no conflict over the dynamic material of the stimuli or because the conflict is too deeply repressed to be aroused; (3) a negative reaction in the form of disgust, shame, embarrassment, horror, etc., if the humor stimuli arouses anxiety without dissipating it.

On the basis of their theoretical position, Redlich and Levine have constructed what they regard as a psychodiagnostic procedure; the Mirth
Response Test (133). This consists of a series of cartoons which, the authors believe, tap various possible areas of conflict and anxiety. On the basis of their experience with these cartoons, they contend that the inability to understand or appreciate humor stimuli results from the attempt to protect oneself from the anxiety which the dynamic content of the humor stimuli arouses.

According to this position, if a person reacts negatively or with complete indifference to a joke which is generally regarded as funny by others, this would indicate that the person has considerable disturbance in the dynamic area which corresponds to the dynamic content of the joke. In such an instance the mirth response would be inhibited by the strong repressive mechanisms which operate to prevent the release of unacceptable thoughts and wishes from the unconscious (132). In support of this theory the authors offer evidence which is clinical and anecdotal in nature.

The anxiety-reduction theory of humor gains some support from the studies of Frankel (71) and Weiss (204) which are generally better controlled than the studies of Redlich and Levine just cited. Both Frankel and Weiss have investigated the hypothesis that people are unable to appreciate humor stimuli which threaten areas of unconscious conflict and disturbance. Both of them utilized the Blacky Pictures as a means of assessing the degree of disturbance shown by individual subjects in the psychosexual areas about which the Blacky Pictures purport to yield information. Frankel (71) had artists draw cartoons which were thought to contain dynamic material corresponding to each of these psychosexual dimensions. Frankel used the Blacky to assess the degree of disturbance manifested by each of her subjects in each of these dimensions. The subjects were then asked to arrange the cartoons in rank order of
preference, and then to pick the cartoon liked best and the one liked least. She found that subjects who had manifested marked disturbance in one or more of the psychosexual dimensions expressed open dislike for a significantly greater number of cartoons relative to these dimensions than subjects who did not manifest this disturbance. In the study by Weiss (204) essentially the same procedure was followed. He used both jokes and cartoons for humor stimuli and tested his subject's ability to recall the humor items 30 minutes after they rated them for degree of unwariness. He found, as Frankel had, that his subjects disliked humor items which contained dynamic material relevant to areas of conflict and, in addition, were unable to recall these disliked humor items after 30 minutes.

One common element which runs through all of these theories of humor is the concept of emotional release in humor appreciation. Few theorists would disagree with the statement that the mirth response is an expression of emotion. Disagreement arises when the question is raised concerning the nature of the dynamic stresses and emotions released to find their outlet in humor and laughter. Some theorists have attempted to answer this question in terms of some one predominant, or exclusive, dynamic tendency or emotion. As a result, they may have overstressed the relative significance of those in which they are especially interested. As more empirical data is accumulated it may be found, as Burt (32) has suggested, that any emotion or motive can be involved in this release, and that the various kinds of humor will be distinguished according to the specific motives or emotions being discharged. The results of the factor analytic studies of Eysenck (66), Andrews (7) and Cattell (39) (40), cited previously, appear to be a step in this direction.
Another common element of agreement to be found, either implicitly or explicitly, in most theories of humor is the assumption of the basic normality and healthiness of humor in psychological functioning. Many who would doubt the adequacy of Freud's general theory of humor might agree with his assertion that in its repudiation of the possibility of suffering and its temporary denial of the grimmer aspects of reality, humor is one of the most effective means that man has at his disposal for evading overwhelming stress and maintaining his psychological equilibrium (72, p. 5). The positive qualities of humor are stressed even by such authors as Rapp (171), who starts with the basic hypothesis that all laughter has its origin in hostility and is basically savage. He contends that laughter and humor has tended to undergo a process of refinement during the course of social development so that today the person with a sense of humor is one who can sit back and laugh at his and others' frailties in an attitude of understanding and tolerance. He further contends that the person with a good sense of humor is characterized by sympathy, an accepting attitude, objectivity, and emotional maturity.

Overlade (160) has found that the capacity for appreciating the humor in a heterogeneous variety of jokes is significantly related to flexibility in thinking, and the ability to perceive implied or alternative meanings in events. On the basis of his findings, he contends that the person with a good sense of humor is better equipped to plan for uncertainty by virtue of his ability to assess correctly his environment, consider more possibilities, and see the implications of his own behavior and that of others. He thus puts forward the hypothesis that, other things being equal, the person with humor perception ability will maintain a better personality adjustment than one with
poor humor perception ability.

In spite of the marked consensus that a person's sense of humor is an index of his level of adjustment, this hypothesis has not been empirically investigated. There have been a few studies which have compared the humor preferences and reactions of normal and abnormal individuals. One of the earliest studies in this area was done by Hester (100), who compared college females and a group of psychotics on their humor ratings of a series of jokes. It was found that a significantly greater number of jokes were rated as being not at all funny by the psychotics than was true of the college students. Redlich (173), in his preliminary work with the Mirth Response Test cited previously (133), reported marked differences in humor appreciation between psychotics and normals. He claims that organic psychotics in the early stages of deterioration characteristically miss the more subtle and symbolic implications of cartoons while in the more advanced stages they simply do not understand cartoons. Schizophrenics, on the other hand, are reported to manifest a very uneven appreciation of humor. Some cartoons are considered to be very humorous while other cartoons elicit no appreciation or understanding whatever. The disturbance in the humor appreciation of psychonesurotics is reported to be less diffuse than it is for psychotics, more specifically linked to the particular problems of the patient, and greater than is characteristic of normals. No quantitative data is offered to support these findings, but Levine and Redlich (132) conclude in a later article that the inability to appreciate humor, or deviant responses to it, can be regarded as a sensitive indicator of maladjustment and emotional disturbance.

A criticism which can be made of these studies is that the humor responses
of normals were compared to those of severely disturbed, hospitalized patients. In this latter group of subjects psychological disturbance is so severe that it pervades most areas of functioning so that it would only be reasonable to expect disturbance in humor response also. The question then arises as to whether one's sense of humor is related to level of psychosocial adjustment in a non-hospitalized, relatively normal population. The common assumption in the literature is that this relationship does exist. In reviewing humor research one notes that many of the other common assumptions about humor have been investigated by several studies. It is, therefore, rather surprising that there is so little research data available which either supports or refutes this assumption.

To the writer's knowledge there are only two studies which have yielded data directly pertinent to the relationship between sense of humor and adjustment. Bird (20), working with grammar school children, established a "humor test" consisting of 10 pairs of humorous pictures. Children at each grade level were asked to indicate which of the two pictures, in each set; were the funniest, and in this way established norms of humor preference for each grade level. It was found that children whose humor preferences varied widely from the norm of their school grade were socially maladjusted, either because they were disliked for lack of cooperation, shunned because of shyness or unusual behavior, or rejected for no apparent reason. No quantitative data is offered to support these reported findings. Using the Redlich Mirth Response Test (173), Doris and Fierman (59) studied the humor preferences of college students who had been divided into "high anxious" and "low anxious" groups on the basis of their answers to an anxiety and worry questionnaire. Preliminary
statistical analysis of their data indicated that the low anxious group showed a greater appreciation for the cartoons as a whole than the high anxious group. Further analysis revealed that not all members of the low and high anxious groups were contributing to the obtained difference. Rather, it was those subjects who were tested by a member of the opposite sex that contributed the most to the obtained difference. The authors concluded that the personalities of the male and female examiners must have been an uncontrolled variable in the expression of humor reactions by the subjects so that the obtained findings, regarding the relationship of humor appreciation and anxiety, are still open to question.

The relation of sense of humor to psychosocial adjustment is thus a largely unexplored area. This study is designed to investigate the question, "do people who have a good general sense of humor, as judged by their subjective response to humor stimuli, differ significantly from those who have a poor general sense of humor with respect to level of psychosocial adjustment and personality characteristics?"

It should be emphasized that "general sense of humor" is being used in this study in a restricted sense. It does not refer to the ability of an individual to be humorous, witty, or clever. It does not refer to the ability to remember jokes and humorous incidents. It also does not refer to the tendency on the part of the individual to laugh uproariously when presented with humorous stimuli. As used in this study, general sense of humor shall refer to the characteristic, total, integrated response which an individual makes to any given heterogeneous variety of humor stimuli. If this characteristic response to humor stimuli is one of a subjective state of
pleasure, delight or mirth, the person will be designated as having a high humor level. If this characteristic response is one of indifference, dislike, anger or disgust the person will be designated as having a low humor level. (Adopted from Sears) (180).

As was indicated previously, the hypothesis that people really do possess this generalized characteristic reaction to varying kinds of humor stimuli is implicit in the majority of the studies of humor. Sears (180) refers to this generalized humor reaction as one's "humor level." This hypothesis was tested and supported by two studies by Eysenck (66) (67). In the first study (66), Eysenck administered to his subjects three different kinds of humor tests. The first test consisted of printed verbal jokes, the second consisted of cartoons, and the third was made up of humorous pictorial comparisons. He found that there was a marked tendency for people who found a large number of items funny on one test to also find a large number of items funny on the other tests. In a follow-up study (67), Eysenck used different subjects and five tests of humor consisting of printed verbal jokes, cartoons, limericks, humorous verses and humorous pictorial comparisons. He again found that those subjects who regarded a large number of items funny on one test also reported finding a large number of items funny on the other four tests. He concluded that the best index of a person's general sense of humor is the number of things he considers funny, rather than the intensity of the humor reaction.

For the purposes of this study, the terms "funniness" or "mirth" will refer to a complex, conscious emotional response to a humorous stimulus which is characterized chiefly by a subjective state of elation and pleasurable surprise, and accompanied by diffuse autonomic and behavioral concomitants.
Defined in this way, the humor response is conceived of as a molar and holistic response, and in accord with this conception, various authors in the literature have proposed that it can be measured on the behavioral, autonomic and subjective level.

On the behavioral level the mirth response varies from a facial expression indicating pleasure to an uproarious laugh. As such, it can be recorded and measured in terms of vocal sounds, facial expression, and bodily movements. In attempting to measure the humor response at the behavioral level, one encounters the difficulty that smiling and laughing do not necessarily accompany the subjective state of mirth or humor. Scofield (179) found that actual laughter correlated poorly with subjective judgments of humorous situations. Gregg (82) found this to be true even of children. In observations of the responses of preschool children to laughter provoking situations, it was found that children reported such situations as being pleasurable and funny even though they did not respond to them with laughter or smiling. In an elaborate study by Wolff, Smith and Murray (211), it was found that when the overt behavioral concomitants of humor are recorded by means of a complex apparatus, including a moving picture camera, the results were essentially the same as the subjective judgments given by their subjects regarding the funniness of the humor stimuli. It thus appears that overt behavior is not always a reliable indicator of the absence, presence, or intensity of the covert humor reaction.

Attempts to measure the humor response at the autonomic level have been, for the most part, unsuccessful. In the study previously cited (179), Scofield found that during spontaneous laughter, in response to humor stimuli, a characteristic pattern of frequency and intensity of breathing occurs, which
can be distinguished from breathing patterns during forced laughter and during relaxed states. As was indicated earlier, however, spontaneous laughter did not always accompany subjective humor reactions and, as a consequence, pneumograph recordings did not serve as a reliable indicator of the covert humor response. These findings are supported by those of Martin (141), who found that although breathing and pulse rate increase after the presentation of comic pictures, this same reaction occurs in response to nonhumorous pictures. Since no characteristic pulse or breathing curves could be found which could distinguish between reactions to humorous and nonhumorous pictures, Martin concluded that the observed autonomic reactions were due to concentration of attention rather than to humor reactions. In another study cited previously (211), Wolff et al. used the psychogalvanometer as a measure of the involuntary or autonomic, reaction to humor stimuli. This form of measurement was employed by the authors in their preliminary investigations of humor, but since the psychogalvanometric measurements yielded essentially the same results as those of subjective report, the galvanometer was not used in the published study.

When one considers the various methods available, at the present time, for recording and measuring the humor response, the best method still appears to be the individual's subjective report. In the final analysis, it is the subject himself who is the best judge of the presence and intensity of any conscious emotional experience. Since the funniness or mirth response does not always manifest itself in overt behavior, measurement of overt behavior does not appear to be the best criterion of the presence of this response in the subject. Measurements of this response at the autonomic level may be a more valid approach at some time in the future, but at present the individual's
subjective report is still necessary to confirm the indications of these methods of measurement. Since there appears to be little that can be gained by the use of these objective methods of measurement instead of, or in addition to, the subjective report, the latter method of measurement will be the one used in this study.
Chapter III
Research Design

A. Subjects

In the previous chapter, the review of research on the age and education variables in humor perception has indicated that the importance of these variables in humor appreciation, beyond adolescence, is still open to question. In view of the inconclusive research findings in this area, an effort was made in this study to select subjects who were relatively homogeneous with regard to age and educational levels.

The initial subjects were 100 female and 110 male college students. The female subjects were recruited from a medium sized, non-coeducational, liberal arts college in the Midwest, and the males were recruited from a large coeducational university in the same city. Both schools are parochial institutions of Roman Catholic denomination. All subjects were volunteers and, in offering their services as subjects, they were told only that the research would concern the psychology of humor and that they would be requested to donate approximately six hours of their time over the course of one school semester.

As a group, the male subjects were slightly older than the female subjects, since some of them were completing their education after having fulfilled their military obligation. The age of the male subjects ranged from 18 to 32 years with a mean age of 21.75 years, a median age of 21 years, and a standard deviation of 2.73 years. The age of the female subjects ranged from 18 to 24...
years with a mean age of 19.97 years, a median age of 20 years, and a standard deviation of 1.04 years.

All of the subjects were in either their sophomore, junior or senior year in college. The sophomore subjects were all completing the second semester of their sophomore year and had selected a major field of study in preparation for their junior year. Of the male subjects, 23.64% were sophomores, 31.82% were juniors, and 44.54% were seniors. Of the female subjects, 36% were sophomores, 27% were juniors, and 38% were seniors. Although no measures of the subjects' mental ability were obtained, they probably represent a somewhat selected group, from the standpoint of intelligence, since they all had completed at least one and one-half years of college.

While the subjects used were relatively homogeneous with respect to age, education, and probably intelligence, they were quite heterogeneous with respect to choice of college majors. The listing of the major field of study for the males and females in Tables 1 and 2 respectively completes the description of the initial sample used in this study.

B. Method

The problem of this study is the investigation of the question, "Do people who have a good sense of humor, as judged by the number of things they regard as humorous, differ significantly from those who have a poor sense of humor with respect to psychosocial adjustment and personality characteristics?"

To answer this question first of all the subjects in the sample were asked to respond to a heterogeneous variety of humor stimuli in order to find individual differences among them with respect to the number of such stimuli regarded as humorous. The form of humor stimulus used in this study was the
### Table 1

Categorization of the College Major of the Male Ss

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<td>Physical Therapy</td>
<td>2</td>
</tr>
<tr>
<td>Economics</td>
<td>3</td>
<td>Political Science</td>
<td>2</td>
</tr>
<tr>
<td>Engineering</td>
<td>32</td>
<td>Pre-dentistry</td>
<td>5</td>
</tr>
<tr>
<td>English</td>
<td>3</td>
<td>Pre-law</td>
<td>1</td>
</tr>
<tr>
<td>History</td>
<td>1</td>
<td>Psychology</td>
<td>30</td>
</tr>
<tr>
<td>Industrial Management</td>
<td>1</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Journalism</td>
<td>5</td>
<td>Speech</td>
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<td>Philosophy</td>
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### Table 2

Categorization of the College Major of the Female Ss

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<th>College Major</th>
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<td>Home Economics</td>
<td>5</td>
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<tr>
<td>Biology</td>
<td>4</td>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Business Education</td>
<td>10</td>
<td>Medical Technology</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry</td>
<td>2</td>
<td>Music</td>
<td>1</td>
</tr>
<tr>
<td>Dietetics</td>
<td>1</td>
<td>Occupational Therapy</td>
<td>18</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>27</td>
<td>Sociology</td>
<td>4</td>
</tr>
<tr>
<td>English</td>
<td>9</td>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td>History</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
printed verbal joke. Sears (180) contends that the printed or verbal joke is the most humor provoking of all the various kinds of humor stimuli. His basic hypothesis is that people laugh at things possible in real life, and that the joke and cartoon are essentially condensations of such events. Since the story of a joke unfolds in a temporal sequence from the beginning to the end of an episode, as in real life, and the cartoon presents all of the crucial factors simultaneously, he believes that the verbal joke is more life-like and hence more humor provoking. In contrast to this contention, Andrews (7), Eysenck (67) and Heim (97) have all found that it makes little difference whether one uses jokes, cartoons, or limericks as humor stimuli because the specific item structure is not of primary importance and all of these stimuli have proved to be equally humor provoking. The choice of the printed verbal joke in this study was consequently one of convenience, as the verbal joke lent itself to easier presentation within the framework of this research design.

