HAPPINESS AND SOCIAL INTERACTION

Thesis for the Degree of M. A. MICHIGAN STATE UNIVERSITY ROBERT A. KAPLAN 1968

University

THESIS



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ABSTRACT

HAPPINESS AND SOCIAL INTERACTION

by Robert A. Kaplan

This research was designed to study the relationship between happiness and social interaction. In order to study these phenomenon, a test which measured happiness (HAP test) and a test which measured social interaction (S.I. test) were constructed. Also, the Leary Interpersonal Check List was administered to study the relationships between LOV, DOM, happiness, and social interaction. The three main hypotheses were that (1) happiness was directly related to the amount of social interaction, (2) that happier persons would have more opposite sex interaction, and (3) happier persons would score higher on LOV and DOM of the Leary Interpersonal Check List. As an emperical check for the S. I. test, a selected group kept personal diaries for a period of seven days.

One hundred and eighty subjects took the HAP, S.I., and Leary tests. Twenty-nine kept diaries for seven days. Results showed that happiness as measured by the HAP test was related in a positive and significant manner to social interaction as measured by the S.I. test. It was also found that persons who scored higher on the HAP test had significantly more opposite sex interaction. The variable LOV was positively related to scores on the HAP test, although the variable DOM was not. The diaries indicated that the S.I. test was a better indicator of opposite sex interaction than general interaction. The general conclusion was that there are clear relationships between happiness and social interaction, but that better test measures must be constructed if the relationship between these variables is to be more fully understood.

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APPROVED DATE

HAPPINESS AND SOCIAL INTERACTION

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A THESIS

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CHAPTER I

INTRODUCTION

Past Research

The problem posed by happiness is one much akin to that of the weather. That is, everyone always talks about it, but no one ever seems to do much about it. But unlike the weather, very little is known about the phenomenon of happiness. Even though this is a problem that has been dealt with by philosophers and theologians for a good many centuries, psychologists have been less than enthusiastic in approaching happiness. The principle reason being that it appears to be an obtuse phenomenon, seemingly unquantifiable. The area of psychology that seems to contribute most to the study of happiness is that of physiological psychology. There are many theories of emotion (James-Lange, Cannon-Bard, Lindsley's Activation theory, Papez-Maclean, and work done by Olds and others on the location of pleasure centers in the brain, see Morgan, 1965, pp. 310-312), that touch upon the specific area of happiness, but these theories deal mainly with the location of various emotional centers in the central nervous system, and do not deal with the social causes and correlates of happiness. It is in this latter area, i.e., the socialized aspect of happiness, that the focal point of this research shall lie.

The first articles to appear that dealt with happiness as a social phenomenon date to the early 1930's (Watson 1930, Hartmann 1934). These studies concerned themselves primarily with the creation of various scales of self-avowed happiness in which subjects, usually college students, were asked to rate themselves on various scales as to how happy they were, how happy they felt they should be, etc. Also, these studies employed lists of events and adjectives which were scaled on a happynonhappy continuum from which the subject would pick those events or adjectives which were relevant to him. The principle results of these ratings of happiness were that some of these measures had good test-retest reliability, and that usually, the mean scores of subjects on happiness scales fell above the expected mean of possible scores. In other words, most people felt that they were happier than average, and a positively skewed distribution of scores was produced. As a usual second step in much of the work done on happiness (Watson 1930, Hartmann 1934, Symonds 1937, Springer 1935, Goldings 1954), subjects were given a barrage of questions covering a wide array of topics. Thus, relationships between happiness and other variables, such as intelligence, marriage patterns, environment, health, socioeconomic status, and others, could be found. The main features demonstrated by these inventories were: (1) Intelligence is not related to

happiness (Watson 1930, Hartmann 1934, Wilson 1960; also Fellows 1956, Jasper 1930, and Washburne 1941). (2) Many personality measures correlated lowly with happiness. In his article, "Correlates of Avowed Happiness," Warner Wilson states:

It is only natural that tests of personality adjustment should correlate with happiness, although sometimes these correlations are surprisingly low, for example, -.26 with neurotic tendency (Hartmann, 1934), .15 with emotional stability (Wessman and Ricks, 1959), and -.19 with worry (Gurin et al., 1960). Correlations with values and with personality traits are even lower. Hartmann (1934) found no highly significant correlations with any of the variables measured by the Allport-Vernon Scale of Values; Wessman and Ricks (1959) found few highly significant correlations, even though they investigated a large number of personality variables; Wilson (1960) found no highly significant correlations between happiness and preference for various ways of life. (p. 304)

(3) "Perhaps the most impressive single finding lies in the relationship between happiness and successful involvement with people. This trend occurred in many studies . . ." (The studies referred to are those by Gurin <u>et al.</u>, 1960; Veroff, <u>et al.</u>, 1962; Watson, 1930; Wessman, 1956; and Wilson, 1960. See Wilson 1967, p. 306.) This last point was of particular interest to this writer, and the research that is described in this thesis is centered around various hypotheses stemming from the relationship between happiness and social interaction.

Definition of "Happiness"

A most important point in a discussion such as this is that which deals with the definition of "happiness"

itself. This is a common term that has a multitude of meanings. However, only a few of the authors cited above defined happiness, and these definitions tended to label it as a sense of joy, euphoria, contentment, or merely a feeling state opposite to that of unhappiness. Clearly, "happiness" can apply to a wide variety of items and events, some of which do not seem to be very closely related. For example, one can be happy to see his wife, happy that he received an A on an exam, and happy that he was not killed in a lightning storm. The feelings and emotions involved in these three events are not identical, although the same word, "happiness," is used to define all three situations. Happiness seems to infer a sense of joy when seeing one's wife, a sense of pride when receiving an A, and a sense of relief at having lived through a storm. Thus, it is important that happiness, as it will be used in this paper, be defined so that confusion can be held to a minimum.

Since persons selected from the student body made up the subject pool in this research, this writer chose to define happiness <u>as a sense of contentment</u>, or <u>satisfaction</u> <u>with life in one's environment</u>, being in this case, the university environment. Since the university constitutes almost the total environment of the student, it could be said that this definition of happiness is one which encompasses feelings towards all aspects of that environment, such as studying, attending classes, living, eating,

dating, etc. Thus, within this definition of happiness, the ideally happy individual would be one who enjoyed attending school, who enjoyed his courses and professors, and who approved of the general tenor of life at this university.