Since the focus of this investigation is upon generalized sense of humor, i.e., one's reaction to a heterogeneous variety of humor stimuli, it was necessary to take care that the jokes selected for presentation to the subjects were relatively heterogeneous in character. A method which many humor investigators have used in selecting humor items has been to go through joke anthologies and choose items at random. This method is likely to result in a biased sample of humor items because of the relationship between personality characteristics and preference for particular kinds of humor which has been demonstrated by Eysenck (66), and Cattell and Luborsky (40). Using this procedure there is the danger that the investigator will select primarily those items which contain dynamic themes that are correlates of his own particular
characteristics. Even if one were to use a table of random numbers in selecting items from such anthologies there is danger that the author of the anthology compiled the items according to this same tendency and the result would still be a biased humor sample. This is particularly likely to be true if the investigator selects humor items from popular periodicals. As Stephenson (190) has pointed out, political, labor and business publications usually contain a disproportionate number of humor items in their own particular fields, while a magazine such as The New Yorker presents a preponderance of satirical humor items which use society and the upper socio-economic class as a target. As Eysenck (68) has shown, in a study cited previously, differences in humor themes between two publications of the same nationality are frequently far greater than those existing between publications of different nationalities.

Another method frequently used for selecting humor items is to start with a large number of items and have one or more judges attempt to sort them into humor categories according to similarities in dynamic content, as ascertained by simple inspection of the items. As was indicated previously, when this method is used the question arises as to whether the selected items are really valid as representative of the homogeneous tendency content the investigators claim them to be.

To circumvent these methodological difficulties, several investigators have employed factor analytic techniques for the identification of those items which form clusters by virtue of the similarity of their dynamic tendency content. The joke items used in this investigation were drawn from forms A and B of the IPAT Humor Test (41). This test was developed on the basis of the
factor analytic studies of humor items carried out by Cattell and Luborsky (39) (hO), discussed in Chapter two. The authors of the test have been able to demonstrate, by use of factor analysis, ten humor clusters among the approximately one hundred jokes in each form of the test. Each of the joke clusters thus revealed has a highly characteristic quality in the humor tendency running through it. Forms A and B of the test contain a total of 264 jokes which represent these ten independent humor clusters. From the total of 264 items, 200 were selected for use in this study. Because of the female subjects used, a number of the more coarse sexual jokes were deleted from the original total. Of the remaining items, 200 were selected in such a way that each humor cluster had approximately equal representation in the total sample. It cannot be claimed that this sample included all, or even most kinds of dynamic humor content. One can be reasonably sure, however, that the sample contains more than just a few kinds of dynamic content. To that extent, the sample represented a relatively heterogeneous group of humor items. The jokes used in this study will be found in appendix A.

The jokes were mimeographed on regular 8½ x 11 paper and then made up into individual packets with 200 jokes in each packet. Each packet of jokes was divided into 10 sections with 20 jokes in each section. The individual packets were distributed to the 100 female and 110 male subjects and they were asked to rate the jokes for degree of funniness on a five point scale which will be elaborated upon later.

The subjects were requested to rate 20 jokes each day for 10 consecutive days. This was done to allow for individual mood swings from day to day, and to minimize the effects of fatigue which might enter in if the subjects were
asked to rate all of the 200 items at one sitting. The jokes were given to the subjects to rate in private and at their own leisure. This procedure was adopted only after considerable deliberation and only after other possible alternative procedures were discarded as offering greater methodological difficulties.

One of the discarded alternatives was to have the subjects rate the items in groups. This procedure introduces the uncontrolled variable of social facilitation and inhibition which is likely to alter the ratings of the items by the subjects because of the reactions of other subjects. The rating of humor items in groups is warned against in the studies of Lang (128), Morrison (150), Perl (162), Sears (180), and Wolff et al. (211). The study by Perl (162), for instance, showed that rating jokes in groups generally influences the subjects to rate humor items as funnier than if they rate them when alone. This elevation was not found to be uniform for all subjects, however, and did not occur at all for some of the other subjects. Thus, while it may be true that all of the subjects are exposed to the same variable of social influence, they respond to it in different ways. When one obtains ratings of jokes in groups, it is not known how much of the rating is a reflection of the subject's identification with, or rejection of, the group. In addition, there are several handicapping practical considerations which militate against the use of this method of item presentation. It would be extremely difficult to get a large group of subjects together at 10, or even five, different times to rate a small number of items each time in order to minimize the effects of mood variations and fatigue. The only alternative to this would be to have the group rate a small sample of items, and this is specifically warned against by both
Cattell (40) and Eysenck (66).

Another discarded alternative was to have each of the subjects individually rate the items in the presence of the investigator. While this method might be the preferred one ideally, it involves practical handicaps extremely difficult, if not impossible, to surmount. For instance, in order to have had the 210 subjects of this study meet individually with the investigator on 10 different occasions, to rate a small group of jokes each time, would have involved 2,100 individual appointments. From the standpoint of time required and scheduling difficulties, this did not appear to be feasible. The only alternative would have been to use a smaller number of subjects, fewer humor items, or both. To reduce the number of subjects would have gone counter to the later stages of the research design, as will be demonstrated later, and to reduce the number of humor items increases the danger of a sampling bias discussed previously.

The remaining alternative method, and the one adopted in this study, was to have the subjects rate the humor items in private and at their leisure. This method eliminates the difficulties inherent in the other methods and has several positive factors in its favor. When subjects rate humor items on their own, they are responding to the items under the same conditions in which they encounter humor items in magazines and newspapers, in the course of their everyday lives. Only a few items are responded to during each occasion; they are encountered usually when the subject is at leisure, and the situation is free of the artificiality of the testing room or laboratory. Martin (141) has demonstrated that a formal or artificial atmosphere tends to inhibit humor responsiveness, while subjects who are allowed freedom of expression in an
informal atmosphere tend to regard a greater number of humor stimuli as pleasurable.

To reduce the possibility that the subjects would confer with others for their opinion before rating the jokes, it was emphasized in the instructions that each subject was to give his own independent judgments of the jokes. This point was reiterated, actually belabored, in the instructions, and to reinforce it the subjects were told that it was not known how funny the items really were and that each subject's opinion was as good as that of anyone else. There was also the possibility that some subjects would be inclined to rate all, or most, of the items at one time. To counter this, each section of 20 jokes for each day required the subject to put in the date and the time of the day that the jokes were rated. In this way the subject's compliance with instructions could be checked. There was, of course, the possibility that some of the subjects might be motivated to falsify their entries in order to make it appear that they had complied with the instructions when they had not. Since the subjects had volunteered for the study purely out of their own interest, and were in no way compelled to continue in it, this possibility of falsification does not seem likely. Nevertheless, each subject was required to hand in 100 jokes, whether rated or not, at the end of five days, with the remaining 100 jokes being turned in five days later.

The packets of humor items were distributed to all of the 100 female volunteer subjects at one time. It was not possible to get all of the male subjects together in one group, so the packets of jokes were distributed to them in their classes. The instructions were first of all read to them orally and a printed sheet containing the same instructions was included in each
packet of jokes. The instructions were as follows:

The task being requested of you is to rate twenty jokes each day for ten consecutive days. Some may seem funny to you and others may not, but it is your opinion of them which is wanted. It is extremely important that you rate the items strictly according to your own opinion rather than according to the way you think others might rate them. Therefore, you are urged to rate the jokes while you are alone, or if you are in the company of someone else, do not communicate with them about the items. Rate the items according to how amusing you think they are, not according to which you consider more tasteful or intellectual. Rate them also according to your first impression rather than by thinking over the relative merits of the items.

In your rating do it according to this scheme:

4 - Extremely funny
3 - Fairly funny
2 - Mediocre
1 - Poor but has some merit
0 - Not funny at all

Place your numerical rating for each joke in the space provided at the end of each item.

There may be some items which you do not understand. If so, give these jokes a rating of "0" (Not funny at all) and encircle the number corresponding to that item. If you have encountered a joke before, put an "X" through the number of that item and rate it,
as closely as possible, according to your impression of it when you first heard it.

Once again, you are urged to give your own opinion. Since this does not involve any form of competition between you and others, there is no necessity for your ratings to coincide with those of anyone else. It is not known how funny these items actually are; your opinion of them is just as good as anyone else.

Remember that you are to rate just twenty jokes each day. Enter the date and the time of the day that you rate each set of jokes in the space provided at the top of the first page of each set. It will be best if you rate the jokes when you are at your leisure.

The five point rating scale was adopted in accord with the recommendation of Hollingworth (102) who asserts that four or five distinctions of merit represent the optimum number which can accurately and comfortably be made in judging jokes. He contends that fewer distinctions may mean a loss in reliability due to coarseness, while more distinctions require discriminations which the subjects are unable to make.

The possibility that items would not be understood by the subjects was greatly reduced by the fact that the jokes were taken from the IPAT Humor Test. Items which commonly were not understood by subjects in the standardization groups were eliminated before the test was published. In spite of this, a provision was made for this possibility in the instructions so that, in the event that a subject did not understand an item, it could be identified and eliminated in computing the subject's humor score.
When one undertakes to do research in the area of humor it is almost
inevitable that some of the subjects will have encountered some of the humor
items previously. This is a variable which must be evaluated but one which
probably cannot be eliminated. In the IPAT Humor Test itself, no provision is
made for this variable. The assumption is made that previous acquaintance with
an item does not substantially alter a person's evaluation of it. There is
little actual information available on the importance of this variable in the
empirical literature. Hollingworth (102) found that when his subjects were
asked to respond to previously encountered jokes their responses identified
three kinds of humor items which were termed "waxing," "waning," and "static"
jokes. The "waxing" jokes were those which the subjects regarded as more
humorous upon repetition. Hollingworth believed that these are jokes which
derive their humor from the nature of the situation they describe. The "waning"
jokes were found to decrease in funniness upon repetition, and these
Hollingworth believed were most dependent upon the element of surprise. The
"static" jokes were those whose funniness did not change for the subjects upon
repetition, and these were thought to contain both the "waxing" and "waning"
humor elements. In a later study, Eysenck (67) found that there was a slight,
but non-significant, tendency for his subjects to give higher humor ratings to
those items which were known previously. In support of this finding, Heim (97)
and Kambouropoulou (110) have found that humor items which can be recalled
after a period of time are the ones which were originally considered the most
funny. Thus it may be that subjects are prone to remember previously encoun-
tered jokes primarily if they were originally regarded as humorous, while jokes
regarded as mediocre or poor are forgotten. At the present the importance of
the repetition variable in humor appreciation is still open to question. That is why the subjects in this study were instructed to rate previously encountered items, as closely as possible, according to the response they had to them when they were first encountered.

When the packets of jokes had been rated and returned, a humor score was established for each subject, representing the subject's general response to the entire sample of jokes. This consisted of the average of all of the individual joke ratings made by each person. In this way each general humor score fell within the range of "0" (Not funny at all) to "4" (Extremely funny). This procedure yielded 100 female general humor scores and 110 male general humor scores. The remainder of this investigation was then carried out with the males and females separately so that in the event that a sex difference would be present, in general reaction to the humor items, it could be identified and controlled by studying each sex group.

From the 100 female general humor scores, a group mean and standard deviation was computed. Those female subjects whose individual humor scores fell above one standard deviation from the female group mean were selected and were designated as the "high humor level" group (H.H.L.). Those subjects whose individual humor scores fell below one standard deviation from the female mean were also selected and designated as the "low humor level" group (L.H.L.). This same procedure was carried out on the 110 male general humor scores. This procedure identified four groups of subjects: two groups, male and female, who considered the jokes more humorous than did the majority of their peers; two groups of subjects, male and female, who considered the jokes in general to be less humorous than did the majority of their peers. The
decision to select only those subjects whose humor scores fell outside of one standard deviation above and below the group means was arbitrary, but it had the advantage of providing precise cutting points for the selection of the high humor level and low humor level groups.

Those subjects who fell within the high and low humor level groups became the population upon which the remainder of the investigation was carried out. After the H.H.L. and L.H.L. groups had been identified in this way, a list of the subjects falling into each of the groups was made by an individual other than the investigator. The latter was then given a list of the subjects' names in scrambled order so that in the subsequent testing of these subjects the investigator would not know whether a given subject had fallen within the high or low humor level group. Each of the subjects was then given an individual appointment at which time the Guilford-Zimmerman Temperament Survey (39) and the Rorschach were administered.

The Guilford-Zimmerman Survey was used to obtain personality data on the subjects at the manifest level of conscious awareness. This instrument is a consolidation of the previous Guilford series of personality inventories. It yields 10 scores, each of which represents a relatively unique trait which has been identified by factor-analysis procedures. The 10 traits measured by the test are as follows: general activity vs. inactivity; restraint vs. impulsiveness; ascendance vs. submissiveness; sociability vs. exclusiveness; emotional stability vs. instability; objectivity vs. subjectivity; friendliness vs. hostility; thoughtfulness vs. unreflectiveness; personal relations vs. criticalness; masculinity vs. femininity. A copy of the Profile Chart for the Guilford-Zimmerman Temperament Survey will be found in Appendix B.
The use of the Guilford-Zimmerman Survey thus provided a measure of these 10 personality traits for each subject in the H.H.L. and L.H.L. groups. The scores each subject obtained on these traits represented the subject's opinion of himself as reflected in his responses to the items of the test. The answer sheets for this test were scored by a professional psychometrist and checked for accuracy of scoring by another individual.

The Rorschach was also administered to the H.H.L. and L.H.L. subjects in the hope that deeper levels of personality adjustment could be tapped. With a questionnaire type of personality test there is always the possibility that whatever is revealed about a person's emotional adjustment at this level may be a superficial facade which conceals a deeper and more basic level of adjustment or maladjustment. The Rorschach records were scored and evaluated according to the modifications in the Inspection Rorschach developed by Ruth L. Munroe (153). The Munroe method was adopted as a compromise between the nomothetic approach of relating single Rorschach scores (M, F, FC, etc.) to humor scores, and the more holistic approach of analyzing the records according to clinical procedure and relating these findings to the humor scores. The Nomothetic approach would have lent itself to easier quantification procedures but would have violated the holistic character of the Rorschach. The clinical approach to an analysis of the records would have introduced subjectivity into the procedure, making quantification extremely difficult. The Munroe method, while capable of yielding only a rough estimate of adjustment, is adaptable to quantitative procedures and at the same time retains a semi-holistic character.

The adjustment rating based on the Inspection Rorschach is arrived at by a relatively objective procedure. It consists of a simple tabulation of the
"bad signs" found in the quantitative proportions of a scored Rorschach record. The number of such "bad signs" in an individual record is expressed as an adjustment rating on a scale running from A to D. Adjustment category A suggests unusually sound personality integration while adjustment category D suggests serious maladjustment. The scale is continuous, and the categorical distinctions pertain to degree rather than to kind of emotional difficulty. The scale is described by Munroe (153, p. 21) as follows:

"A - Unusually sound integration of the personality. Emotional problems are either very mild or very well handled.

"B - Emotional problems observable, but they are too slight to affect behavior markedly or cause serious inner discomfort.

"C - Emotional difficulties rather marked, very likely to affect attitudes, interests and performance, but not to an extreme degree.

"D - Serious difficulty in meeting reality-demands adequately, or marked inner stress, or both."

In addition, there is a rating of E for indications of psychopathology like severe psychoneurosis, character disorder, or incipient psychosis.

The Munroe Inspection Rorschach method utilizes the Klopfer (121) scoring system, with very minor variations which make this system easier to tabulate. In this study the Rorschachs were administered and scored exactly according to Munroe's directions, with two exceptions. The F+ and F- were scored according to Beck (16) in order to reduce the subjectivity involved in scoring this determinant. The only other way in which the present procedure differed from the Munroe method is that the Rorschachs were administered individually instead of by the group method that had been used by Munroe in most of her studies (153).
When the Rorschach records had been gathered from the subjects and scored by the investigator, they were equally distributed to three clinical psychologists who checked the records for accuracy of scoring. The investigator and these three individuals had all been trained in the Rorschach method under the same teachers, and as a consequence there were relatively few instances of lack of agreement on the scoring of the responses. Where such disagreement did occur, the responses were discussed until agreement was reached.

After the records had been scored, each record was given an adjustment rating according to the Munroe method of tabulation of "bad signs." This was done twice so that the second ratings could be used as a check on the first ratings.

Up to this point in the procedure it had not been known by the investigator which subjects had fallen into the H.H.I. group and which had fallen into the L.H.I. group. After the final scores for the Guilford-Zimmerman Survey and the final adjustment ratings for the Rorschach had been obtained, the subjects could be identified with regard to their humor level. The next step in the procedure was to compare the subjects in the high humor level group with those in the low humor level group with respect to the Guilford-Zimmerman scores and the Rorschach ratings of adjustment. The quantification procedures employed in making these comparisons will be described in the following section on the analysis of the data.
Chapter IV

Results

A. Selection of the HHL and LHL Groups

When the packets of rated jokes were returned, they were inspected to discover the degree to which the subjects had complied with the instructions to rate 20 jokes a day for 10 consecutive days. It will be remembered that the subjects had been required to enter the date and the time of day that each section of 20 jokes had been rated. A check of these entries revealed that the female subjects had tended to be more conscientious than the male subjects in strictly complying with the instructions. Deviations from the instructions were essentially of two kinds: subjects would fail to rate the jokes designated for a given day and then rate more than 20 jokes on another day; or they would skip a day and then continue rating 20 jokes a day and return the materials late. Fifteen percent of the females and 20 percent of the males deviated from the instructions in these ways.

Of the 100 female subjects, nine had failed to rate jokes on one day, and then had rated 40 jokes on another day, while two of them had failed to rate jokes on two days and rated 40 jokes on two different days. In addition, three female subjects had skipped rating jokes on one day but had then continued to rate 20 jokes a day and had returned the materials late. One of the girls missed rating jokes on two days and returned these items unrated. These materials were returned to her to be rated on two consecutive days.

Of the 110 male subjects, 11 failed to rate jokes on one day and had then
rated 40 jokes on one other day, and 10 of them missed two days and rated 40 jokes on two other days. One male subject skipped two days but continued rating 20 jokes a day and returned the materials late.

It will be noted that none of the subjects rated more than 40 items on any one day in spite of these instances of non-compliance with the instructions. Thus, all of the subjects rated the bulk of the items over a period of time sufficiently long to minimize the effects of fatigue and temporary mood on their reactions to the items as was originally intended.

The rated items were next inspected to ascertain the number of jokes which had been designated as not understood by the subjects. This turned out to be a much more frequent occurrence than had been initially anticipated. Tables 3 and 4 list the frequency of this occurrence for males and females.

Table 3

<table>
<thead>
<tr>
<th>Number Not Understood</th>
<th>Number of Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or less items</td>
<td>30</td>
</tr>
<tr>
<td>6 to 10 items</td>
<td>8</td>
</tr>
<tr>
<td>11 to 15 items</td>
<td>4</td>
</tr>
<tr>
<td>More than 15 items</td>
<td>3</td>
</tr>
</tbody>
</table>
Table 4
Number of Items Not Understood by Male Ss

<table>
<thead>
<tr>
<th>Number Not Understood</th>
<th>Number of Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or less items</td>
<td>35</td>
</tr>
<tr>
<td>6 to 10 items</td>
<td>6</td>
</tr>
<tr>
<td>11 to 15 items</td>
<td>2</td>
</tr>
<tr>
<td>More than 15 items</td>
<td>1</td>
</tr>
</tbody>
</table>

Some humor investigators, especially Levine (133) and Redlich (173), contend that a subject's inability to understand a joke is the dynamic equivalent of reacting negatively to it. In the absence of adequate empirical evidence to support this contention, however, it was deemed best to eliminate the items not understood in computing a subject's general humor score. Elimination of those items not understood by a subject did not reduce the subject's rated reaction to the sample as a whole. At the end of this chapter, data is presented which indicates that the humor scores obtained by the subjects were not related to the number of items they were unable to understand.

A general humor score was then computed for each subject. This score consisted of the simple arithmetical mean of all of the individual joke ratings made by a subject. Using this procedure, each subject received a general humor score which fell within the range of 0 (Not funny at all) to 4 (Extremely funny) which represented his general appraisal of the joke sample. The distributions of male and female humor scores are described in table 5.
Table 5
Distribution Characteristics of the General Humor Scores

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>0.14 - 2.86</td>
<td>0.76 - 3.20</td>
</tr>
<tr>
<td>Median</td>
<td>1.66</td>
<td>1.78</td>
</tr>
<tr>
<td>Mean</td>
<td>1.66</td>
<td>1.75</td>
</tr>
<tr>
<td>Standard Error (M)</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.55</td>
<td>0.48</td>
</tr>
<tr>
<td>Standard Error (S.D.)</td>
<td>0.04</td>
<td>0.04</td>
</tr>
</tbody>
</table>

It appeared that both the male and female distributions closely approximated the normal curve. In order to test whether these two distributions could have arisen from a normally distributed population, the chi-square test of the normal-distribution hypothesis (88, p. 281) was made for both sets of data. For the male distribution, with 8 d.f., the $X^2$ was 9.595 which falls far below the .05 level of confidence. For the female distribution, with 6 d.f., the $X^2$ was 9.368 which also falls below the .05 level of confidence. As a consequence the hypothesis that the male and female humor score distributions represent samples from the normal population is tenable.

As will be noted from table 5, the male and female distributions are remarkably similar. The means of the two groups differ by 0.09 and the standard deviations by only 0.07. This suggested the lack of a significant sex difference between the males and females in their general appreciation of the joke sample. In order to test this, the standard error of the difference
between the means was found (88, p. 213), and a $t$ test was applied (88, p. 214). The standard error of the difference was 0.071 and the critical ratio was 1.26. Since $t$ would have had to have been 1.65 to be significant at even the .10 level of confidence, the obtained difference between the means clearly is not significant and the null hypothesis is not rejected. Then, in order to test the significance of the difference between the variances of the two distributions, the $F$ test for homogeneity of variance (198, pp. 192-195) was applied. The $F$ was found to be 1.34, and since it would have had to have been 1.51 to be significant at the .05 level of confidence, the obtained difference in variances is clearly not significant and the null hypothesis once again is not rejected. As a consequence, it is tenable to consider both the male and female distributions to represent random samples from a normal population with the same population mean and variance.

This finding is in harmony with those obtained by Eysenck (67), Ghosh (76), Heim (97), and Landis (127) which were discussed in chapter two. All of these investigators have found that humor differences between males and females are insignificant, both with regard to the number and kinds of things considered funny. Because there is insufficient evidence of a sex difference in the general humor appreciation of the two groups, it was decided that the male and female humor scores would be combined into one composite group in order to obtain a larger sample from which to select the high and low humor level groups. As will be seen, this procedure had the great advantage of yielding H.H.L. and L.H.L. groups with a larger $N$ than would have been the case if they had been selected from the male and female samples separately. This larger $N$ in each group made for more adequate subsequent statistical treatment.
The composite group of male and female humor scores had a mean of 1.70 and a standard deviation of 0.52. The standard error of the mean was 0.036 and the standard error of the standard deviation was 0.025. The resulting distribution of 210 humor scores appeared to very closely approximate the normal curve. The number of cases and the different percentages, rounded to two places, falling in each of the sigma units will be found in table 6. In order

Table 6
The N and Percentage of Cases Falling in Each Sigma Unit

<table>
<thead>
<tr>
<th>Sigma Units</th>
<th>Male N</th>
<th>Female N</th>
<th>Composite N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>-30' to -20'</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>2.38</td>
</tr>
<tr>
<td>-20' to -10'</td>
<td>12</td>
<td>16</td>
<td>28</td>
<td>13.33</td>
</tr>
<tr>
<td>-10' to M</td>
<td>42</td>
<td>29</td>
<td>71</td>
<td>33.81</td>
</tr>
<tr>
<td>M to 10'</td>
<td>32</td>
<td>41</td>
<td>73</td>
<td>34.76</td>
</tr>
<tr>
<td>10' to 20'</td>
<td>17</td>
<td>11</td>
<td>28</td>
<td>13.33</td>
</tr>
<tr>
<td>20' to 30'</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>2.38</td>
</tr>
</tbody>
</table>

to test the hypothesis that the composite sample of male and female humor scores could have arisen from a normally distributed population, the chi-square test of the normal-distribution hypothesis (88, p. 284) was made. For the composite sample, with 8 d.f., the $X^2$ was 5.664 which falls far below the .05 level of confidence (at the 0.70 level). As a consequence, the obtained frequency distribution of male and female humor scores fits the normal form quite acceptably.

As had been planned, those subjects whose individual humor scores had
fallen above one standard deviation from the mean were selected and designated as the "high humor level" group. Those subjects whose individual humor scores had fallen below one standard deviation from the group mean were selected and designated as the "low humor level" group. As can be seen from Table 6, this placed 33 subjects in each of the two humor level groups. If a significant sex difference had been found between the males and females, in their general reaction to the humor sample, then the H.H.L. and L.H.L. groups would have had to have been selected from the male and female samples separately. This would have resulted in a smaller N in each of the four groups: for the males there would have been 20 subjects in the H.H.L. group and 15 subjects in the L.H.L. group; for the females there would have been 14 subjects in the H.H.L. group and 18 subjects in the L.H.L. group. Because no significant sex difference had been found, the combining of all the male and female scores into one composite group yielded a larger N in each of the H.H.L. and L.H.L. groups with an equal number of subjects in each group.

After the H.H.L. and L.H.L. groups had been identified in this way, a list of the names of the subjects falling into each of the groups was made by an individual other than the investigator. The latter was then given a list of the subjects' names in a scrambled order so that in the subsequent testing of these subjects the investigator did not know whether a given subject had fallen within the high or low humor level group. Each of the 66 subjects was then given an individual appointment, at which time the Guilford-Zimmerman Temperament Survey (89) and the Rorschach were administered. These instruments were then scored as described in chapter three, and the Rorschach records were given an adjustment rating according to the Munroe method (153). After the
final scores from the Guilford-Zimmerman Survey and the final adjustment ratings from the Rorschach had been obtained, the individual subjects were identified as to whether they belonged to the H.H.I. or L.H.I. group.

B. The Comparison of the H.H.I. and L.H.I. Groups

After the subjects were grouped according to their humor level it was found that the members of the L.H.I. group were quite similar to those in the H.H.I. group with regard to sex composition, age, education, and socio-cultural background. A full description of the subjects in each group will be found in the tables in Appendix C. The L.H.I. group was composed of 17 males and 16 females, while the H.H.I. group was composed of 19 males and 14 females. The members of the H.H.I. group had a mean age of 21.18 years with a standard deviation of 2.07 years, and the L.H.I. group had a mean age of 20.82 years with a standard deviation of 1.72 years. The slightly older mean age in the H.H.I. group was due to the greater age variability because the median age for both groups was 21 years. The great majority of subjects in each group were either in their junior or senior year in college, as one would expect from the age composition of the groups and the original selection of the 210 subjects.

With regard to cultural background, 91% of the subjects in each group were from the middle west section of the United States. Only two of the L.H.I. subjects and one of the H.H.I. subjects were from a rural environment. Of the very large urban component in both groups, 70% of the L.H.I. subjects and 67% of the H.H.I. subjects came from large metropolitan centers like Chicago, Milwaukee, Detroit, Kansas City, and New York City. All of the subjects in both groups were Caucasian and professed a Roman Catholic religious affiliation. Regarding marital status, all but two of the H.H.I. and one of the L.H.I.
subjects were single.

An attempt was made to classify each of the subjects according to their socio-economic background, but this was difficult because the subjects were unable to estimate accurately the amount of the family income, the fair market value of the family home, or to describe definitively the dwelling area of the family home. In some cases, the subjects were unable even to state the exact number of years of education each of the parents had had. The one criterion of social status which all of the subjects were able to supply was the occupation of the father or other person who had been the principal source of support during their development. This offered the possibility of very rough classification according to the occupation variable in the "Index of Status Characteristics" developed by Warner, Hecker and Eells (202, p. 140) in 1949. Their scale for rating the status characteristics of occupations includes a scale from one to seven, with one representing occupations having the highest social status, and seven representing the lowest status occupations. When the subjects in each group were classified for socio-economic background according to this scheme, the two groups were again found to be quite similar. The subjects in both groups came from homes having a median occupational rating of 3.00. The H.H.L. subjects came from homes having a mean occupational rating of 2.82, with a standard deviation of 1.62, while the L.H.L. subjects came from homes having a mean occupational rating of 3.00 with a standard deviation of 1.78. This socio-economic comparison of the two groups is very cursory, at best, but a review of the occupation ratings in table 14 of Appendix C reveals that neither the L.H.L. group nor the H.H.L. group is characterized as coming from homes with a predominant occupational rating.
The two groups were then compared with regard to the scores obtained by the subjects on the 10 personality traits measured by the Guilford-Zimmerman Temperament Survey. Because the H.H.L. and L.H.L. groups were composed of both males and females, the scores of the two groups could not be compared directly because sex differences were found to exist on three of the trait scales in the standardization groups upon which the Temperament Survey is based. The three scales are: Trait A (ascendancy vs. submissiveness), Trait F (friendliness vs. hostility), and Trait M (masculinity vs. femininity). In the original standardization groups the males tended to be more ascendant than females, but less friendly and agreeable, although these sex differences were not found to be significant. On Trait M, as one would expect, a significant sex difference was found.

In order to be able to compare the mixed male-female L.H.L. and H.H.L. groups on these three scales, it was necessary to convert male and female Guilford-Zimmerman scores to a common scale for each of the three traits. It was decided that the male scale would be made the common scale, and the female scores were then converted into male score equivalents. To accomplish this, all of the male and female scores on these three scales were converted into Z-scores (136, pp. 145-146) by making use of the means and standard deviations given in the Guilford-Zimmerman manual. By converting the scores in this way, each one was expressed in terms of how far it fell from its own mean with regard to the group standard deviation. The male and female Z-scores were then matched for equivalence so that for each female score, on each trait, a corresponding male Z-score was obtained. Then by finding the male raw score corresponding to each male Z-score, it was a simple matter of converting each
female raw score to an equivalent male raw score. The female raw scores on each of the three scales and their corresponding male score equivalents will be found in Appendix D. As one would expect, the obtained male score equivalents correspond to the male scores that are placed roughly opposite the female scores on the Profile Sheet for the Guilford-Zimmerman Temperament Survey which will be found in Appendix B. After this was done, the H.H.I. group could be directly compared to the L.H.I. group on all of the ten trait scales.

In comparing the two groups on the Guilford-Zimmerman scores, the mean for the H.H.I. group and L.H.I. group was computed for each of the 10 traits. The difference between the two means on each trait was then treated for significance. Since the groups were composed of relatively small samples (N of 33 in each group) the differences between means were tested for significance by applying Lindquist's t test for small samples (135, p. 57). Differences in variance between the two groups on each of the 10 traits, were then tested for significance by applying the F test for homogeneity of variance (135, p. 60). In table 7 will be found the means for the H.H.I. and L.H.I. groups, the differences between them, the ts for the significance of difference, and Fs for each of the 10 traits.

With 6 df (9, p. 116) the ts were significant at the .05 level of probability or better for five of the 10 traits: Traits G (general activity vs. inactivity), S (sociability vs. exclusiveness), E (emotional stability vs. instability), Q (objectivity vs. hypersensitiveness), and P (cooperativeness vs. intolerance). The ts for Traits R (restraint vs. impulsiveness), A (ascendence vs. submissiveness), F (friendliness vs. hostility), T (thoughtfulness vs. unreflectiveness), and M (masculinity vs. femininity) were clearly
<table>
<thead>
<tr>
<th>Trait</th>
<th>H.H.L.</th>
<th>L.H.L.</th>
<th>Difference</th>
<th>t</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>19.73</td>
<td>17.15</td>
<td>2.58</td>
<td>*2.303</td>
<td>1.775</td>
</tr>
<tr>
<td>R</td>
<td>17.76</td>
<td>17.54</td>
<td>0.22</td>
<td>0.183</td>
<td>1.146</td>
</tr>
<tr>
<td>A</td>
<td>17.60</td>
<td>17.97</td>
<td>0.37</td>
<td>0.258</td>
<td>1.198</td>
</tr>
<tr>
<td>S</td>
<td>22.30</td>
<td>18.75</td>
<td>3.65</td>
<td>**2.616</td>
<td>1.165</td>
</tr>
<tr>
<td>E</td>
<td>20.51</td>
<td>13.97</td>
<td>6.54</td>
<td>***5.640</td>
<td>1.575</td>
</tr>
<tr>
<td>O</td>
<td>19.76</td>
<td>17.06</td>
<td>2.70</td>
<td>**2.500</td>
<td>1.185</td>
</tr>
<tr>
<td>F</td>
<td>16.64</td>
<td>15.58</td>
<td>1.06</td>
<td>0.863</td>
<td>1.606</td>
</tr>
<tr>
<td>T</td>
<td>18.73</td>
<td>19.06</td>
<td>0.33</td>
<td>0.301</td>
<td>1.299</td>
</tr>
<tr>
<td>P</td>
<td>19.85</td>
<td>17.24</td>
<td>2.61</td>
<td>*2.090</td>
<td>***2.377</td>
</tr>
<tr>
<td>M</td>
<td>20.33</td>
<td>20.48</td>
<td>0.15</td>
<td>0.160</td>
<td>1.218</td>
</tr>
</tbody>
</table>

* Significant at the .05 level
** Significant at the .02 level
*** Significant at the .01 level

non-significant since they all failed to reach the .50 level of probability.