Problems Encountered in Past Research

In the past, very little has been done to employ empirical checks upon the test measures used. Some investigators, however (Hartmann 1934, Goldings 1954), did make use of empirical testing. Hartmann had four friends of each subject rate that subject upon a happiness dimension that the subject had already completed. Then, the results of the four friends' ratings and the subject's own score were compared. Goldings had clinically trained observers evaluate his subjects for qualities of happiness. These are both, however, rather subjective ratings of feeling states, and offer no form of naturalistic observation. In order to partially get around this problem, this writer included an empirical check in the form of a personal diary for the measure of social interaction, both to be discussed at length later in this paper.

CHAPTER II

HYPOTHESES

The main body of research was carried out to investigate three major hypotheses. These hypotheses will now be stated, followed by a brief rationale for each.

> 1. Those persons who are happiest in the university setting, i.e., those who are most content with themselves in their environment, will be those persons with the greatest amount of social interaction, which includes interaction with all persons of both sexes.

Rationale.--This first hypothesis was derived from the relations reported in the literature, cited above, and from many personal observations. It seems reasonable to assume that in an overly socialized environment such as the large university, that the more active one is in his interpersonal relationships, the more satisfied he will be with his own role in this society, and therefore, the happier he will be.

2. Those persons who are happier will show a greater amount of opposite sex interaction than those persons who are unhappy.

<u>Rationale</u>.--This second hypothesis does not find roots in the literature, but stems solely from personal

observations. In addition to the type of interaction mentioned in the first hypothesis, a social conscious university such as Michigan State University seems to demand a great amount of opposite sex social involvement. Dating, and other forms of interaction with the opposite sex appear to be of vital concern to the student due to the pressures of the university setting, as well as the individual needs of the typical 18 to 20 year-old individual, the general age group of most of the subjects used in this research. It therefore seems reasonable to assume that those persons who engage in more opposite sex interaction, as compared to the average amount of opposite sex interaction, will be those individuals who will feel more complete in a highly socialized atmosphere, and thus, happier.

> 3. Those persons who are happier should tend to score higher on the LOV and DOM areas of the Leary Interpersonal Check List. At the same time, there should exist a positive and significant correlation between the scores obtained by the Interpersonal Check List, and scores on the Happiness Measure, devised by this writer, and described later in this thesis.

<u>Rationale</u>.--This third hypothesis was formulated for several reasons. The Leary Interpersonal Check List is an established, and often used clinical tool. Its purpose is to provide personality profiles of the persons who take

this Check List, and does so by obtaining a number of scales and subscores from the results of each individual (see Appendix C for a complete explanation of this scoring procedure). The Check List provides four subscores: love, hostility, dominance, and submission, and two main scores, LOV (which is a combined love score), and DOM (which is a combined dominance score). It would seem reasonable that if these scores really do tap these personality areas, that a happier person would then score high in LOV, and perhaps high in DOM. Thus, the Check List scores should correlate with the obtained scores from this writer's own tests. Also, most of the previous literature reported low correlations of happiness variables with other personality measures (see Wilson, 1967, p. 306), and the use of the Check List in this research will serve to support or refute these past findings.

CHAPTER III

METHODOLOGY

Formulation of a Happiness Measure

As stated above, most of the previous measures used for accessing happiness took the form of scaled ratings of self avowed happiness. This writer felt that this type of measure was too obvious, and too easily faked by the subjects. This "fraud factor" is admittedly very difficult to control for in any testing situation, but it was felt that simple tests such as picking adjectives from a scaled happy-nonhappy list, or a graded happiness scale in which one marks his position on the scale, were inadequate. Also, previous tests of happiness were rather broad in scope, making no distinction between the various types of happiness being measured. Therefore, it was necessary to construct a scale which would measure the type of socially determined happiness which this writer has previously defined. This test (see Appendix A) was a fifty question true-false measure, easily scorable by machine, and not too time consuming. In order to control for the effects of acquiescense set, or the tendency for subjects to record affirmative answers no matter the content of the questions, the test was balanced so that there were approximately equal numbers of true and false answers

required in order to obtain a perfect score (there were 26 true answers, and 24 false answers required). The test was constructed such that an ideally "happy" individual would score a perfect score of fifty. Typical items from this test (hereinafter referred to as the HAP Test) were "25. I often choose to dine alone," "22. I like my room mate," and "47. I have a pretty solid group of friends here at M.S.U." As for the problem of fraud, it was felt that a multi-question test dealing with a number of different environmental situations would be a more subtle way of obtaining a happiness score, and thus not be as susceptible to fraud as some of the more obvious scaled tests mentioned above.

Formulation of a Scale of Social Interaction

It was decided that a rather straight forward inventory type scale would be best fitted to the needs of this experiment. A test of forty-four questions was constructed (see Appendix A), each having a scaled range of answers from one to five. The questions were designed to obtain a well-rounded view of the total social activity of the subjects. The questions generally were of two types. One called for rather clear, factual answers, such as "9. I have the following number of close friends: (a) 0 (b) 1-2 (c) 3-4 (d) 5-6 (e) 7 or more." The other type of questions were more of a preference type, such as "11. I like going to the movies with a date." All

forty-four questions on the Social Interaction Measure (hereinafter referred to as the S.I. test) were arranged so that an individual who had the greatest amount of social interaction would score "five" on each question. Some of the questions, however, such as "10. I go out with friends of the same sex (a) never (b) rarely (c) sometimes (d) often (e) always," due to their own particular nature, do not lend themselves to this strict interpretation, since a "four" answer is more likely in this instance than a "five" answer. In general, however, the higher the score, the greater the amount of social interaction indicated.

Subtest Measures on the S.I. Test

Certain questions were specifically designed to measure interaction with persons of the opposite sex, and certain questions were designed to obtain interaction scores for members of the same sex. Typical questions of this sort include, for opposite sex interaction, "11. I like going out to dinner with a date," and "30. I had a long walk with a date (in the last four weeks) (a) 0 times (b) 1 time (c) 2-3 times (d) 4-5 times (3) more than five times." (This subtest measuring opposite sex interaction will be hereinafter referred to as Opp. sex subtest). Corresponding questions which measured same sex interaction were "21. I like going out to dinner with a friend," and "38. I went for a long walk with a friend (in the last

four weeks), etc." (This subtest which measures same sex interaction will hereinafter be referred to as the Same sex subtest.) The Opp. sex subtest was comprised of questions 11-19 and 29-36. The Same sex subtest was comprised of questions 20-28 and 37-44.