The variance ratio between the H.H.L. and L.H.L. group, with the greater mean square 32d.f. and the lesser mean square 32d.f., was significant only for Trait P (9, p. 119). The variance ratio for Trait G just fell short of the
.05 level of probability. The Fs for homogeneity of variance for all of the other traits were clearly non-significant.

When the female scores on Traits A, F, and M were transformed into male score equivalents previously, Trait M posed a special problem. Unlike Traits A and F, significant sex differences exist on Trait M, so that the male and female scales run in opposite directions. It was possible that transforming female masculinity-femininity scores to male score equivalents was purely artificial and had no reality psychologically. Thus, although the H.H.L. group and L.H.L. group were not found to differ significantly in terms of either the central tendency or the variance on the common male scale, the question was raised as to whether females in the H.H.L. and L.H.L. groups, and males in the two groups, would differ significantly on this trait within their own sex grouping.

To answer this question, the males in the H.H.L. group were compared to the males in the L.H.L. group on Trait M, using t as a test of significance of mean difference and F as a test of significance of variance difference. The same procedure was followed for comparing the females in the two groups. The results will be found in table 8.

Table 8

Comparison of Males and Females on Trait M

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Means</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>H.H.L.</td>
<td>L.H.L.</td>
<td>H.H.L.</td>
<td>L.H.L.</td>
<td>Diff.</td>
<td>t</td>
<td>F</td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
<td>17</td>
<td>20.74</td>
<td>20.65</td>
<td>0.09</td>
<td>0.08</td>
<td>1.57</td>
</tr>
<tr>
<td>Female</td>
<td>14</td>
<td>16</td>
<td>10.79</td>
<td>11.31</td>
<td>0.52</td>
<td>0.34</td>
<td>1.04</td>
</tr>
</tbody>
</table>
The t for males, with 3ldf, and the t for females, with 26df, are both clearly non-significant (9, p. 116). The F for the males, with 16df for the greater mean square and 16df for the lesser mean square, and the F for the females with, 15df for the greater mean square and 13df for the lesser mean square, were both also non-significant (9, p. 118). These findings support those found when the H.H.L. and L.H.L. groups were compared on Trait N using the common male scale.

To check this finding one step further, the chi-square test of independence (198, p. 101) was applied in a contingency table where there were two classes for each variable (male and female in the H.H.L. and L.H.L. group). The \( X^2 \), with 1d.f. is 0.244 which falls below the .50 level of probability (9, p. 121) and is clearly not significant. This is in accord with the two previous findings, and the hypothesis that H.H.L. subjects do not significantly differ from L.H.L. subjects with respect to masculinity or femininity as measured by the Guilford-Zimmerman is further supported.

Before leaving the comparison of the two groups on the scales of the Guilford-Zimmerman, it should be noted from table 7, that on each trait for which a significant mean difference was found, the mean of the H.H.L. group is consistently higher than that of the L.H.L. group. Stated differently, on the five traits (O-S-E-O-P) on which the H.H.L. and L.H.L. subjects differed significantly, the mean of the H.H.L. group was in the direction of greater general activity, sociability, emotional stability, objectivity, and cooperativeness. These findings will be discussed in the subsequent section after the Rorschach data has been presented.

The Rorschach protocols of the H.H.L. subjects and L.H.L. subjects next
were compared by use of the Munroe Inspection Method (153). This method starts with a systematic survey of the protocol by use of a comprehensive check list which covers variables generally used in Rorschach assessment. A copy of this check list will be found in Appendix E. The Rorschach protocol is inspected for each item on the list and a check is made, in the column provided for scoring, whenever a subject deviates from the "normal" range with respect to a given item. If the deviation is extreme, two or even three checks may be entered to indicate the degree of deviation. No check is entered in the scoring column if the particular item is within the "normal" range.

The items on the check list are grouped according to the perceptual elements involved in Rorschach responses (form, color, shading, movement, location, content, etc.) Each group is represented by two to five of the most common ways in which an atypical approach can be manifested. In addition to a check for each deviation, a (+) sign for each excessive reaction and a (-) sign for each diminished reaction is recorded. Each one of these indications represents a "bad sign" or deviation from the "normal." When the examiner uses the same scoring system as the one on which the check list is based, i.e., the Klopfer method (121), the entry of these notations is quite an objective procedure. (There is, of course, some subjectivity involved in the scoring.)

Originally, Munroe used the check list merely as a means of taking into account the salient features of a protocol in a systematic and rapid fashion so that an adjustment rating could be made based upon qualitative judgments. After using the check list for several years Munroe says:

"We observed that simply counting the number of entries on the check list yielded a figure which tallied very well with external indices
of adjustment (153, p. 66).

Munroe presents data (153, pp. 66-67) which indicates that subjects with six entries or less were generally quite well adjusted (A Rating), those with more than six but less than ten entries were moderately well adjusted (B Rating), and those with ten entries or more were moderately maladjusted (C Rating). A later study using the check list with disturbed subjects revealed that the more seriously disturbed subjects had as many as 15 to 17 entries (D Rating) and cases of actual pathology had as many as 25 entries (E Rating). Using this data as a guide, adjustment ratings were given to the Rorschach protocols according to this scheme:

- 0 to 6 entries - A Adjustment Rating
- 7 to 10 entries - B Adjustment Rating
- 11 to 15 entries - C Adjustment Rating
- 16 to 20 entries - D Adjustment Rating
- 21+ entries - E Adjustment Rating

These ratings make no claim to be based upon a rigid statistical basis, but the method does offer an empirical bases for a procedure more objective than that involved in traditional clinical assessment of Rorschach protocols. Each adjustment rating was given "blind," in the sense that it was derived from the protocol itself with no other information than that appearing on the face of the Munroe Check List (Appendix E). When each subject appeared for the administration of the Rorschach it was not known whether they were in the H.H.L. group or L.H.L. group. In spite of a request not to, six of the 66 subjects volunteered the information that they thought the jokes were "pretty funny" or "poor." The degree to which this information may have unconsciously contaminated the way in
which the examiner administered or scored these six protocols is not known. If such unconscious contamination occurred on these six records, the chances are that it would have occurred only in the administration, since the scoring of the records was checked by psychologists other than the examiner.

After the adjustment ratings had been given to each protocol, the individuals were identified as belonging to the H.H.L. or L.H.L. group. The number and percent of H.H.L. and L.H.L. subjects possessing each of the five adjustment ratings will be found in table 9.

Table 9

Rorschach Adjustment Ratings for H.H.L. and L.H.L. Subjects

<table>
<thead>
<tr>
<th>Group</th>
<th>Adjustment Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>H.H.L.</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>L.H.L.</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
</tbody>
</table>

In looking over the data in table 9, one is struck by the rather marked differences between the adjustment ratings of the H.H.L. group as compared to the L.H.L. group. The H.H.L. subjects have a concentration of A and B adjustment ratings, while the L.H.L. subjects have a concentration of D and E.
adjustment ratings. The two groups are about equally represented in the C adjustment rating. Because the differences were apparently marked, the chi-square test of independence was applied in a two by five contingency table (198, p. 99). With $d.f.$, the $X^2$ is 42.18 which is significant at the .01 level of probability. As a consequence, the hypothesis of no difference between the H.H.L. and L.H.L. adjustment ratings is untenable, and the hypothesis of a real difference in ratings between them may be retained. This difference is in the direction of H.H.L. subjects tending to have consistently higher adjustment ratings, with L.H.L. subjects having consistently lower adjustment ratings.

An attempt was made to measure the degree of these relationships, but choice of a correlational procedure was made difficult because the H.H.L. and L.H.L. groups represented selected samples from the extreme ends of the humor distribution. Although the two humor groups represented a selected dichotomy, the biserial $r$ was not appropriate for two reasons: since the middle 68.57% of the original population had not been used, the two selected humor groups were discontinuous; if the two humor groups had been selected as categories in one variable, they would have had to have been correlated with five categories in the adjustment variable. Because there were five categories in the adjustment variable, and since the H.H.L. and L.H.L. scores could both be put into five or more categories, the coefficient of contingency (75, p. 259) was used.

A C (75, p. 360) was computed for the relationship between the H.H.L. scores and the adjustment ratings, and then between the L.H.L. scores and the adjustment ratings. In each case, the humor variable was put into 11 categories and the adjustment variable was in five categories. The C between the L.H.L. scores and the adjustment ratings in a $5 \times 11$ contingency table is .69, while the C...
between the H.H.L. scores and the adjustment ratings is .61. Since there were at least five categories in each variable, these C's can be regarded as approaching the Pearson r in size (88, p. 344). When the obtained C's were corrected for errors of grouping, according to the method suggested by Guilford (88, p. 360), the corrected C between L.H.L. scores and adjustment ratings was .74 with the coefficient in a truly positive direction. An inspection of the contingency table reveals what can be observed in table 9: the L.H.L. subjects have a preponderance of B adjustment ratings and there is a decreasing number of L.H.L. subjects who have adjustment ratings of D, C, and B, with none of them attaining an A adjustment rating. The corrected C between the H.H.L. scores and the adjustment ratings is .66, which again reveals a high degree of relationship.

An inspection of this contingency table, however, does not reveal the same true positive relationship that existed with the L.H.L. scores. As can also be seen in table 9, the H.H.L. subjects have a preponderance of B and C adjustment ratings, with only a minority of these subjects attaining an A adjustment rating. This will be discussed in the subsequent section in conjunction with a discussion of the data from the Guilford-Zimmerman scores.

It will be remembered that the scheme for assignment of adjustment ratings to the Rorschach protocols, by simple tabulation of deviant indices, is based on data from Munroe (153, pp. 66-67) which is suggestive rather than definitive. While the evidence strongly supports the hypothesis that the H.H.L. subjects, as a group, obtained significantly higher adjustment ratings than the L.H.L. subjects as a group, the lack of precise statistical standardization for this scheme might cause one to question the validity of the adjustment ratings. In an attempt to compare the two humor level groups on their Rorschach protocols,
another statistical procedure was used.

The Munroe Inspection Technique is based on the premise that each deviant item on the check list is just one indication of disturbance in one aspect of the personality. It is only when these deviant items multiply in a protocol that varying degrees of maladjustment are indicated. As Munroe says:

"By virtue of its comprehensive nature, the check list measures not only malfunction, but the sound aspects of personality as well. While the latter appear on the record only in the negative form of absence of the entry, the subject who has many resources along with some problems does not receive as high a maladjustment tally as the subject whose difficulties ramify more widely through the personality" (153, pp. 72-73).

In view of this, it seemed feasible to go directly to the tallies themselves, without reference to an adjustment rating. Here one could regard the number of tallies as a continuous scale, with few tallies representing better adjustment, and an increase in tallies representing increasing degrees of maladjustment. With this as a point of departure, one could ask whether the H.H.L. group differed significantly from the L.H.L. group in the number of deviant tallies achieved as a group and, hence, in over-all adjustment. To test this, the mean number of tallies was found for each group, the difference between them was tested for significance by $t$ (135, p. 57), and the difference in variance tested for significance with $F$ (135, p. 60). The number of tallies for H.H.L. subjects ranged from three to eighteen, with a mean number of tallies of 8.39. For the subjects in the L.H.L. group the number of tallies ranged from eight to 27, with a mean of 18.58 tallies. The difference between the means is 10.19,
and the $t$ test of significance is 9.35. With 6\text{d.f.}, this $t$ is significant at the .01 level of probability (9, p. 116). The $F$ test of the variance ratio, with 32\text{d.f.} for the greater mean square and 32\text{d.f.} for the lesser mean square, is 1.78. This $F$ falls below the .05 level of probability (9, p. 119) and thus is not significant. These findings are in harmony with those obtained from the adjustment ratings and from the scores obtained by the two groups on Trait E (emotional stability) on the Guilford-Zimmerman Temperament Survey. There thus is consistent evidence which indicates that the L.H.L. subjects, as a group, manifest a poorer level of adjustment on psychological instruments than the H.H.L. subjects.

In spite of the consistency of the results from testing, one can ask legitimately whether the ratings of adjustment based on the subjects' Rorschach protocols bear any relationship to their adjustment at a behavioral level. To answer this question would require some external criterion of adjustment, which is difficult to define and even more difficult to obtain. One possible line of investigation lay in the expectation that seriously disturbed students would tend to have greater overt adjustment difficulties in school and thus be brought to the attention of school administrative officials. It thus seemed possible to contact the officials of the two schools from which the subjects were drawn, to inquire which, if any, of the 66 H.H.L. and L.H.L. subjects were known to be adjustment problems.

The female subjects had been drawn from a relatively small college so information regarding them was easier to obtain. The dean of the college was aware of students in the school who were having adjustment difficulties manifested in academic, social, or disciplinary problems at an overt level so as
to come to the attention of the faculty. A list of the female H.H.L. and L.H. L. subjects' names were given to the dean with the names in jumbled order. The dean was then asked to indicate which of the girls were known (not presumed) to be having adjustment difficulties in the school. It was more difficult to obtain this information for the male subjects because they were drawn from a school having more than 10,000 students. With such a large student body, it is unlikely that any one school official would be familiar with any but the most serious problem students. This latter school does have a central agency for psychological services, however, and students whose adjustment difficulties come to the attention of faculty or administrative department heads are referred to this agency. In addition, students are free to seek these services on their own and are encouraged to do so by the administration. As a consequence, the files of this agency were thoroughly searched for the names of H.H.L. and L.H.L. subjects to see if they had received psychological services any time in their college careers.

The information obtained from these procedures is, of course, purely qualitative and anecdotal and, as such, cannot be considered as empirical evidence which can stand by itself. For this reason, the obtained data is not being included in this section with the quantitative data but will be found in Appendix F for consideration by the reader. While this data is qualitative, it is clearly in harmony with the test results and to this extent supports the hypothesis that the L.H.L. subjects manifest a poorer adjustment, as a group, than those subjects in the H.H.L. group.

Finally, the H.H.L. and L.H.L. groups were compared relative to the number of joke items the subjects had designated as not understood. The mean
number of joke items not understood by the L.H.L. subjects was 2.00 while the
mean of the H.H.L. subjects was 2.91. With 6 d.f. (9, p. 116) the t test of
the difference between the means was found to be 0.53 which fails to reach the
.50 level of probability and is clearly nonsignificant. The variance ratio
between the two groups, with the greater mean square 32 d.f. and the lesser
mean square 32 d.f., was found to be 1.22 which also fails to reach signifi-
cance (9, p. 119). In view of the lack of significant difference between these
two extreme humor groups in the number of joke items they were unable to
understand, failure to grasp a joke appears to be unrelated to the humor
scores.
Chapter V

Analysis of Results

The two-fold purpose of this study was stated as follows: the investigation of the relationship between general sense of humor and level of psychosocial adjustment; the investigation of the relationship between general sense of humor and particular personality characteristics. For the purposes of this study, "general sense of humor" was used in a restricted sense to mean the characteristic, total, integrated response which is habitually made by an individual in reaction to a heterogeneous variety of humor stimuli. No attempt was made to define exactly the nature of sense of humor, but the stated meaning of "general sense of humor" was meant simply to describe the variable to be investigated.

In attempting to relate this variable to level of psychosocial adjustment and personality characteristics, two highly selected groups of subjects were used: those whose humor ratings placed them outside the limits ± 1 S.D. from the mean rating of their peers. This artificial dichotomy resulted in two extreme groups, one of which considered the joke stimuli as relatively non-humorous, with a mean humor rating of 0.89, and one of which considered the jokes to be fairly funny with a mean humor rating of 2.49. Psychosocial adjustment was not defined in any absolute sense, but was designated by the scores on Trait E (Emotional Stability) of the Guilford-Zimmerman Temperament Survey and ratings of adjustment from Rorschach protocols according to the system developed by Ruth L. Munroe in the Inspection Rorschach.
Before a discussion of the findings which are directly pertinent to the variables intended for study in this investigation, some attention should be given to the data relevant to other areas of humor phenomena. First of all, degree of subjective humor response to a heterogeneous variety of humor stimuli apparently is distributed normally in the population for males and females separately, and also for a composite of the two sexes. When the $\chi^2$ tests of the normal-distribution hypothesis were applied to the distributions of 100 female scores, the 110 male scores, and the 210 composite scores, the obtained $\chi^2$'s revealed that the humor rating distributions fit the normal form quite acceptably.