Procedure

<u>Subjects</u>.--On three consecutive nights during the third week of the spring quarter, some 180 students came in to serve as subjects. These students were all from the introductory psychology classes, and were "paid" for their services in the form of research credit. An additional incentive was an opportunity to earn some cash for further work in this research, although the nature of this further work (the keeping of a diary) was not specified at the time.

Method.--Each student was given a packet of three tests which included the HAP test, the S.I. test, and a copy of the Leary Interpersonal Check List (see Appendix A). In addition, each student was given I.B.M. scoring sheets, and a separate sheet of instructions, indicating which test was to be taken first, and which scoring sheets were to be used with each test. This was done to keep the necessity of verbal instruction to a minimum, since subjects were starting at varied times over a period of one and one-half hours. (It might be added at this point that a fellow colleague used this same subject pool, and gave

each subject one 55 question test before they received their packet of three tests, and then took their pictures after they had completed the packet of three tests. The entire time involved for all four tests and the photograph was about one hour.)

The Use of Personal Diaries as an Empirical Check for the S.I. Test

A few weeks after the original testing, thirty students were chosen at random from the pool of about 150 students who had indicated they would be interested in doing further work for credit and cash. This group included 15 males and 15 females, although one of the females did not finish her diary, and thus the final group consisted of some 29 subjects. A meeting was held with these subjects, and it was explained to them that they were to keep special diaries. These diaries consisted of a complete record of all social interaction for a period of seven days. Social interaction was defined primarily as any conversation with another individual, although any type of activity in which interpersonal contact was established was also considered to be valid social interaction. The manner in which subjects recorded this information was as follows. Each subject was given dittoed sheets with 25 lines on each sheet. Whenever a subject engaged in social interaction, he was to record the initials and sex of the person with whom the interaction took place, the approximate length

of the conversation, and the approximate time of day of the conversation. Each subject was given 14 such sheets with the additional instructions that it was unknown how many persons the average person talks to during the course of the twenty-four hour day, and that they should not use the 50 lines available per day as any sort of guide. In addition to receiving more research credit for this work, each subject received \$4.00 as an extra incentive for keeping up with the diary. Assistants were assigned to groups of these students, and were to call them at least every other night to remind them about keeping up with their diaries. At the end of seven days, the diaries were collected and scored by assistants. There were thirteen scores taken from each diary. These scores were: (1) the number of total interactions; (2) the number of opposite sex interactions; (3) the number of the same sex interactions; (4) the number of interactions up to 5 minutes; (5) the number of interactions from 5-15 minutes; (6) the number of interactions from 15-30 minutes; (7) the number of interactions from 30-60 minutes; (8) the number of interactions over 60 minutes; (9) the number of interactions between 12:00 A.M.-6:00 A.M.; (10) the number of interactions between 6:00 A.M.-12:00 Noon; (11) the number of interactions between 12:00 Noon-6:00 P.M.; (12) the number of interactions between 6:00 P.M.-12:00 Midnight; and (13) the total number of hours of interaction, found by adding the amount of time indicated in items 4 through 8.

Further Breakdown of HAP Test Results

In order to further investigate the differences between the extreems on the HAP test, the top and bottom thirty subjects' scores were analyzed more fully. T-tests were run on the S.I. test scores, the Opp. and Same sex subscores, and the six Leary scores obtained from the Check List.

CHAPTER IV

ANALYSIS OF RESULTS AND DISCUSSION

Reliability of HAP Test

Since the HAP test was a new measure, it was necessary to determine its reliability. A Kuder Richardson KR-20 was run to assess the reliability of the HAP test. The internal reliability given by this formula was .87, which suggests that the HAP test can be considered to be internally reliable. Along with the KR-20, it was possible to get point biserial correlations for each item. These were useful in pointing out some items that did not seem to fit in very well with the rest of the test itself. These items were "ll. I miss my family," with a point biserial correlation of .05; item 6 "I seldom leave the dorm during weekends," .17; item 16 "M.S.U. was one of my first place schools," .18; item 17 "I have enough time to be alone," .17; and item 10 "I often contemplate changing my major" .19. Some of the items with higher correlations were 34 "I feel lost in the crowds here" (with a correlation of .49), item 4 "I would like to transfer to another school" (.54), item 41 "I feel that the faculty is very

impersonal, and that most professors don't care much about me" (.55). The item with the highest point biserial correlation was item 28 "I am happy at M.S.U.," with a correlation of .59. From the data given by these correlations, it appears that the HAP test is measuring variables along the appropriate continuum since the highest correlating items are those dealing more directly with feelings along a happy-unhappy dimension, as opposed to the lower correlating items such as "I miss my family" or "I often contemplate changing my major." Certainly the latter variables are related to happiness, but apparently not in a very consistent manner in this sample of college students.

In order to better understand just what the HAP test was actually measuring, a factor analysis was run. Of all the underlying factors running throughout the data, there seemed to be five major factors, and these will be considered here. Although some 16 factors displayed Eigenvalues greater than 1.00, and 16 factors were rotated, only five displayed a sufficient amount of loadings higher than .30. These five correspond to the five Eigenvalues which were greater than 2.00, and accounted for about 27% of the variance.

The first factor seemed to encompass a "feeling of general discontent with one's self and with M.S.U., characterized by an aura of general unhappiness and a desire to leave M.S.U." The second factor seemed to be "a positive feeling about attending school at M.S.U., stemming in

part, from the social atmosphere." The third factor revealed "a sense of well being, based upon friendships found at M.S.U." The fourth factor seemed to be "a feeling of loneliness, and a longing to get away from M.S.U. as often as possible." This factor is distinguished from the first factor by the fact that there was very little overt negative content in the variables that comprised it. The fifth, and final factor, reflected a "strong positive feeling towards the faculty and administration at M.S.U." (See Appendix D for a complete breakdown of these factors.) From this analysis, it appears that the HAP test is indeed measuring variables that are very much tied to happiness. The factor analysis also permits one to see just how the different variables cluster so that a better test could be constructed. Factor one is comprised of some ten variables which, apparently, are measuring almost the same thing. Certainly, with this information in mind, new questions could incorporate this factor in one or two variables, serving the purpose of trimming non-essential material from the HAP test itself, and clearly demarcating voids that could be filled with other questions which could tap different aspects of the area of happiness. The fact that the HAP test was internally reliable indicates that the results obtained by this measure are probably reproducable in a re-test situation. However, the factor analysis points more to the actual content of the test in that it "asks what it measures." The HAP test does, it seems,

measure various underlying factors which are closely related to happiness, but it points out the need for other factors which could be measured. These additional factors could include variables which get at the question "What about happiness that is not so directly tied to the university environment?" In other words, what about more generalized feelings of unhappiness, or happiness? How could these factors be tapped? Although the HAP test is sufficient in that it is a first attempt measure, it could, and should be improved if further work is to be done along these lines. Questions dealing with aspects of religion. feelings of inadequacy, insecurity about the future, external pressures such as from parents or the government, all must, in some way, contribute to happiness, just as a sunny day in spring often does. By the use of further factor clustering, and additional or revised measures of the HAP test, one could, with further testing, produce a more complete measure of happiness, and thus help in the quantification of this rather obtuse feeling state.

Reliability of the S.I. Test

Due to the structure of the S.I. test, it was impossible to run a KR-20. There is, however, an analogous program called the Alpha program which is suited for measures with Likert type scales. The Alpha test gave an internal reliability of .82, suggesting that the S.I. test is also internally reliable. Intercorrelations were also computed for each item, the lowest being .75.

A factor analysis was run on the S.I. test also. Six major factors were isolated, which accounted for about 42% of the variance. The most powerful factor was the first, which "dealt with general frequencies of dating patterns." The second factor was one which "revealed less socialized interaction with a date, or friend, such as studying, or having meals." The third factor revealed "a sense of close involvement with a friend of the same sex." The fourth factor was "a strong positive feeling for partying and drinking with a member of the same sex." The fifth factor revealed "a close, very personal involvement with a date." The sixth factor described "a more discriminate desire for parties and drinking, including such activities only when with a date." (See Appendix D for a complete breakdown of these factors.) These factors indicate that the S.I. test was comprised of factors which were more concerned with dating and social activities, as opposed to being equally concerned with matters involving both sexes. Also, the manner in which variables clustered within each factor indicated that there was a great deal of noise in the test itself, and that many fewer questions could be employed to obtain these same factors. The validity of this test will be discussed more fully when the results of the diaries are discussed.

Results of the HAP and S.I. Measures

A total of 180 subjects took each of these measures. On the HAP test, the mean score out of a possible 50 was 38.74, with a standard deviation of 7.10. The S.I. test yielded a mean score of 128.61 out of a possible 220. The standard deviation was 16.00. The opp. sex subscore (of the S.I. test) had a mean of 49.94 out of a possible 85, with a standard deviation of 8.77. The Same sex subscore yielded a mean of 46.13 out of 85, with a standard deviation of 6.70.

Correlations between HAP, S.I. and Subtest Scores and Discussion of the First Hypothesis

As one will recall, the first hypothesis to be tested in this research was:

Those persons who are happiest in the university setting, i.e., those who are most content with themselves in their environment, will be those persons with the greatest amount of social interaction.

In order to test the validity of this hypothesis, the scores from the HAP test and the S.I. test were correlated, to see just what kind of rationship existed between these two major variables. Using the Pearson "r" in this, and all the correlations in this reaserch, it was found that the scores on the HAP test correlated with the scores on the S.I. test with r = .32. This was significant at the 0.002 level, two-tailed, with 178 degrees of freedom. The HAP test correlated with the Opp. sex subtest with r = .21,

significant at the 0.01 level, two-tailed, with 178 degrees of freedom. The HAP test correlated with the Same sex subtest with r = .24, significant at the 0.002 level, two-tailed, with 178 degrees of freedom (see Table 1). These figures tend to indicate that the first hypothesis is generally true. There is, indeed, a significant,

TABLE 1.--Correlations of relevant scores with HAP scores.

Main S.I. Score	r = .32
Opp. Sex Interaction (S.I. test)	r = .21
Same Sex Interaction (S.I. test)	r = .23
Leary LOV	r = .32
Leary DOM	r = .17
Leary love	r = .25
Leary hostility	r =23

and positive relationship between "happiness," as measured by the HAP test, and "social interaction," as measured by the S.I. test. However, these are not very high correlations. If there is truely a strong relationship between happiness and social interaction, the correlation should have been stronger. Apparently, other investigators have run into this same problem.

The evidence of validity based upon agreement between avowed happiness and other measures is meager. It is appropriate, of course, to interpret these validity coefficients in light of the validity of other trait measures . . . ratings . . . and other data [which] . . . suggest that validity coefficients of .3 and up are relative good as far as the validity of traits other than happiness is concerned. (Wilson, 1930, p. 294)

A possible explanation may be that the measures employed to evaluate happiness and social interaction may not be touching upon the right factors. As was indicated in the discussion above, the HAP test is most likely not a complete measure of the variable "happiness." As will be indicated later in this thesis, the S.I. test also seems to be lacking somewhat in getting at the full interaction patterns of the subjects.

Results of the High and Low HAP Test T-Tests, and Discussion of the Second Hypothesis

T-tests were run between selected variables of the top thirty and lower thirty scores on the HAP test. The results were as follows: The mean interaction score of the "high happy" group was 134.37, as compared to 119.70 for the "low happy" group, both out of a possible 220. These means yielded a t = 1.935, which, for 58 degrees of freedom, is just below the 0.05 significance level. The Same sex interaction scores yielded means of 46.96 for the "high happy" group and 43.53 for the "low happy" group. In this case, t = 1.956, with 58 degrees of freedom, again just below the 0.05 significance level. The Opp. sex interaction means were 53.16 for the "high happy" group and 47.43 for the "low happy" group. This produced

a t = 2.48, significant at the 0.02 level, with 58 degrees of freedom (all of the above t's are two-tailed). From these results, the second hypothesis

> Those persons who are happier will show a greater amount of opposite sex interaction than those persons who are unhappy,

seems to be valid. The differences between opposite sex interaction were those which were most clearly different, and were the only scores that reached the 0.05 significance level. What these results illustrate is that in a population of college students, the variables dealing with opposite sex interaction more clearly differentiate the "happy" and "unhappy," as determined by the HAP test. This result. as predicted, is not at all surprising. The role that dating plays in this university setting is large and often underestimated. Due to the fact that the university throws together great numbers of individuals with similar educational backgrounds, interests, and degrees of intelligence, for the first time most students are faced with a situation in which there are ample opportunities to expand their social lives in any direction they desire. At the same time, students are faced with a great amount of freedom in movement, and a consequence of this freedom is often expanded energy in engaging in activities with the opposite If, due to any number of reasons, students are sex. thwarted in their social involvement with the opposite sex, these students are apt to feel less involved with the university situation, and often, less happy.