In addition, data from several different sources in this investigation support the findings of the majority of other studies, which were reviewed in chapter two, on the importance of the sex variable in humor appreciation. In the original population of 210 subjects, from which the H.H.L. and L.H.L. subjects were drawn, the 100 females and 110 males were found not to differ significantly from each other in their generalised reaction to the joke sample. Then when the H.H.L. and L.H.L. groups were drawn from the composite male-female sample, neither group was found to be predominantly of one sex. To investigate this one step further, the two humor level groups were compared for masculinity-femininity on Trait M of the Guilford-Zimmerman. This was done in two ways: the composite male-female H.H.L. and L.H.L. groups were compared directly on a common scale and then the males and females in one group were compared with their own sex in the other group. When both of these latter procedures were followed (see tables 7 and 8) it was found that the H.H.L. subjects were significantly neither more feminine nor more masculine than L.H.L.
subjects as measured by Trait M of the Guilford-Zimmerman. This lends further support to the consensus of previous studies which have found the sex of an individual to be a non-significant factor in determining one's reaction to humor stimuli.

The data in table 7 reveals that the H.H.L. and L.H.L. subjects differed significantly from each other on five of the 10 traits measured by the Guilford-Zimmerman. On Trait G (General activity), the H.H.L. group had a higher mean score than the L.H.L. group, this difference just missing significance at the .02 level and being beyond the .05 level of probability. Using the description of this trait in the G-Z manual (89, p. 8), this finding indicates that compared to L.H.L. subjects, there is a significantly greater tendency for H.H.L. subjects to possess stronger "drive" and "energy," and to take part in more activities. It should also be noted that the F test of the variance ratio of the two groups just misses being significant at the .05 level. Since the L.H.L. subjects had the greatest variability of scores on this trait it is suggested that there is some tendency for them to be more variable in general activity than is true of the H.H.L. group.

It is interesting to note that the mean of 17.15 for the L.H.L. group on Trait G is very close to the mean of the G-Z standardization groups (M=17.00) which is published in the manual (89, p. 7). As a consequence, it would appear that the significant difference existing between the two groups on this trait is not due to any deficiency of general activity on the part of L.H.L. subjects but to greater than average general activity by the H.H.L. subjects.

The same situation appears to exist with respect to Trait S (Sociability). The mean for the G-Z standardization groups is 18.80 (89, p. 7) while the mean
of the L.H.L. group is 18.75. Yet the mean of the H.H.L. group (22.30) on this trait is significantly greater than that of the L.H.L. group at the .02 level of probability. Using the description of Trait $S$ in the manual (89, p. 9), this finding indicates that subjects with a high humor level demonstrate a conspicuous tendency to be at ease with others, to enjoy their company, and to "readily establish intimate rapport."

In view of the above finding, it is not surprising that a significant difference at the .05 level was found to exist between the two groups on Trait $P$ (Personal Relations) which "has consistently correlated highest with all criteria involving human relations" (89, p. 9). Again using the description in the manual, H.H.L. subjects have a significantly greater "tolerance and understanding of other people and their human weaknesses," while L.H.L. subjects tend to be characterized by "faultfinding and criticalness of other people and of institutions generally" (89, p. 9). Taking into consideration the significant differences existing between the two groups on Traits $S$ and $P$, one would expect that H.H.L. subjects would generally possess a greater capacity for maintaining harmonious interpersonal relationships than would be true of individuals having a low humor level. It will also be noted from table 7 that the $F$ test of the variance ratio between the two groups on Trait $P$ is significant at the .01 level of probability. Since the L.H.L. subjects have the greatest variability in scores on this trait, one can conclude that H.H.L. subjects are much more uniform in their capacity for relating harmoniously to others, while L.H.L. subjects are more variable with regard to this personality characteristic.

In view of the above findings, one might logically predict that the H.H.L.
subjects would also be significantly higher than the L.H.L. subjects on Trait F (Friendliness), but such is not the case. Neither the $F$ test of the variance ratio nor the $t$ test of mean difference approach probable significance. This finding is not so surprising, however, when one considers that Trait $F$ only correlates $+.50$ with Trait $P$, and $-.06$ with Trait $S$ (89, p. 7). Along these same lines, one might suspect that because of the $+.61$ correlation between Trait $S$ (Sociability) and Trait $A$ (Ascendance), a significant difference between the two groups on Trait $S$ might be accompanied by a significant difference between them on Trait $A$. Again this was not found to be true because both the $t$ test of mean difference and the $F$ test of variance ratio fail to reach the .05 level of confidence for Trait $A$. Apparently the H.H.L. subjects are able to maintain more harmonious interpersonal relationships than the L.H.L. subjects without being significantly more ascendant or friendly.

The popular stereotype of the person who finds many things humorous is that of an individual who tends to be happy-go-lucky and easy going. Conversely, the popular stereotype of the person who finds few things humorous is that of an individual who is serious and restrained. If these stereotypes were true, one might suspect that the H.H.L. and L.H.L. subjects would differ significantly from each other on Trait $R$ (Restraint vs. impulsiveness) and on Trait $T$ (Thoughtfulness vs. unreflectiveness). This was not found to be true. The $F$ tests of the variance ratio for these two traits failed to reach the .05 level of probability and the $t$ tests of the mean differences both failed to reach the .50 level and are clearly non-significant.

Of the two remaining scales of the Quilford-Zimmerman Survey, Trait $O$ (Objectivity vs. hypersensitiveness) and Trait $E$ (Emotional stability vs.
instability), significant differences were found between the H.H.L. and L.H.L. subjects which have special relevance with respect to level of psychosocial adjustment. On Trait Q, the two groups did not differ significantly in variability, but the difference between their means was significant at the .02 level of probability. As with Traits Q and S, the mean of 17.06 for the L.H.L. group does not differ greatly from the mean of 17.40 for the 0-2 standardization groups (89, p. 7). As a consequence, the significantly higher mean of 19.76 for the H.H.L. group suggests that these subjects are characterised by more objectivity in their interpersonal relationships than the average individual, and are significantly less prone to "touchiness or hypersensitivity" than is true of the L.H.L. subjects (89, p. 9). This greater objectivity on the part of the H.H.L. subjects may contribute partially to their significantly better interpersonal relationships.

The Objectivity and Emotional Stability scales are the two most highly related scales on the Temperament Survey, with a correlation of +.69, since both of them directly relate to emotional behavior (89, p. 6). It therefore is not surprising that with a highly significant difference existing between the two groups on Trait Q, the H.H.L. group achieved a mean score on Trait E that significantly exceeded the L.H.L. group mean at the .01 level of probability. Actually, Trait E embraces two aspects of emotional life: cheerfulness vs. depression on the one hand, and emotional stability vs. instability on the other. As such, Trait E becomes an index of emotional adjustment (89, p. 6 and p. 9). It is on the Trait E scale that the two groups manifested the greatest divergence in central tendency. The H.H.L. mean of 20.51 falls at the 65th
percentile as compared to the G-Z standardization groups, and the L.H.L. mean
of 13.97 falls at the 25th percentile. As such, the L.H.L. subjects, as a
group, manifested below average emotional adjustment while the H.H.L. group
manifested better than average emotional adjustment.

If one considers Trait E as an index of emotional adjustment and Trait F
as an index of social adjustment, then the significantly higher scores
attained by the H.H.L. group on these two scales point to a conclusion of
significantly better over-all adjustment for H.H.L. subjects as compared to the
L.H.L. subjects. This conclusion, of course, is based only on the scores
obtained by the subjects on the Guilford-Zimmerman Temperament Survey. This
test, being a questionnaire personality inventory, depends for its validity upon
the honesty of the subject's answers and the level of the subject's conscious
self-awareness. The question remains as to whether the adjustment scores on
this test truly reflect the psychological adjustment of the subjects at the
deeper and more basic levels of the personality. Also, in view of the
significantly better social skills of the H.H.L. subjects, the question can be
raised as to whether the H.H.L. subjects were simply more adept than the L.H.L.
subjects in making themselves "look good" on the Guilford-Zimmerman. It was to
answer questions such as these that each of the subjects in the two groups were
given a Rorschach in an attempt to tap the deeper layers of their personalities.

As was indicated in table 9, subjects from the two groups were about
equally represented in the G adjustment rating. According to Monroe, a G
adjustment rating indicates:

"Emotional difficulties rather marked, very likely to affect attitudes,
interests and performance, but not to an extreme degree" (153, p. 21).
The subjects obtaining A and B adjustment ratings, indicating generally good adjustment, were almost exclusively H.H.L. subjects with only one of the L.H.L. subjects obtaining as high as a B rating. On the other hand, subjects obtaining D and E adjustment ratings, indicating serious maladjustment and psychopathology respectively, were almost exclusively L.H.L. subjects with only one H.H.L. subject obtaining as low as a D rating. The highly significant $\chi^2$ test of independence clearly substantiated the hypothesis that a real difference existed between the H.H.L. and L.H.L. groups in their levels of adjustment according to the Munroe method. This was found to be true whether the differences between the two groups were tested for significance with respect to the adjustment ratings or the absolute number of deviant tallies on the Munroe Check List (Appendix E). These findings, on the basis of the subject's Rorschach protocols, clearly substantiate those obtained on the basis of scores achieved by the subjects on Trait E and Trait F of the Guilford-Zimmerman Temperament Survey. Both at the manifest level of conscious self-awareness and at the deeper and more basic levels of personality, the data supports a conclusion of significantly better psychological adjustment for H.H.L. subjects as compared to L.H.L. subjects. This conclusion gains further qualitative substantiation by the information obtained relative to the subject's adjustment at a behavioral level (Appendix D).

In considering this conclusion, one very important aspect of the obtained data should be given special emphasis. It will be remembered that when the coefficient of contingency was computed for the relationship between H.H.L. scores and adjustment ratings, and L.H.L. scores and their adjustment ratings, both coefficients were quite high. It was noted that an inspection of the
contingency table revealed that the $c$ for the relationship of L.H.L. scores and adjustment ratings was in a truly positive direction: the L.H.L. subjects have a preponderance of $E$ adjustment ratings and there is a decreasing number of L.H.L. subjects who have adjustment ratings of $D$, $C$, and $B$ with none of them attaining an $A$ adjustment rating. This was not found to be true of the $c$ for the relationship of H.H.L. scores and the adjustment ratings. As can be seen in table 9, the H.H.L. subjects have a preponderance of $B$ and $C$ adjustment ratings with only a minority of H.H.L. subjects attaining an $A$ adjustment rating. Munroe describes $A$ adjustment as follows:

"Unusually sound integration of the personality. Emotional problems either very mild or very well handled" (153, p. 21).

$B$ adjustment is described as follows:

"Emotional problems observable; too slight to affect behavior markedly or cause serious inner discomfort."

Only 24% of the H.H.L. subjects received $A$ adjustment ratings with 45% receiving $B$ ratings and 27% receiving $C$ ratings.

It thus appears that the H.H.L. subjects are not without emotional problems but are able to handle their problems effectively enough to maintain a moderately good adjustment. The L.H.L. subjects, on the other hand, consistently received ratings which are indicative of serious maladjustment and actual psychopathology. This is in harmony with what was found for Trait $E$ of the Guilford-Zimmerman Scale. On this test, the mean of the H.H.L. group was roughly within the average range of the $O-Z$ standardization group. It was the mean of the L.H.L. group which fell considerably below the average range of the $O-Z$ standardization group. It thus appears that the significant difference
which exists between these two groups in overall adjustment is not so much due
to the fact that the H.H.L. subjects are so very well adjusted, but that the
L.H.L. subjects, as a group, are so poorly adjusted.

In general, the data from this investigation supports the following conclu-
sion: Individuals who differ markedly in their general reaction to a heteroge-
neous variety of humor stimuli also differ significantly with respect to other
personality characteristics. As compared to low humor level subjects, high
humor level subjects were found to be characterized by significantly greater
energy and general activity. In the sphere of interpersonal relationships,
high humor level subjects were found to possess significantly more social
interest, to be more at ease in relating to others, and to maintain signifi-
cantly greater objectivity in their evaluation of themselves and the behavior
of other people. In addition, low humor level subjects fail to maintain as
high a level of interpersonal harmony and general psychological adjustment as
that manifested by high humor level subjects. There is a significant tendency
for low humor level subjects to be seriously maladjusted.

Contrary to what might be expected from popular stereotypes, high humor
and low humor level subjects were not found to significantly differ on the
personality dimensions of restraint vs. impulsiveness, ascendance vs.
submissiveness, friendliness vs. hostility, or thoughtfulness vs. unreflective-
ness. High humor level subjects apparently are capable of maintaining
significantly more harmonious interpersonal relationships without being signifi-
cantly more friendly and agreeable or more socially ascendant.

Any attempt to generalize widely from these findings must be done with
cautions because of the highly selective procedure employed in this investigation.
Because of the relative dearth of well established empirical data on humor phenomena in the literature, it was deemed more sagacious to confine this investigation to a relatively homogeneous population. As a consequence, the subjects were selected so as to be similar with respect to age, education, religion and cultural background. The procedure used in this investigation should be repeated on other homogeneous samples that differ from the one used in this study with respect to these variables. Only to the extent that similar results would be obtained on different populations could the findings of this investigation be generalized.

Another factor which must be considered is that the findings of this investigation are based on a comparison of subjects who represent the extreme ends of the humor continuum. As such, the question remains as to whether humor level is related to psychosocial adjustment, and other personality variables, in those subjects whose humor responsiveness places them within one standard deviation above and below the population mean. Since these widely divergent humor level subjects were found to differ significantly on personality variables measured by such a test as the Guilford-Zimmerman, future investigations can employ psychometric personality tests which are far more economical in terms of time than the Rorschach which was used in this research. A future study is contemplated in which the same humor stimuli and method of obtaining humor level scores will be utilized, but where the entire sample of subjects will be tested, rather than just the two extremes of the distribution.
Chapter VI

Summary and Conclusions

The psychological phenomenon which is designated by the term humor has been a subject of philosophical interest for centuries. With the development of the behavioral sciences, humor has continued to be a popular subject in the theoretical literature, but there is a surprising paucity of empirical research on the subject. Of the humor research which has been conducted, the bulk of it has yielded data which suggests that after an individual has reached chronological maturity, such variables as age, sex, intelligence, education, nationality, etc. are of minimal importance in determining a person's reaction to humor stimuli. As a result, most of the humor research in recent years has concentrated on an investigation of the relationship between sense of humor and other dynamic personality variables. While the present study pursues this same line of investigation, it differs in both purpose and method from other studies which have been done in this area.

The problem of this study was two-fold: the investigation of the relationship between general sense of humor and level of psychosocial adjustment; the investigation of the relationship between general sense of humor and particular personality characteristics. Previous research has sought to find correlates between preference for specific kinds or themes of humor and specific personality characteristics. The present study differs from these in that it has for its focus "general sense of humor" which was described as the characteristic, total, integrated response which is habitually made by an individual in
reaction to a heterogeneous variety of humor stimuli. One facet of this study was thus an investigation of the relationship between general sense of humor and specific personality characteristics.

A second facet of this study was designed to challenge the commonly held assumption that people who can regard many different situations as being humorous are better adjusted psychologically than people who regard very few things as being humorous. In spite of the marked lack of agreement among the various theories of humor, one common element of agreement is that humor and laughter operate to the psychological benefit of the individual. A second purpose of this study was to investigate this assumption.

In attempting to relate general sense of humor to personality characteristics and psycho-social adjustment, two highly selected groups of subjects were used who were designated by the term high humor level and low humor level. These two groups of subjects were selected from an initial population of 100 females and 110 male college students, who were quite homogeneous with respect to age, education and religious affiliation.

Each of the subjects in this initial population was requested to respond to a heterogeneous variety of humor stimuli. The form of humor stimuli used in this study was printed verbal jokes drawn from forms A and B of the I.P.A.T. Humor Test. The humor sample consisted of a relatively heterogeneous selection of 200 jokes taken from this humor test.

Each of the subjects was given a packet of 200 jokes which was divided into 10 sections with 20 jokes in each section. The subjects were asked to rate the jokes for degree of funniness on a five point scale that ranged from 0 (not funny at all) to 4 (extremely funny). They were requested to rate 20
jokes each day for 10 days to allow for variations of mood, and to minimize the effects of fatigue which might enter in if subjects were to rate all 200 jokes at one time.

When the packets of jokes had been rated and returned, a humor score was established for each subject which represented the subject's general response to the entire sample of jokes. This score consisted of the average of all of the individual joke ratings made by each person. This resulted in a distribution of 100 female and 110 male humor scores. When the two distributions were compared statistically, it was found that they did not significantly differ from each other in either their mean humor score or dispersion of scores. In the absence of a significant difference between the sexes, in their general appreciation of the joke sample, all of the male and female humor scores were combined into one large composite distribution. The resulting distribution was found to fit the normal form quite acceptably.

Those subjects whose individual humor scores had fallen above one standard deviation from the composite group mean were selected and designated as the "high humor level" group. Those subjects whose humor scores had fallen below one standard deviation from the group mean were selected and designated as the "low humor level" group. This selection placed 33 subjects in each of the two humor level groups and it was these 66 subjects upon whom the remainder of the investigation was carried out.