Results of the Leary Interpersonal Check List Scores, and Discussion of the Third Hypothesis

The Check List gave four subscores and two main scores (see Appendix C). The dominance subscore gave a mean of 14.73, with a standard deviation of 4.55. The submission subscore gave a mean of 14.94, and a standard deviation of 5.61. The love subscore gave a mean of 16.63 and standard deviation of 5.79. The hostility subscore gave a mean of 15.36 and a standard deviation of 4.89. The main score LOV gave a mean of 1.27, with a standard deviation of 8.15, and the main DOM score was -0.22, with a standard deviation of 7.34. Selected correlations with these scores and the HAP test scores are as follows: DOM and HAP, r = .17; LOV and HAP, r = .32; subscore love and HAP, r = .25; subscore hostility and HAP, r = -.23. All but the DOM-HAP correlation were significant at the 0.002 level, two-tailed, and the DOM-HAP correlation was significant at the 0.02 level, two-tailed. All had 178 degrees of freedom (see Table 1). T-tests run on the top and lower thirty scores on the HAP test yielded a significant difference between LOV scores. The "high happy" group had a mean score of -3.83. The resultant t = 3.89, significant at the 0.0003 level, two-tailed, with 58 degrees of freedom. There were no significant differences on the DOM scores.

The third hypothesis stated the following:

Those persons who are happier should tend to score higher on the LOV and DOM areas of the Leary Interpersonal Check List. At the same time there should exist a positive and significant correlation between the scores obtained by the Interpersonal Check List, and scores on the Happiness measure (HAP test).

The .32 correlation between the HAP test scores and the LOV scores seems to indicate that these measures are related. Again, this is not a very powerful relation, although in this case, Leary and this writer have not set out to measure the same variables. It was thought that persons who would score high on the HAP test would be those who were more out going, forceful, and dominant in their relationships. If one takes Leary's DOM as a measure of these tendencies, this aspect of the third hypothesis must be rejected. There was only very low correlation of .16 between the DOM scores and the HAP scores, and the t-tests between the high and low "happy" groups revealed no significant differences between the two groups on DOM scores. These results indicate that the Leary Check List is not readily compatible with other measures which are trying to assess happiness. Although there was a .32 correlation between LOV and HAP scores, the mean score for the "high happy" group of thirty subjects was only 5.74 which corresponded to a standard score of 55 from the range of all possible LOV scores. This indicates that the "high happy" group was not very high on LOV, compared to standards Leary has compiled. The "low happy" group had a mean LOV score of -3.82, which corresponded to a standard score of

44, indicating that the "low happy" group was also very close to the mean score of all subjects which Leary found.

Results of the Diaries and Discussion

As stated above, the diaries were scored on thirteen variables. The four variables of most interest were the total number of interactions during the week, the total number of opposite sex interactions during the week, the total number of same sex interactions during the week, and the total number of hours of interaction for the entire These scores were correlated with the scores from week. the S.I. tests for these 29 subjects. The correlation between the total number of persons talked to during the week and the main interaction score from the S.I. test was r = .31, which was not significant for 27 degrees of freedom. The correlation between the Same sex subtest and the number of persons of the same sex talked to during the week was r = .34, again not significant for 27 degrees of freedom. The number of persons recorded in opposite sex interaction correlated with the main score of the S.I. test with r = .44, significant at the 0.02 level, two-tailed, for 27 degrees of freedom, and correlated with Opp. sex interaction score with r = .47, significant at the 0.01 level, two-tailed with 27 degrees of freedom. The correlation between the total hour score and the main interaction score on the S.I. test was r =.16, not significant. The correlations of the 13 diary

variables and the HAP, and S.I. test variables are reproduced in Appendix B.

The diary was to serve the very important purpose of providing an empirical check on the S.I. test, the measure of social interaction. If one is to accept the diary as such, the S.I. test is not, on the whole, an adequate measure of social interaction. The S.I. test is, however, an apparently reliable measure of opposite sex interaction. The correlations of .44 and .47 were the highest obtained in this research. This indicates that the test itself must be reworked to move away from its emphasise on opposite sex interaction to include variables which will more reliably measure same sex interaction. This could be done by eliminating the rather subjective opinion questions, e.g., "I like going out to dinner with a date," which tend to place the subject on the spot, since he might enjoy going to dinner with a friend just as much, but feel compelled, for various reasons, to place a higher value on the opposite sex answer. These reasons might include suspicion as to just what the test is measuring, and feeling afraid to score as a "queer" or "non-normal" individual by recording high preferences for same sex type questions. Also, one may "like" to do things with the opposite sex without actually doing them, thus jacking up the opposite sex interaction score. One solution to this problem is to rid the test of these "like"

questions, and rely totally on simple questions which call for actual recounting of past experiences.

There is another possibility, and that is that these diaries were not valid empirical measures of the interaction that occurred during the week. The only valid way to check the effectiveness of the dairy would be to send spies out to follow these subjects, and make separate listings of the various contacts made during the days. An elaborate checking mechanism would be something like a small radio transmitter that the subject would carry with him which would automatically record the persons he had conversed with. These schemes are rather impractical, however, at this stage of this research. Thus, one is forced to rely upon the diaries themselves. The impressions that this writer received on how the subjects were actually keeping their diaries was mixed. Some reported to great lengths the manner in which they were trying to keep accurate reports. The writer received several calls, asking how to score interaction at a large party, or what to do at work, and one boy reported that he almost got thrown off a bus because he asked the initials of a girl he had been talking to so he could record them in his diary. On the other hand, some of the diaries turned in were very sparse. Whether these persons really had only very small amounts of interaction, or whether they were merely lazy is hard to tell. Not enough

persons kept diaries, so that it was impossible to detect any major traits among the persons who did not keep up their diaries. This in itself might be valuable information, in that the reason these subjects do not keep up diaries may be related to some aspect of their social adjustment, happiness, or some other unknown variable. The use of a measure such as a diary is, however, very important, since it brings much needed new techniques into the research arsenal.