Each of the 66 subjects was given the Guilford-Zimmerman Temperament Survey and an individual Rorschach. The Guilford-Zimmerman Survey was employed to obtain personality data on the subjects relative to the 10 personality traits measured by this test. The 10 traits measured are as follows: general activity
vs. inactivity, restraint vs. impulsiveness, ascendance vs. submissiveness, sociability vs. exclusiveness, emotional stability vs. instability, objectivity vs. hypersensitiveness, friendliness vs. hostility, thoughtfulness vs. unreflectiveness, personal relations vs. criticalness, and masculinity vs. femininity. The use of this instrument provided data on each subject's opinion of his own personality in each of these trait areas. The Rorschach was used in the hope that deeper levels of personality adjustment could be tapped. The Rorschach records were scored and given an adjustment rating according to the method developed by Ruth L. Munroe.

At the time that the Guilford-Zimmerman and Rorschach were administered to each subject, scored, and an adjustment rating assigned to each Rorschach record, care was taken that the investigator did not know whether a given subject fell within the H.H.L. or L.H.L. group. This precaution was taken to eliminate the possible contaminating results of such knowledge. After the final scores for the Guilford-Zimmerman Survey and the final adjustment ratings for the Rorschach had been obtained, the subjects could then be identified with regard to their humor level and the two groups compared on these two instruments.

When the scores obtained by the H.H.L. and L.H.L. subjects on the Guilford-Zimmerman Survey were compared, it was found that the two groups differed significantly from each other on five of the ten traits measured by this instrument. The H.H.L. subjects, as a group, obtained significantly higher scores than the L.H.L. subjects on traits G, S, E, Q and P. This data supports a conclusion that H.H.L. subjects were characterized by significantly greater general activity, sociability, emotional stability, objectivity, and ability
for maintaining harmonious interpersonal relationships. If one considers trait \( E \) as an index of emotional adjustment and trait \( P \) as an index of social adjustment, then the significantly higher scores attained by the H.H.L. subjects on these two scales point to a conclusion of significantly better over-all adjustment for H.H.L. subjects as compared to L.H.L. subjects.

These findings are in harmony with the data obtained by comparing the H.H.L. and L.H.L. subjects relative to the adjustment ratings they received based on their Rorschach records. The H.H.L. subject consistently received higher adjustment ratings than did the L.H.L. subjects, and the two groups were found to significantly differ from each other in this respect. It was noted, however, that the significant difference which existed between the two groups in overall adjustment was not so much due to the fact that H.H.L. subjects were without emotional problems and so very well adjusted, but that the L.H.L. subjects as a group were so poorly adjusted.

Contrary to what might be expected from popular stereotypes, the H.H.L. and L.H.L. subjects were not found to differ significantly on the Guilford-Zimmerman personality traits of restraint vs. impulsiveness, ascendance vs. submissiveness, friendliness vs. hostility, or thoughtfulness vs. unreflectiveness. Apparently H.H.L. subjects are capable of maintaining significantly more harmonious interpersonal relationships without being significantly more friendly and agreeable or more socially ascendant.

Any attempt to generalize widely from these findings must be done with caution because of the highly selective procedure employed in this investigation. Because of the relative dearth of well established empirical data on humor phenomena in the literature, it was deemed more sagacious to confine this
investigation to a relatively homogeneous population. As a consequence, the subjects were selected so as to be similar with respect to age, education, religion and cultural background. The procedure used in this investigation should be repeated on other homogeneous samples that differ from the one used in this study with respect to these variables. Only to the extent that similar results would be obtained on different populations could the findings of this investigation be generalized.

Another factor which must be considered is that the findings of this investigation are based on a comparison of subjects who represent the extreme ends of the humor continuum. As such, the question remains as to whether humor level is related to psychosocial adjustment, and other personality variables, in those subjects whose humor responsiveness places them within one standard deviation above and below the population mean. Since these widely divergent humor level subjects were found to differ significantly on personality variables measured by such a test as the Guilford-Zimmerman, future investigations can employ psychometric personality tests which are far more economical in terms of time than the Rorschach which was used in this research. A future study is contemplated in which the same humor stimuli and method of obtaining humor level scores will be utilized, but where the entire sample of subjects will be tested rather than just the two extremes of the distribution.
Appendix A

The Joke Sample Made Up Into Ten Sections

With Twenty Jokes In Each Section

<table>
<thead>
<tr>
<th>First Day</th>
<th>Name</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The minister called at the Jones home one Sunday afternoon and little Willie answered the bell. &quot;Pa ain't home,&quot; he announced, &quot;he went over to the golf club.&quot; The minister's brow darkened. Little Willie then hastened to explain. &quot;Oh he ain't going to play golf, not on Sunday. He just went over for a few highballs and a little stud poker.&quot;</td>
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<tr>
<td>2. &quot;Do you mean to tell me,&quot; said the judge, &quot;That you murdered that poor old woman for a paltry two dollars?&quot; &quot;Well judge you know how it is ---- two bucks here, two bucks there -- it all adds up.&quot;</td>
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<tr>
<td>3. &quot;How do you get your kid sister to find so many fishing worms for you?&quot; asked Bobby. &quot;Oh it's easy,&quot; said Tommy, &quot;Out of every ten she digs up, I let her have one to eat.&quot;</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4. &quot;Did he take his misfortunes like a man?&quot; &quot;Precisely. He laid the blame on his wife.&quot;</td>
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<tr>
<td>5. Customer: &quot;Waiter, your thumb is in my soup.&quot; Waiter: &quot;That's all right sir, it's so used to the heat that I hardly notice it.&quot;</td>
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<td></td>
<td></td>
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<tr>
<td>6. She: &quot;Do you serve crabs here?&quot; He: &quot;We serve anyone, sit down.&quot;</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7. &quot;Hey boy, stop that ox.&quot; &quot;I can't sir, I don't have no stopper.&quot; &quot;Well don't just stand there, speak to him you good for nothing.&quot; &quot;Well OK ----------------- Good morning Mr. Ox.&quot;</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8. Suitor: &quot;Do you think it's possible to communicate with the dead?&quot; Bored Girl: &quot;Oh yes, I hear you distinctly.&quot;</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9. &quot;If looks could kill, I'd assassinate you with a glance.&quot; &quot;If looks could kill, it would be suicide for me to look in a mirror.&quot;</td>
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<td></td>
</tr>
</tbody>
</table>
10. "Why do you prefer Wagner to other composers?"
   "Because he composes about the only music that you can hear above
   the conversation."

11. "Have you ever met my sister Louisa?"
   "Yes, she's rather stout, isn't she?"
   "I have another at home who is Lena."

12. Sign carried by a large fat man: "This pedestrian stops frequently.
   Buses---cars---taxis---trucks, BEWARE."

13. The king honored a surgical clinic with a visit and found the
    doctor engaged in amputating a leg. He watched the procedure of
    the operation with great interest and expressed his approval with
    the loud utterance: "bravo, bravo, doctor." When the operation
    was over the humble doctor approached the king and, impressed by
    his approval asked, "Does your majesty also command the amputation
    of the other leg?"

14. Outraged father finding a young man with his daughter:
    "How was it that you were kissing my daughter? Answer me
    young man, how was it?"
    Young man: "Swell."

15. Wife: "Dear, will you love me when my hair turns grey?"
    Husband: "Why not? I've loved you from black hair through
    red to platinum already."

16. After giving the hired man a dressing down for returning late
    with the supplies, the farmer demanded, "Alright now, Milier,
    let's hear how it happened." "Well, I picked up the minister
    along the road," explained the hired hand, "and from there on,
    the mules couldn't understand a word I said to them."

17. Waiter: "Sir, about that steak that you ordered. How would
    you like it?"
    Customer: "Very much indeed."

18. He was sneaking in late at night and was about to get into bed
    when his wife, half roused, turned sleepily and said,
    "Is that you Fido?"
    The husband, relating the rest of the story said, "For once in my
    life I had real presence of mind. I licked her hand."

19. "Gee, I sure wish I was three or four feet taller."
    "Why is that?"
    "Because the doctor told me that whiskey was killing me by inches."
20. Jim: "So you and Susan are going to get married, and all the time I thought it was just a playful little flirtation."
Bill: "Yes, so did I."
21. "Your money or your life," called the holdup man.  
"Take my life then," said Brannigan, "for I'm saving my money for my old age."

22. Patient: "What's the best thing for hives?"  
Doctor: "Bees."

23. Love is laughable. In fact, it's just two silly.

24. "Hello doctor, where are you going?"  
"I'm calling on Smith. He's down with a cold."  
"Oh, they've called you in. Well then I'll stop at the undertaker's and order the coffin."

25. He was timid, but persistent; she was cold.  
"May I have the right to kiss you?" he begged.  
"I'll give you a right if you try it," said she clenching her fist.

26. "Did you see any strange sights when you were downtown this morning?"  
"Certainly, I hadn't gone two blocks before I met your wife."

27. Rat exterminator: "I only hope I can take it as well as they do when my time comes."

28. "Waiter. There's a fly in my soup."  
"Well don't be so stingy, how much can a little fly drink?"

29. Teacher: "What are you drawing?"  
Youngster: "I'm drawing a picture of God."  
Teacher: "How can you do that? No one in the world knows what God looks like."

Youngster: "Well, they will when I get through with the picture."

30. Yes sir, that woman is certainly dignified --- every time she throws a cup at her husband she always remembers to take the spoon out first.

31. He: "Tell me something. Do girls really like conceited men as well as they do the other kind?"  
She: "What other kind?"
32. Reverend: "For the wicked there will be a weeping and wailing and gnashing of teeth in the next world."
Member: "But Reverend, how about those who have no teeth?"
Reverend: "Brother, teeth will be provided.

33. "Who is that horribly ugly looking woman sitting by herself over there?" asked the stranger of his host. "That, sir," said the host, "Happens to be my sister." "Of course," exclaimed the embarrassed guest, "I didn't notice the resemblance."

34. Instructor: (Examining the class) "Who drove the Israelites out of Egypt?" "You!" he said pointing to a small boy in the corner.
Boy: (Trembling) "T'wasn't me sir. I only came back from the country last week."

35. As the fish was served to a guest at the table he put both hands twice into the mayonnaise and then ran them through his hair. Being looked at by his neighbor with astonishment, he seemed to have noticed his mistake and excused himself by saying, "Pardon me, I thought it was spinach."

36. Butch: "That was a good picture of your pop that your ma showed me. But why did it only show his head?"
Scarface: "That's because she had the electric chair taken out."

37. "Well, I'm off to the races," said Mr. Dale to his wife,
"And I sure hope that I break even because I sure need the dough."

38. Two young men from Oxford came up to London for a riotous weekend. After some hours of dissipation in a West-End cinema, they met two ladies of the evening on Piccadilly Square and went to a neighboring bar, where, for reasons of their own, the two couples separated. A short while later, however, Ralph was back tapping on his friend's shoulder. "I say, old man," he began with a slightly embarrassed air, "Would you mind terribly swapping girls with me? What with this bloody fog and all I seem to have gotten hold of my bloody aunt."

39. A pupil at a very strict girl's school asked for permission to go for a drive with a gentleman friend.
"You know the regulations of the institution," was the reply.
"Are you engaged to him?"
"No," she said, "But I expect to be before I get back."

40. Doctor: "Man, you're looking bad. Did you take that powder I gave you --- just enough to cover a dime?"
Patient: "That did I do, doc. Only I didn't have a dime so I used ten pennies instead."
<table>
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<tr>
<th>Third Day</th>
<th>Name</th>
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| 41. "Is this a lawyer's office, mam?"
"What do you think it is, a Turkish bath?"
"Now don't get all steamed up." | | | |
| 42. Life is just one darn thing after another.
Love is just two darn things after each other. | | | |
| 43. Famous Explorer: "It was pretty awful in the jungle.
Why once an animal with horns twelve feet long came at me. I
never saw such an animal."
Mr. Mull: "I believe you." | | | |
| 44. She: "Why haven't you any hair on your head?"
He: "Grass doesn't grow on a busy street."
She: "No, It can't get up through the concrete." | | | |
| 45. "I'm afraid your dinner is going to be a little burnt tonight
darling."
"Why, did they have a fire at the delicatessen shop?" | | | |
| 46. Little Willy in his best of sashes
Fell in the fire and was burned to ashes
By and by the room grew chilly
But no body wanted to poke up Willy. | | | |
| 47. The interviewer asked Mr. James H. Weldon, "Do you file your
nails?" thereby giving Mr. Waldon the opportunity to say, "No,
I just throw them away after I cut them." | | | |
| 48. Kind neighbor: (To little boy who is eating an apple)
"Look out for the worms, sonny."
Little boy: "When I eat apples, the worms have to look out for
themselves." | | | |
| 49. "My husband is so careless. His buttons are forever coming off
his clothes."
"Perhaps they aren't sewed on properly."
"That's just it. He's so careless about his sewing." | | | |
| 50. "Mama," asked little Mary, "if I get married, will I have a
husband like daddy?"
"Yes dear."
"And if I don't get married, will I be an old maid like
Aunt Agatha?"
"Yes dear"
"Gee, it's really a hard world for us women isn't it?" | | | |
51. "I just heard that your son is an undertaker. I thought you
told me he was a physician?"
"No, not at all."
"I don't like to contradict you, my friend, but I'm positive
you said so."
"You misunderstood me. I said he follows the medical profession."

52. "I rise for information," said a member of the legislative
body.
"I'm glad to hear it," said a bystander, "for no man needs it
more."

53. The exclusive Mr. Vanderdam was giving a bridge party when
the patter of tiny feet was heard from the head of the stair.
"Hush," she said softly. "The children are going to give their
goodnight message. It always makes me so sentimental to hear
them."
There was a moment of silence; then, shrilly; "Mama, Percy found
a bed bug."

54. A horse walked up to a bar and asked for a martini with
catsup. "O.K. Bud," said the bartender and mixed it pronto.
After tossing off the drink with considerable and obvious relish
the horse leaned over the bar and said,
"I suppose you think it strange for me to come in here and ask
for a martini with catsup."
"Heck no," said the bartender, "I like them that way myself."

55. A man in a doctor's office absent mindedly started off with
somebody else's umbrella, and returned it with a humble apology
when the owner raised Cain. Later in the day he bought three
umbrellas at a bargain sale, and on the way home he encountered
the lady whose umbrella he had started to make off with in the
morning. "I see," she said icily, "That you've done pretty
well today."

56. "Do you folks around here have much trouble with insects getting
into your corn?"
"We sure do, but we just fishes 'em out of our corn liquor and
drinks it anyhow."

57. It was the first day of April.
"Mama, mama, come quick," came a piping voice, "there's some
man kissing the maid."
The mother made a hurried start, but was halted by her small son
who said, "April fool________________________it's only papa."

58. "I call my girl friend furnace."
"Why?"
"Because she'll go out on me if I don't watch her."
59. "I'm sorry," said the man who was paying his rent, "to have to tell you that we are giving up our apartment. It is too small."
"But there's only you and your wife," the landlord replied, "and the apartment was planned for two people."
"Yes, I know, but my wife has decided to keep a gold fish.

60. "Oh heck, I left my watch up-stairs."
"That's alright. It'll run down."
"No, it won't, it's a winding stairway."
61. It takes years for nature to make a boy into a man, but it takes only a few minutes for a woman to make a monkey out of him.

62. The prosecuting attorney had encountered a somewhat difficult witness. Finally he was asked if he was acquainted with any of the men on the jury.
"Yes sir," announced the witness, "more than half of them."
"Are you willing to swear that you know more than half of them?" demanded the lawyer.
"Why if it comes to that, I'm willing to swear that I know more than all of them put together."

63. Harry: "I always drink milk because my doctor says that milk is a great bone builder."
Carrie: "I'm afraid your drinks are going to your head."

64. A famous musician once asked a woman why she forever sang the same song.
"Because it haunts me." replied the woman.
"No wonder," replied the musician, you are continually murdering it."

65. The despondent old gentleman emerged from his club and climbed stiffly into his cab.
"Where to?" asked the driver.
"Drive off a cliff; I'm committing suicide."

66. She: "Joe is marrying Edna, and he's really getting a prize."
He: "What for? Bravery?"

67. Auntie: "For heavens sake, Willie, don't they teach you any manners at home? You shouldn't reach for the butter. Haven't you got a tongue?"
Willie: "Sure I have, but my arm is longer."

68. A bashful young man was escorting a bashful young lady home when she said, "Don't tell anyone that you took me home."
"Don't be afraid," he replied, "I'm as much ashamed of it as you are."

69. Tired salesman (Sitting in a barber's chair); "Give me a shave."
Barber: "You're too low in the chair, will you sit up please?"
Tired salesman: "Oh heck, give me a haircut then."

70. Professor: "There is no such thing as absolute truth."
Student: "Are you sure of that?"
Professor: "Positive."
71. A doctor was very critical of the bricklayer's work on his front wall.
   "Ah," he sneered, "a trowel can hide a lot of mistakes."
   "Yes, doctor, and also a shovel."

72. "Why do you want Limburger cheese packed in your lunch?" asked the grocer.
   "Because, papa," answered the truthful little son, "I want teacher to send me home."

73. To discover whether an ostrich is a male or a female, just tell a joke.
   If he laughs, it's a male.
   If she laughs, it's a female.

74. "If I insured my house for fifty thousand dollars and it burned up the next day, what would I get?"
   Insurance agent: "Ten years most likely."

75. "I found a five dollar bill in a tavern tonight."
   "I know, I can smell it on your breath."

76. "You say I'm the most beautiful, divine, and gorgeous creature in the whole world? What are you trying to do, kid me?"
   "No, I'm trying to kiss you."

77. A man wandered into a tennis tournament and sat down on the bench. "Whose game?" he asked the pretty young thing sitting next to him on the bench. She looked up hopefully and said, "I am."

78. "Why don't you come to see me these days? You used to be over every other night and we talked and had such a good time."
   "Why don't you come and see me like you used to?"
   "Well my goodness, if I lived as close to you as you live to me why, gosh, I'd be there all the time."

79. "Fish hook, that's an odd name for a town. Why is it called that?"
   "Because it's the end of the line."

80. "Are marriage licenses expensive in this country?"
   "They sure are. Two dollars down and your pay check for life."
81. Lecturer: "Of course you all know what the inside of a corpuscle is like."
Chairman: "Most of us do, but you'd better explain it for the benefit of those who have never been inside one."

82. Man: "I'm just the picture of health."
Woman: "Yes, but it's slightly underdeveloped."

83. Abel: "Dearest, I must marry you."
Mable: "Have you seen mother and father?"
Abel: "Often darling, but I love you just the same."

84. Epitaph to a waiter:
By and by
God caught his eye.

85. A young man stepped into a clothing store to ask the price of a suit that was in the window. "You picked the best suit that was in the place," said the merchant approvingly, "and to show you that I like to do business with a man who has good taste, I'm going to make you a special proposition. I wouldn't ask you $62 for the suit, I wouldn't ask you $52. I wouldn't even ask you $42 for it. $32 is my price for you young man."
The customer replied, "I wouldn't give you $32 for the suit. And I wouldn't give you $22. My offer is $12."
"Sold," said the merchant. "That's the way I like to do business—no chiseling."

86. Benevolent Gentleman: "Does your watch tell the time?"
Youngster: "No sir. You have to look at it."

87. Mrs. Smith was walking down the street when she spied Mrs. Gordon. She thought that Mrs. Gordon looked ill so she called Mr. Gordon and exclaimed, "I just saw your wife on the street and I don't like the way she looks."
"Neither do I" explained Mr. Gordon, "but she's awfully good with the children."

88. "Did you have any trouble with your car in all that Sunday traffic?"
"Did I? I fainted and had to drive nine miles before I could find a safe place to pass out."
89. A protestant Episcopal minister was walking down a city street wearing the garb of the profession. He was met by two Irish boys. "Good morning Father," said one of the boys. "Quiet, he ain't no father," said the other, he's got a wife and two kids."

90. Politician: "I'm glad to see such a dense crowd here tonight." Voice: "Don't be too pleased we ain't all dense."

91. "Mike. Stop scratching your head." "I won't Mom, they started on me first."

92. Staggering with weariness the farm horse started up the slope, pulling a heavy load. "Giddap," yelled the farmer shaking the reins. The horse tugged, lost its footing and went down on its knees. The farmer cursed, "Get up you thundering idiot." The horse lay on its side and stared dejectedly over its shoulder at the farmer who burst out, "Tar-nation. If you don't get up I'll drive right over you."


94. A man who was addicted to drink supported himself in a small city by private teaching. His vice finally became known and he lost most of his pupils as a consequence. A friend of his took it on himself to advise him to reform. "Look here," he said, "you could have the best pupils in town if you would give up your drinking. Why not do it?"

"What are you talking about," was the indignant reply. "I am teaching in order to be able to drink. Shall I give up drinking in order to have pupils?"

95. "For goodness sakes, use both hands" shrilled the girl in the auto. "I can't," said the escort. "I have to steer with one."

96. "You're the nicest boy I've ever kissed." "You can tell that to the marines." "I have, dozens of them."

97. A fellow walked into a music store and asked for a piece of music entitled, "Act on the Square," and while the clerk was looking for it, walked off with a $50.00 banjo.
98. Ernie: "My grandfather can play the piano by ear."
    Gooney: "That's nothing. My grandfather fiddles with his
    whiskers."

99. Life --- the first half is ruined by our parents and the second
    half is ruined by our children.

100. A politician burst angrily into the newspaper editor's office.
    "You've got a lot of nerve," he roared. "What's the idea of
    printing lies about me?" "Humph, grunted the editor unperturbed.
    "You shouldn't complain. What would you do if we printed the
    truth about you?"
109

Sixth Day

Name_________________________________________ Date _______ Time_______

101. Teen-age youth (Boasting to his girl): "I was out with a nurse last night."
    She: "Cheer up. Maybe next time your mother will let you go out without one."

102. "Oh Joe, you're just awful. You sit there reading your old newspaper and you don't pay any attention to me. You don't love me anymore."
    "Nonsense, Cynthia. I love you more than ever. I worship the ground you walk on. Your every wish shall be my command. Now for gosh sakes, shut up and let me read the funnies."

103. An eagle-eyed undertaker noticed an old crone shuffling away from a funeral service at his parlor and asked her how she was. "One hundred and one," crackled the old lady proudly.
    "Well, well" said the undertaker suavely, "Hardly worth going home, is it?"

104. A baker said to a tavern keeper, one of whose fingers was festering, "I guess your finger must have gotten into some of your beer."
    "You are wrong," the tavern keeper replied.
    "One of your rolls got under my finger nail."

105. Father: (reproving his son for greediness)
    "Jimmie, you're a pig. Do you know what a pig is?"
    Jimmie: "Yes, dad, a pig is a hog's little boy."

106. "My boy friend plays the violin wonderful. Such a feeling for music."
    "Has he a sensitive ear?"
    "Has he? I'll say he has. I've never bitten it yet that he hasn't screamed."

107. There is the story about the sailor who cabled his girl from Honolulu. His message read, "I love you, I love you, I love you." When he learned that he could have a tenth word without any extra charge, he gave the matter a great deal of thought and then added, "Regards."

108. A principal of a grammar school wanted to demonstrate to one of his teachers that her pupils were not paying attention in class. He asked for someone to give him a word. One pupil gave "top" and the principal promptly wrote "pot" on the blackboard. He asked for another word and received "pit" so he wrote "tip" on the board. This went on for several minutes until a voice from the back said, "Reviver, let's see you do something with that."
109. "My roommate fell down stairs last night with two pints of gin."
   "Did he spill any?"
   "No, he kept his mouth closed."

110. Sally: "Why do those trees bend over so far?"
    Tommy: "You'd bend over if you were as full of green apples as they are."

111. Commuter on subway to passenger with a pigeon on each shoulder.
    "Pardon me, but do you always go around with pigeons sitting on your shoulders?"
    "What can I do?" was the reply, "They got on with me at Union Square."

112. "You have a pretty tough looking lot of customers to dispose of this morning, haven't you?" remarked a friend of the judge just before the opening of the police court.
    "Huh" rejoined the dispenser of justice, "you are looking at the wrong bunch. Those are the lawyers."

113. "Was it very crowded at the night club last night?"
    "Not under my table it wasn't."

114. "Peggy has really gone up in the world, hasn't she?"
    "Yes indeed. Why she used to marry men that she would not even invite to dinner now."

115. Little Tommy: "Sister Mary must be able to see in the dark."
    His mother: "Why do you think that?"
    Tommy: "Cause last night when she was sittin with Mr. Steady in the living room I heard her say, "Why George, You haven't shaved."

116. "He was surprised that the two holes were cut in the pelts of animals just where the eyes were located."

117. "Did you hear of the kidnapping case on our block?"
    "Good heavens no, who was it?"
    "Mrs. Smith. She missed her little boy and when she went hunting for him she found the kid napping in his crib."

118. "One of our noted travelers declares that in Assam the women rule."
    "Why select Assam?"

119. "My instructor told me that I ride as if I were part of the horse."
    She: "Did he tell you which part?"
120. She: "When I talk people listen with their mouths open."
He: "Oh, so you're a dentist."
121. Judge: "Prisoner, why did you follow this man and beat and kick him so mercilessly?"
Prisoner: "I'm sorry, your honor, I thought it was my wife."

122. "Here, I'll help you carry that trunk."
"Okay" (The Trunk falls)
"Better pick that trunk up quick."
"Why? Let it stay there—we'll get someone to help us with it."
"No we better pick that trunk up because Mr. Doakes wouldn't like it to be left there."
"Where is Mr. Doakes?"
"He's under the trunk."

123. "Did you ever have your tonsils out little boy?"
"Only when I laugh, lady."

124. Professor: "Yes, all my life people have been telling me that I have a mind like a whip."
Laborer: "No wonder, ever so often it snaps."

125. Mistress (Hearing a crash in the kitchen)
"More dishes Mary?" Mary: "No mam. Less."

"I bet pop never went to Sunday School when he was a kid."
"He went regularly," his mother answered him.
"O.K.,” agreed Willie reluctantly, "but I bet it won't do me any good either."

127. A woman had a very violent argument with her husband, in the course of which she threw him out of the second story window and he landed in the waste basket in the yard. Their Chinese servant, on seeing the husband in this condition, shook his head and said, "American lady vely extlavagant—he good for at least five years yet."

128. She: "So you love me. Would you die for me?"
He: "No, mine is an undying love."

129. Two men were arraigned on a charge of violating the law.
"Have you an attorney?" asked the judge.
"We're not going to have a lawyer," was the surprising answer; "we've decided to tell the truth."
130. A tourist had stopped at a mountaineer's cabin and noticed four holes in the door. When he asked about them the mountaineer replied that he had four cats. "But wouldn't one good sized hole do for all the cats?" asked the tourist. "Nope," said the mountaineer, "when I say scat I mean scat."

131. "Mummy, doesn't that monkey look awfully like grandpa?" "Hush darling, you mustn't say things like that." "But the monkey can't understand, can he Mummy?"

132. A traveler was walking along a mountain road. As he passed a little hut he noticed that a man and a dog were seated at a table opposite each other on the front porch. Curious, he walked up and saw that both the man and the dog were deep in thought over a game of chess. After watching the two make several rather brilliant moves he finally exclaimed in amazement, "Say, That's a pretty smart dog you've got there." "Oh, he's not so smart," was the mountaineer's answer, "after all, I usually beat him two out of three games."

133. By some unaccountable mistake thirteen men filed toward the jury box when the case was about to be tried. After twelve of them had taken the twelve seats, the judge said to the one remaining standing; "What is your name?" "James C. Branes, sir." "Mr. Bailiff," said the judge, "take this man back to the commissioners and tell them that we cannot use him as we already have twelve men without Branes."

134. Judge: "This officer says that while you were in a state of intoxication you tried to climb a lamp post." Defendant: "That's true, your honor, but three crocodiles had been following me all night and they were beginning to get on my nerves."

135. Mother: "Come Lennie, don't be a little savage. Come and kiss the lady." Lennie: "No, she's a naughty lady. If I give her a kiss she may slap me just like she did to papa."

136. Jane: "Is that true that you never kiss a man good night?" Louise: "That's right. By the time he leaves me it's always morning."
Two men met in a Russian railway station. "Where are you traveling?" asked the one. "To Pinsk" was the answer. "Now see here," said the other one bristling, "what a liar you are. When you say you are going to Pinsk, you really want me to believe that you are traveling to Cracow. However, I'm sure that you are really traveling to Pinsk, so why lie about it?"

He: "Pardon me, but you look like Helen Green."
She: "So what? I look worse in pink."

"What happened to you Doc? Why are you all banged up?"
"I fell down a well and broke my collar bone."
"Well, you should mind the sick and leave the well alone."

Parson: "Why don't you ever come to hear me preach?"
Friend: "I'd like to, but I make it a rule never to go to places of amusement on Sunday."
141. Jack: "Say, do you like playing with blocks?"
   Jim: "Not since I grew up."
   Jack: "Then quit scratching your head."

142. She: "I'm looking forward to my 24th birthday."
   Escort: "Aren't you facing in the wrong direction?"

143. Mrs. Chase made the mistake of leaving the baby in her husband's care while she went into the kitchen to pay the month's bills. Mr. Chase buried himself behind his newspaper and forgot all about the baby until he heard a series of thumps, followed by a horrendous wail. It was evident that the baby had fallen downstairs.
   "Martha," he called excitedly, "Come quick, Junior just took his first forty-eight steps."

144. Jim: "Have you heard? Jones has been run over by a brewery truck."
   Steve: "Well, that's the first time that the drinks have ever been on Jones."

145. Raymond wandered back stage between the acts of a musical revue and innocently started to enter a room clearly marked, "Chorus Girls Dressing Room. Positively no admittance." A watchman caught him in the act. "Can't you read?" he hollered, pointing to the sign.
   "Who's smoking?" asked Raymond.

146. "I hear that you have a little sister."
   "Yes," answered the small boy.
   "And how do you like her?"
   "Well she's OK, but I wish she was a boy. Then I could play marbles, basketball and other games with her."
   "Then why don't you exchange her for a brother?"
   "We can't," was the answer, "It's too late now cause we've used her for four days already."

147. "My wife is a fine shot. She can hit a dollar every time."
   "That's nothing, my wife goes through my trousers every time and never misses a dime."

148. "Say, have you got a bottle opener around here?"
   "Yes, but he's away at college."
149. "What do you think of the political situation?"
"Don't bother me just now," said Senator Sorgum.
"I've got to get out and make a speech. This is no time to think."

150. The Metropolitan Symphony Orchestra had played in a small New England town and it was the first experience of its kind for many of the inhabitants. The next day some of the old timers gathered around and expressed their opinions. A comment of one of the oldest inhabitants was: "All I got to say is it was a danged long way to bring that big bass drum only to bang it wunst."

151. "Why, what's the matter darling?"
"Papa hit his finger with a hammer."
"Well don't cry about it. If anything, you should laugh."
"I did."

152. A man walked into a tavern, sat down at the bar and ordered a drink. Suddenly the man sitting next to him got up, walked over to the wall, walked up the side of the wall, walked across the ceiling upside down, down the side of the other wall and out the door. The man at the bar was amazed, but when he looked around at the others in the tavern, it appeared that none of them were the least bit surprised.
"Don't you think that was a little unusual?" he inquired of the bartender.
"Not in the least," he replied, "he never says good-night."

153. Judge: "So you confess that the unfortunate man was carried to a pump and there drenched with water? Now, Mr. French, what part did you take in this disagreeable affair?"
Witness: "The left leg, sir."

154. "I'm losing my punch," she said she left the cocktail party in a hurry.

155. After all, what good is happiness? You can't buy money with it.

156. Susan: "I caught my boy friend flirting."
Sarah: "I caught my boy friend that way too."

157. New Neighbor: "Little boy, I need a dozen eggs from the store. Do you suppose you could go for me?"
Little boy: "No, but I heard my pa say he could."
158. All of us waited impatiently for her verdict. She chewed in silence for a moment and then shook her head knowingly. "So that's caviar," she declared----"tastes just like onions to me."

159. "I hear that you had burglars at your house the other night." "Yes, they stole practically everything but the soap." "The dirty crooks."

160. One prehistoric man to another: "Now that we've learned to communicate with each other---shut up."
161. At a benefit dance an actor, in a gentle mood, asked a maiden lady to dance. "Oh," she simpered as they waltzed, "Whatever made you ask poor little me to dance?" "Well," responded the actor gallantly, "it's a charity ball, isn't it?"

162. He: "I'm a great bird imitator. Would you like to see me do it?"
She: "I certainly would. Imitate a homing pigeon."

163. Dick: "Was that a new girl that I saw you with last night?"
Doc: "No, it was just the old one painted over."

164. A hardened motorist had just run down a jay walker and stopped the car on top of the unfortunate man. "Hey there," yelled the motorist, peering down over the side of the car, "while you're under there, take a look at my brake rods will you?"

165. Frederick the Great heard of a Silesian clergyman who had the reputation for communication with the spirits. He sent for him and received him with the following question: "Can you really call up ghosts?" "At your pleasure," replied the clergyman---but they won't come."

166. The editor was busy at his desk when the phone rang. On the other end was an irate subscriber. "I noticed in your paper," the reader shouted, "that you printed I was dead."
"That so?" was the indifferent retort. "Where are you speaking from now?"

167. Mrs. Flanagan was pleased. "You see Jerry," she beamed at her young son, "I told you that was a nice little boy next door. I was glad to see through the window just now that you made friends with him and were helping him pick up his marbles.
"Marbles," scoffed Jerry, "Those weren't marbles. I socked him in the jaw and those were his teeth."