CHAPTER V

CONCLUSION

This research has shown that happiness is related in some degree to social interaction. The extent to which this is so is still not clear, due to the inadequacies inherent in the test measures, as described above. The trends described do seem to exist, but before variables which can be used to quantify happiness are found, more work must be done in this area. Better tests must be designed, in the manners outlined above, and more empirical checks must also be devised so that the tests will have validity in the real world. Why, one may ask, even bother to try to quantify such an entity such as happiness? The answer is that happiness is something which most persons are constantly involved with. The desire to be happy seems to be a universal want, and to better understand the variables which constitute happiness seems to be a very logical step. If psychology is to become truely interested in man himself, than studies of phenomenon such as happiness are of the utmost importance.

APPENDIX A

HAP Test and S.I. Test

Please answer the following questions True, or False. Place your answer in the appropriate space on the answer sheet provided. Some questions may seem as if they do not apply, or they may be hard to answer, but please answer all of them. 1. In general, I was much happier in high school than at M.S.U. 2. In general, the professors here are good. 3. Most classes here are exciting. 4. I would like to transfer to another school. 5. I get along with my room mate. 6. I seldom leave the dorm during weekends. 7. I feel like going home often. 8. M.S.U. is better than I had expected. 9. I get along with the people on my floor (or neighbors). 10. I often contemplate changing my major. 11. I miss my family. 12. I plan to graduate from M.S.U. 13. There are too many things wrong at M.S.U. 14. I enjoy the social atmosphere of N.S.U. 15. In general, the faculty cares about the students at M.S.U. 16. M.S.U. was one of my first choice schools. 17. I have enough time to be alone. 18. I dislike the work load here. 19. There are a number of changes I would like to make at this university. 20. I would recommend this school to a brother, sister, or friend. 21. I do not often feel that I have been graded unfairly. 22. I like my room mate. XIX 23. A degree from N.S.U. is just as good as a gefree degree from anywhere. 24. I often feel blue and depressed for no reason. 25. I often choose to dine alone. 26. I fit in very well with my crowd of friends. 27. I have trouble sleeping nights. 28. I am happy at N.S.U. 29. No one has time to talk to me. 30. The pressure for grades is far too great at this school. 31. I like being away from home. 32. I often regret coming to school here. 33. I will be proud to be an alumnus of M.S.U. 34. I feel lost in the crowds here. 35. M.S.U. has given me exciting and highly rewarding experiences. 36. I am often envious of friends at other colleges. 37. I think that president Hanna is doing a good job. 38. There are not enough courses offered in the special areas in which I am interested. 39. I feel that m.S.U. will have adequately prepared me for my future by the time I graduate. 40. Most of the people here are dull. 41. I feel that the faculty is very in personal, and that most professors don't care much about me. 42. I find that I am bored in many of my classes. 43. I like the people on my floor. 44. I resent all the emphasis placed on sports at M.S.U. 45. The many services offered b, the university make me feel that those in charge really do care about the welfare of the students. 46. I rarely complain about the conditions at M.S.U. 47. I have a pretty solid group of friends here at M.S.U. 48. I often feel overwhelmed by the demands of college. 49. The social life at h.b.U. is as good, or better than I had expected. 50. I get away from nere on weekends as much as possible.

Each of the following questions has a choice of five answers. Pick the answer that is most correct for you, and mark it on the answer sheet provided. 1. I go out on a date a) 0-2 times a term b) 3-5 times a term c) 2-4 times a month d)1-2 times a week e)3-7 times a week 2. My social life is a)quite poor b)not too bad c)average d)good e)great 3. I go out with the same person again (i.e., second, third, etc., time) a)never b)rarely c)sometimes d)usually e)always 4. Compared to most people, I go out a) much less than most b) less than most c) about the same as most d) more than most e) much more than most 5. To suit myself, I would like to go out a)much more often b)more often c)about the same d)less often e)much less often 6. Compared to high school, I max now go out a)much less often b)less often c)about the same d)more often e) much more often 7. I should study a)much less than I do now b)less than I do now c)about the same as I now study d) more than now e)much more than now 8. I spend the following amount of time studying each day and/or night (for an average weekday) a) more than four hours b)3-4 hours c)2-3 hours d)1-2 hours e)0-1 hours 9. I have the following number of close friends a) **‡** 0 b) 1-2 c) 3-4 d) 5-6 e) 7 or more 10. I go out with friends of the same sex a)never b) rarely c)sometimes d)often e) always The following items are to be answered by choosing an appropriate response from the following five point scale: 1.= I strongly dislike this. 2.= I don't like doing this. 3.= I am rather neutral about this. 4.= I like to do this. 5.= I like to do this very much. 11. I like going to the movies with a date. 12345 12. I ikin like going out to dinner with a date. 12345 13. I like studying at the library with a date. 12345 14. I like talking about the war, civil rights, and other political topics with a date. 12345 15. I like talking about my own feelings of love and life with a date. 12345 16. I like going to parties with a date. 12345 17. I like going on long walks with a date. 1 2 3 4 5 18. I like trying to understand a personal problem with the help of a date 12345 19. I like going out drinking with a date. 12345

The following items are to be anwsered by means of the max same scale. 1.= I strongly dislike this. 2.= I don't like doing this. 3.= I am rather neutral about this. 4.= I like to do this. 5.= I like to do this very much. In these items, "friend" means a friend of the same sex. 20. I like going to the movies with a friend. 12345 21. I like going out to dinner with a friend. 12345 22. I like studying at the library with a friend. 12345 23. I like talking about the war, civil rights, and other political topics with a friend. 12345 24. I like talking about my own feelings of love and life with a friend. 12345 25. I like going to parties with a friend. 1 2 3 4 5 26. I like going on long walks with a friend. 12345 27. I like trying to understand a personal problem with the help of a friend. 12345 28. I like going out drinking with a friend. 12345 In the following items, indicate the number of times you have participated in the following activities in the last four weeks. (Do not include any activities beyond the period of the last four weeks please.) 29. I went to an athletic event, lecture, concert, or other such event with a date (in the last four weeks) a) 0 times b) 1 time c) 2-3 times d)4-5 times e)more than 5 times 30. I went for a long walk with a date(in the 1 st four weeks) a)O times b)l time c) 2-3 times d) 4-5 times e) more than 5 times 31. I had a meaningful talk with a date(in the last four weeks) a) 0 times b)1 time c)2-3 times d) 4-5 times e) more than 5 times 32. I went on a study date (in the last four weeks) a) 0 times b)1 time c) 2-3 times d) 495 times e) more than 5 times 33. I went to the movies with a date (in the last four weeks) a) O times b) 1 time c) 2-3 times d) 4-5 times e) more than 5 times 34. I went out to dinner with a date (in the last four weeks) a) 0 times b)1 time c)2-3 times d) 4-5 times e) more than 5 times 35. I went out drinking with a date(in the last four weeks) a) 0 times b) 1 time c)2-3 times d)3 4-5 times e) more than 5 times 36. I went to a party with a date (in the last four weeks) a) O times b) 1 time c) 2-3 times d) 4-5 times e) more than 5 times

In the following items, indicate the number of times you have participated in the following activities with a friend, or friends of the same sex. (Again, include only those events which have taken place in the past four weeks) 37. I went to an athletic event, lecture, concert or other such event with a friend (in the last four weeks) a)O times b) 1 time c) 2-3 times d) 4-5 times e) more than 5 times 38. I went for a long walk with a friend a) 0 times b) 1 time c) 2-3 times d) 4-5 times e) more than 5 times 39. I had a meaningful talk with a friend a) 0 times b) 1 time c) 2-3 times d)4-5 times e) more than 5 times 40. I went to the library, or some other place to study with a friend a)) 0 times b) 1 time c) 2-3 times d) 4-5 times e) more than 5 times 41. I went to the movies with a friend a)O times b) 1 time c) 2-3 times d) 4-5 times e) more than 5 times 42. I went out to dinner with a friend a) o times b) 1 time c) 2-3 times d) 4-5 times e) more than 5 times 43. I went out drinking with a friend a) 0 times b) 1 time c) 2-3 times d) 4-5 times e) more than 5 times 44. I went to a party with a friend a) O times b) 1 time c) 2-3 times d) 4-5 times e) more than 5 times.

The Interpersonal Check List

Nome	Age Sex	Date	Testing #
Address	City	Phone	Education
Occupation	Marital Status	Referred by	
Group	Other		

DIRECTIONS: This booklet contains a list of descriptive words and phrases which you will use in describing yourself and members of your family or members of your group. The test administrator will indicate which persons you are to describe. Write their names in the spaces prepared at the top of the inside pages. In front of each item are columns of answer spaces. The first column is for yourself, and there is another column for each of the persons you will describe.

Read the items quickly and fill in the first circle in front of each item you consider to be generally descriptive of yourself at the present time. Leave the answer space blank when an item does not describe you. In the example below, the subject (Column 1) has indicated that Item A is true and item B is false as applied to him.

Item 1 2 3 4 5 6 7 8 **A 0**000000 well-behaved

1 2 3 4 5 6 7 8 B 00000000 suspicious

After you have gone through the list marking those items which apply to you, return to the beginning and consider the next person you have been asked to describe, marking the second column of answer spaces for every item you consider to be descriptive of him (or her). Proceed in the same way to describe the other persons indicated by the test administrator. Always complete your description of one person before starting the next.

Your first impression is generally the best so work quickly and don't be concerned about duplications, contradictions, or being exact. If you feel much doubt whether an item applies, leave it blank.

This booklet has been prepared by Timothy Leary, Ph. D., and published by Unitas Publications, Psychological Consultation Service, Box 68, Cambridge, Mass. 02138. (Tel. 617: 547-7244.) The interpersonal Check List was developed by Rolfe LaForge, Ph. D., and Robert Suczek, Ph. D., and other staff members of the Kaiser Foundation Research Project in Psychology.

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APPENDIX B

Correlations of all Thirteen Variables Measured by the Diaries with each Other and with the HAP, S.I., Opp. and Same Sex Scores.

1 = the test A score2 = the test B score3 = Test B subscore 1 4 = Test B subscore 25 = Opposite sex diary score 6 = Same sex diary score 7 = Total interaction diary score 8 = Number of 5 minute conversations 9 = Number of 15 minute conversations 10 = Number of 30 minute conversations 11 = Number of 60 minute conversations 12 = Number of conversations more than 60 minutes 13 = Number of conversations between 12:00 Midnight-6:00 A.M. 14 = Number of conversations between 6:00 A.M.-12:00 Noon 15 = Number of conversations between 12:00 Noon-6:00 P.M. 16 = Number of conversations between 6:00 P.M.-12:00 Midnight 17 = Total number of hours spent in conversation

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ſ	.02	.43	.46	• 03	1.00												
9	.07	.12	.10	.33	.30	1.00											
7	.06	.31	.16	.24	.74	.86	1.00										
ω	.15	.28	.14	.17	.68	.43	.66	1.00									
ب	- .09	.11	.17	.02	.51	.63	.72	.41	1.00								
10	.14	.21	.10	.23	.23	.70	.62	00.	• 36	1.00							
11	16	.14	• 0 4	.25	.05	.52	.40	. 29	.28	.54	1.00					41	
12	.00	.05	04	.10	.10	.29	.26	- .30	17	.54	.57	1.00					
13	15	.23	.28	.02	• 50	.43	•56	.10	.62	.45	.51	.25	1.00				
14	10	.24	.09	.27	.29	.68	.63	.35	.48	.50	.34	.15	.15	1.00			
15	.09	.21	.09	.20	.71	.75	.91	.65	.66	.49	• 33	.19	.40	.46	1.00		
16	.15	• 33	.17	.26	.63	.82	.91	.61	.60	•65	.32	.26	.55	.56	.70	1.00	
17	• 00	.15	• 03	.19	.26	•55	.53	16	.14	• 75	• 15	. 92	. 45	• 36	. 44	.48	[.00
	Г	2	ξ	4	5	9	7	ω	6	10	11	12	13	14	15	16	17