169. A little boy walked into a grocery store and asked for some canary seed. "Is it for your mother?" asked the grocer.
"Of course not," said the boy with disdain, "It's for the bird."
170. A farmer was losing his patience trying to drive two mules into a field, when the local person came by and said, "Don't speak like that to those dumb animals."
Farmer: "You're just the man I want to see."
Parson: "Why?"
Farmer: "Tell me, how did Noah get these blamed things into the ark?"

171. Joe: "Where are you headed Jim?"
Jim: "I'm taking a box of candy to my wife's relatives.
Joe: "Assorted nuts?"
Jim: "You said it."

172. On the steps of a rich man's house a habitual beggar met one of his own kind. The latter advised him to go away, saying, "Do not go up today, the Baron is out of sorts and he refuses to give anyone more than a dollar." "I will go up anyway," replied the first. "Why in the world should I make him a present of a dollar? Is he making me any presents?"

173. "Oscar is the laziest brother-in-law that I've ever seen."
"How tall is he?"
"I don't know, I've never seen him standing up."

174. Waiter: "You wished for coffee without cream sir?"
Man: "Yes, I did."
Waiter: "Well, I'm sorry, but we have no cream. Will you take it without milk?"

175. Judge: "You say that you have appeared in court before. In what suit?"
Defendant: "My blue serge."

176. A drunk staggered up to the sandwich section of an automat and deposited two nickels and a ham sandwich came out. He had put in twenty nickels and had ten sandwiches when the manager came over and said, "Why don't you stop? Haven't you got enough?" "What," exclaimed the drunk, "Quit when I'm on a winning streak?"

177. "Is this the Salvation Army?"
"Yes."
"Do you save bad women?"
"Yes."
"Well, save me a couple for Saturday Night."
178. Boy: "Listen cutie, would you like to make a bet? I'll bet you that I can kiss you without even touching you."
Girl: "I'll take you up on that."
Boy: "Get ready, this is going to be a cinch."
(He kisses her several times.)
Girl: "You touched me when you kissed me."
Boy: "Alright, you win. Here's your nickle."

179. Where there is a snowstorm you will find a white snow-like substance called snow.

180. "Did you read the article in the paper this morning--How To Tell A Bad Egg?"
"No, but I'd advise you that if you have anything important to tell a bad egg you'd better break it gently."
181. Life is an everlasting struggle to keep money coming in, and teeth and hair from coming out.

182. "I'm sorry that I missed your party the other night," said the snooty woman. "Oh, did you?" was the reply.

183. Unhappy motorist (After having just run over a lady's dog):
"I'm awfully sorry ma'am, I will replace your dog."
Lady: "Sir, you flatter yourself."

184. Bill: "You dance very well."
Betty: "I wish I could say the same for you."
Bill: "You could, if you could lie as well as I do."

185. "I shouldn't have eaten that missionary steak" said the cannibal king with a frown.
"For often I've heard the old proverb: You can't keep a good man down."

186. A horse dealer in recommending a saddle horse to his client, said, "If you mount this horse at ten o'clock in the evening, you will be in Monticello at six-thirty in the morning."
"And what would I do in Monticello at six-thirty in the morning?" asked the client.

187. "Do you call that a veal outlet waiter? said the customer. "Why it's an insult to every true calf in the country."
"I didn't mean to insult you sir," said the waiter.

188. "I see that the admiral has been reduced in rank."
"What is he now, a commodore?"
"No, he's his wife's second mate."

189. When a father returned home in the evening, his six year old daughter said, "There was a strange man here to see you today papa."
"Did he have a bill?" the father enquired.
"Of course not. He just had a plain nose like all the rest of us."
190. "I must say, these are fine biscuits," exclaimed the young husband to his wife.
A little later the husband's mother asked him, "How could you say those were fine biscuits when they were as hard as rocks?"
"I didn't say they were fine" he explained, "I merely said I must say so."

191. A distinguished visitor to a mental hospital went to the telephone and had difficulty getting the connection. Exasperated, he shouted to the operator: "Look here girl, do you know who I am?" "No" was the reply, "But I know where you are."

192. Student: "Sir, I don't think I deserve an absolute zero."
Professor: "Neither do I, but it's the lowest mark that I can possibly give."

193. "Who made your teeth Mrs. Murphy?"
"Why the Good Lord did, my son."
"Doctor Stone made mother's and they are nicer than yours."

194. Several little boys were talking.
First Boy: "See this mark on my back? That's because my mother ate strawberries before I was born."
Second Boy: "This mark on my hand is because my mother was frightened by a mouse."
Third Boy: (In deep slow voice) "When I was born my mother cracked a phonograph record, but I'm not superstitious--superstitious--superstitious.

195. A kind hearted clergyman asked a convict how it was that he came to be in jail. The fellow said with tears in his eyes that he was coming home from a prayer meeting and sat down to rest. He fell asleep and while he was asleep the county built a jail around him, and when he woke up the jailer wouldn't let him out.

196. "Was your last fire a bad one?"
"Yes indeed. I barely made expenses."

197. Operator: "Number please."
Drunk, in a phone booth: "Number lases, I want my peanuts."

198. A finicky lady fussed and argued for a long time with her butcher over a piece of lamb and finally said, "You know this really looks more like mutton than lamb."
"Well," remarked the disgusted butcher, it was lamb when I first showed it to you lady."
199. She had been conspicuously absent from the dance floor and her fiancé went out to find her. As they returned he said, "I saw that stranger kissing you."
"Yes?" she answered.
"Where is that guy? I'll teach him a thing or two, he raged. "Ah darling," she said, "I don't think you could."

200. Willie: "Papa, why don't you go away so I can see mama dump the salesman off the fire escape?"
Papa: "Why Willie, what on earth are you talking about."
Willie: "Why I heard her tell him that she'd tip him off as soon as you left."
### PROFILE CHART FOR THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY

For high-school, college, and adult ages

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**Comment:**

**Date:**

**Middle:**

**First:**

**Last:**

**Name:**

**Inactivity, Lowness, Impulsiveness, Rhymthymia, Submissiveness, Shyness, Sociality, Emotional Instability, Depression, Subjectivity, Hypersensitivity, Hostility, Belligerence, Unreflectiveness, Criticalness, Tolerance, Femininity, Masculinity**

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Appendix C

Additional Tables For the Description
of the H.H.L. and L.H.L. Subjects

Table 10

Age Characteristics of the H.H.L. and L.H.L. Ss

<table>
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<th>Age in Years</th>
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Table 11

Educational Level of H.H.L. and L.H.L. Ss

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>H.H.L. Group</th>
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Table 12

Geographical Background of H.H.L. and L.H.L. Ss

<table>
<thead>
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<th>Area of U. S.</th>
<th>H.H.L. Group</th>
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*One H.H.L. Subject was from Guam*
**Table 13**

Urban vs. Rural Background of H.H.L. and L.H.L. Ss

<table>
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<th>Background</th>
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<td><strong>Metropolitan</strong></td>
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* A town or small city

** A city and suburban area of a million or more population
Table 14

Occupational Status of the Principal Sources of Financial Support for H.H.L. and L.H.L. Subjects*

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<th>Rating Assigned to Occupation</th>
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<td>B. Proprietors and Managers</td>
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<td>C. Business Men</td>
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<td>2</td>
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<td>D. Clerks and Kindred Workers</td>
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<td>F. Protective and Service Workers</td>
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*Adapted from Warner, Meeker, and Bells (202, pp. 140-141).
Appendix D

Female Raw Scores and Their Corresponding Male Equivalents on Traits A, F, and M of the Guilford-Zimmerman

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Appendix E
Munroe Inspection Rorschach Record*
Appendix F

Qualitative Data Relative to The Behavioral Adjustment of H.H.L. and L.H.L. Subjects

When information about the behavioral adjustment of the H.H.L. and L.H.L. subjects was obtained in the ways described in Chapter IV, one of the most striking findings was that of the 14 subjects who had received twenty or more checks for deviations on the Munroe Check List, and hence an F adjustment rating, seven of them, or 50% were well known to the school officials as serious adjustment problems. By comparison, 3 out of the 11 subjects having obtained 16 to 20 deviant checks, and hence a D adjustment rating, were known to the school officials as serious adjustment problems. Of the 17 subjects who received from 11 to 15 deviant checks and a C adjustment rating, 5 of them, or 29%, were known to the officials but were regarded as minor adjustment problems.

By contrast, of the 24 subjects having 10 or less deviant checks, and hence an A or B adjustment rating, 5 subjects, or 21%, had sought and received what is termed "routine vocational counseling" which signifies that no evidence of emotional disturbance was found by psychologists during the course of this counseling. None of the A and B adjustment subjects had ever come to the attention of the officials for adjustment difficulties.

Of the 33 H.H.L. subjects of both sexes, only one was a known serious adjustment problem. This was a female subject who had received 18 deviant checks on the Munroe Check List and was the only H.H.L. subject to receive an adjustment rating as low as D. In addition, two of the H.H.L. subjects, a male and female, were considered minor adjustment problems and both had received C.
adjustment ratings.

By contrast, of the 33 L.H.L. subjects, twelve of them were known to be adjustment problems. Of these, five had in the past or were at the time receiving some form of medical or psychotherapeutic aid for their emotional difficulties. All of these five had received more than 20 deviant checks and an E adjustment rating. Of particular interest is the one L.H.L. subject who had received as high as a B adjustment rating on the Rorschach. This was a male subject who had sought and received vocational counseling and was considered well adjusted by the psychologist who counseled him.

The following is a description of the information obtained about each of the subjects who were either known as adjustment problems or had received some form of psychological services from the schools they attended.
High Humor Level Subjects

1. Subject J. H. - 5 deviant Rorschach checks - A Adjustment Rating.
   Male - 25 yrs. old - Junior year - Psychology Major. Had sought and
   received "routine vocational counseling." No evidence of emotional
   disturbance was found at that time.

2. Subject R. S. - 6 deviant Rorschach checks - A Adjustment Rating.
   Male - 21 yrs. old - Senior year - Electrical Engineering Major. Had
   sought and received "routine vocational counseling" while a senior in
   high school. No evidence of emotional disturbance was found at that time.

3. Subject J. K. - 7 deviant Rorschach checks - B Adjustment Rating.
   Male - 22 yrs. old - Senior year - Electrical Engineering Major. Had
   sought and received "routine vocational counseling." No evidence of
   emotional disturbance was found at that time, but the psychologist noted,
   "A little unrealistic about his ability and tends to set goals which are
   too high."

4. Subject D. P. - 7 deviant Rorschach checks - B Adjustment Rating.
   Female - 24 years old - Senior year - Home Economics Major. Raised on
   Guam and lived there during the Japanese occupation. School authorities
   considered her "shy and socially withdrawn" when she first entered college.
   They considered her to have been "making an increasingly better social
   adjustment in the school. A good student."

5. Subject T. M. - 7 deviant Rorschach checks - B Adjustment Rating.
   Male - 20 yrs. old - Senior year - Psychology Major. Seen for "routine
   vocational counseling" when he was a college freshman. At that time the
   psychologist noted that he was "immature" and manifested "adolescent
hostility." No evidence was found of psychopathology at that time.

6. Subject R. C. - 12 deviant Rorschach checks - C Adjustment Rating.

Female - 20 yrs. old - Senior year - Elementary Education Major. Had polio as a child with a residual "stiff arm" while in college. School authorities considered her "shy and socially withdrawn" when she first entered college. During four years of college she became "increasingly more outgoing" and was elected president of the student council.

7. Subject T. H. - 11 deviant Rorschach checks - C Adjustment Rating.

Male - 20 yrs. old - Second sem. sophomore year - Zoology Major. Had sought and received vocational counseling while a college freshman. The psychologist noted he was "hostile and immature," but no evidence was found of psychopathology at that time. A year later he was seen for short-term psychological counseling after being caught "cheating on an examination. The psychologist considered him to possess "character disorder tendencies."

8. Subject J. M. - 18 deviant Rorschach checks - D Adjustment Rating.

Female - 21 yrs. old - Senior year - Elementary Education Major. A known emotional problem. School authorities considered her "extremely withdrawn socially." They noted, "Marked conflict and jealousy" in her relations with a younger sister in the school who is scholastically and socially superior to her.

Low Humor Level Subjects

1. Subject R. S. - 8 deviant Rorschach checks - B Adjustment Rating.

Male 21 yrs. old - Senior year - Journalism Major. Had sought and received
"routine vocational counseling" while he was a senior in high school. No evidence of emotional disturbance was found at that time. He was attending college on an Evans scholarship.

2. **Subject L. B. - 13 deviant Rorschach checks - C Adjustment Rating.**

Female - 21 yrs. old - Senior year - English Major. Known to the school authorities as a behavior problem. She "consistently complains about the living accommodations" at the school and "frequently breaks dormitory regulations" which brings her into conflict with the officers of the student council.

3. **Subject J. D. - 13 deviant Rorschach checks - C Adjustment Rating.**

Male - 27 yrs. old - Senior year - Psychology Major. Has been seen for "vocational counseling" on several occasions. Was dropped from college after two years because of poor scholastic achievement. He returned to college, after working for one year, and was only minimally meeting scholastic requirements. No evidence of psychopathology was found during his counseling contacts, but his counselors regarded him as "highly immature" and a severe educational-vocational adjustment problem.

4. **Subject P. G. - 14 deviant Rorschach checks - C Adjustment Rating.**

Male - 21 yrs. old - Senior year - Philosophy Major. Was a member of a group of students who were assessed relative to potential for medical school. As a result of this assessment the psychologist noted, "Markedly ambitious and yet more submissive than the average college student; markedly withdrawn with above average amount of depressive anxiety."

5. **Subject M. D. - 17 deviant Rorschach checks - D Adjustment Rating.**

Male - 21 yrs. old - Senior year - Journalism Major. Was seen for
assessment prior to acceptance in college because of history of acting-out behavior and vandalism as an adolescent. Assessment revealed a mild character disorder. Was accepted for college and made an adequate scholastic adjustment with no evidence of a continuance of anti-social behavior.

6. Subject M. N. - 17 deviant Rorschach checks - D Adjustment Rating.
Female - 20 yrs. old - Junior year - History Major. A known emotional problem in the school. She was described by the Dean as "very emotional" in the sense of emotional lability.

7. Subject C. A. - 23 deviant Rorschach checks - E Adjustment Rating.
Male - 21 yrs. old - Senior year - English Major. A life-long stuttering problem. He was seen by the school psychiatrist because of his complaint of excessive feeling of inadequacy. The psychiatrist diagnosed him as, "Passive-dependent reaction with a constricted personality."

8. Subject J. D. - 23 deviant Rorschach checks - E Adjustment Rating.
Female - 21 yrs. old - Junior year - Elementary Education Major. An albino. A well known emotional problem in the school and had been under medical care for some time because of her "nervousness." She had been turned down for the convent because of "emotional disturbance."

Male - 21 yrs. old - Senior year - Psychology Major. Had sought vocational counseling while a college freshman at which time he complained of an "inability to memorize." As a result of his initial interview the psychologist had described him as, "highly immature; lacks initiative; press of speech; incoherence of the thought processes." General
psychological assessment procedures were begun, but he missed an appointment for testing and never returned so the case was closed.

10. Subject D. M. - 26 deviant Rorschach checks - E Adjustment Rating.
   Male - 19 yrs. old - Second sem. sophomore year - Philosophy Major. Had sought vocational counseling services while a college freshman. On the basis of the initial interview the psychologist had noted, "An emotionally disturbed student - will require clinical services if he is to be worked with." A battery of aptitude, interest and personality tests was set up for him. He took the aptitude and interest tests but refused to take the personality tests and never returned. The case was closed.

11. Subject A. S. - 23 deviant Rorschach checks - E Adjustment Rating.
   Female - 20 yrs old - Junior year - Business Administration Major. She was under psychiatric care at the time of the investigation. It was discovered later that she had undergone psychodiagnostic testing at the center for psychological services at the larger university. She was an overt homosexual and diagnosed as "A narcissistic character disorder."

   Male - 25 yrs. old - Junior year - Philosophy Major. Although unmarried, he was seen by the school psychiatrist because of a complaint of "sexual impotence." Psychiatrist diagnosed him as, "Latent Schizophrenia With Paranoid Trends."

13. Subject M. Y. - 21 deviant Rorschach checks - E Adjustment Rating.
   Female - 21 yrs. old - Senior year - History Major. A known emotional problem in the school. She had been under medical care for some time for her "nervousness." She had entered a convent at one time, but because of
her emotional difficulties she had been advised to terminate this training
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APPROVAL SHEET

The dissertation submitted by Richard Joseph Haberle has been read and approved by five members of the Department of Psychology.

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the dissertation is now given final approval with reference to content, form, and mechanical accuracy.

The dissertation is therefore accepted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy.

June 1, 1960
Date

Signature of Adviser