APPENDIX C

Leary Interpersonal Check List Computations There are 128 questions on the Leary Interpersonal Check List. Certain answers are combined to give eight separate groups of answers. These eight groups, and the questions which comprise them are as follows:

Group I: 1-4, 33-36, 65-68, 97-100 Group II: 5-8, 37-40, 69-72, 101-104 Group III: 9-12, 41-44, 73-76, 105-108 Group IV: 13-16, 45-48, 77-80, 109-112 Group V: 17-20, 49-52, 81-84, 113-116 Group VI: 21-24, 53-56, 85-88, 117-120 Group VII: 25-28, 57-60, 89-92, 121-124 Group VIII: 29-32, 61-64, 93-96, 125-128 Subscores are obtained by combining these eight groups in the following manner: Dominance = 0.7 (sum of II + sum of VIII) + sum of I Submission = 0.7 (sum of IV + sum of VI) + sum of V Love = 0.7 (sum of VI + sum of VIII) + sum of VII Hostility = 0.7 (sum of II + sum of IV) + sum of III The main scores are found by the following formulas: DOM = 0.7 (sum of II + sum of VIII - sum of IV sum of VI) + sum of I - sum of V LOV = 0.7 (sum of VI + sum of VIII - sum of II sum of IV) + sum of VII - sum of III

APPENDIX D

Breakdown of Factors from HAP and S.I. Tests

Below are the factors mentioned in the text, derived from factor analyses of the HAP test and the S.I. test. Each factor shall be listed, followed by the particular items that comprise it. The number which follows each item is that item's rotated factor loading.

- Factor 1. "A feeling of general discontent with one's self and with M.S.U., characterized by an aura of general unhappiness, and a desire to leave M.S.U."
- 1. In general, I was much happier in high school than at M.S.U. (.43)
- I would like to transfer to another school. (.60) 4.
- 6. I seldom leave the dorm during weekends. (.42)
- 13. There are too many things wrong at M.S.U. (.40)
- 24. I often feel blue and depressed for no reason. (.32)
- 29. No one has time to talk to me. (.66)
- 32.
- I often regret coming to school here. (.72) I am often envious of friends at other schools. (.62) 36.
- 40. Most of the people here are dull. (.64)
- 41. I feel that the faculty is very impersonal, and that most professors don't care about me. (.33)
- Factor 2. "A positive feeling about attending school at M.S.U., stemming, in part, from the social atmosphere."
- 14. I enjoy the social atmosphere of M.S.U. (-.75)
- 20. I would recommend this school to a brother, sister, or friend. (-.32)
- 28. I am happy at M.S.U. (-.53)
- M.S.U. has given me exciting and highly rewarding 35. experiences. (-.42)
- 49. The social life at M.S.U. is as good, or better than I expected. (-.81)
- "A sense of well being, based upon friendships Factor 3. found at M.S.U."
- 14. I enjoy the social atmosphere of M.S.U. (-.34)
- 26. I fit in very well with my crowd of friends. (-.70)
- I am happy at M.S.U. (-.32) 28.
- 31. I like being away from home. (-.56)
- 47. I have a pretty solid groups of friends here at M.S.U. (-.67)

- Factor 4. "A feeling of loneliness and a longing to get away from M.S.U. as often as possible."
- 7. I feel like going home often. (-.72)
- 44. I resent all the emphasis placed on sports at M.S.U. (-.34)
- 50. I get away from here on weekends as much as possible. (-.76)
- Factor 5. "A strong positive feeling towards the faculty and the administration at M.S.U."
- 2. In general, the professors are good. (.45)
- 15. In general, the faculty cares about the students at M.S.U. (.80)
- 37. I think that President Hanna is doing a good job. (.53)
- 45. The many services offered by the university make me feel that those in charge really do care about the conditions at M.S.U. (.68)
- The S.I. Test
- Factor 1. This factor "dealt with general frequencies of dating patterns."

1. I go out on a date . . . (.85) My social life is . . . (.78) 2. I go out with the same person again . . . (.69) 3. 4. Compared to most people, I go out . . . (.76) To suit myself, I would like to go out . . . (.64) 5. 29. I went to an athletic event, lecture, concert, or other such event with a date \ldots (.43)30. I went for a long walk with a date . . . (.70) 31. I had a meaningful talk with a date . . . (.78) 32. I went on a study date . . . (.66) I went to the movies with a date . . . (.66) 33. 34. I went out to dinner with a date . . . (.64) Factor 2. This factor "revealed less socialized interaction with a date, or friend, such as studying, or having meals." 12. I like going out to dinner with a date . . . (-.43)

13. I like studying at the library with a date . . (-.42)
20. I like going to the movies with a friend . . (-.61)
21. I like going out to dinner with a friend . . . (-.79)
22. I like studying at the library with a friend . . . (-.73)
26. I like going on long walks with a friend . . . (-.54)

Facto	r	3. "A sense of close envolvement with a friend of the same sex."
24.	Ι	like talking about my own feelings of love and life with a friend (.68)
26. 27.	I I	like going on long walks with a friend (.53) like trying to understand a personal problem with the help of a friend (.56)
38.	I	went for a long walk with a friend (.61)
39.	Ι	had a meaningful talk with a friend \dots (.77)
Facto	r	4. "A strong positive feeling for partying and drinking with a member of the same sex."
19.	Ι	like going out drinking with a date $(.47)$
25.	I	like going to parties with a friend (.68)
28.	Ī	like going out drinking with a friend (.70)
43.	Ι	went out drinking with a friend (.63)
44.	Ι	went to a party with a friend (.65)
Facto	r	5. "A close, very personal involvement with a date."
15.	Ι	like talking about my own feelings of love and life with a date (.64)
17.	Ι	like going on long walks with a date (.44)
18.	Ι	like trying to understand a personal problem with the help of a date (.85)
27.	Ι	like trying to understand a personal problem with the help of a friend (.44)
Facto	r	6. "A more discriminate desire for parties and drinking, including such activities only when with a date."
16. 19. 35. 36.	I I I I	like going to parties with a date (.56) like going out drinking with a date (.65) went out drinking with a date (.80) went to a party with a date (.77)

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