

SOME RELATIONSHIPS BETWEEN PERSONALITY  
AND HUMOR

Thesis for the Degree of Ph. D.  
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Allyn F. Roberts

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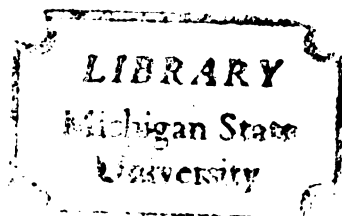
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SOME RELATIONSHIPS BETWEEN  
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ALLYN F. ROBERTS

AN ABSTRACT

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# ABSTRACT

Humor, a topic of considerable philosophical speculation throughout the ages, has until recently been an area much neglected by the psychologist. Though humor may be the most common form of emotional expression in our culture, there have been few scientifically designed experiments aimed at exploring the relationship between humor and personality.

The present study is an outgrowth of the theorizing of Freud and George H. Mead on humor. A consideration of their remarks led to the formulation of three hypotheses stating relationships between personality variables and the appreciation of humor.

Twenty-five hospitalized male adults diagnosed as psychoneurotic and twenty-five nearly recovered male adult tuberculosis patients served as the subjects of the study. A series of thirty-five cartoons representing seven distinct themes was presented to the subjects for rating. Two measures of humor appreciation were derived from the responses: (1) a verbal funniness score, derived from each subject's ratings of the cartoons on a seven point scale of funniness, and (2) the number of laughs and smiles. These measures were compared with three personality variables: general adjustment level, amount of tension in the cartoon theme areas, and role-taking facility.

The first hypothesis involved a comparison between the humor appreciation measures and three ways of defining psychological adjustment: (1) the absence of severe psychopathology, (2) high ego strength on the Barron scale, and (3) the absence of strong tensions. Significant relationships were found between the absence of psychopathology and both humor appreciation measures, between scores on the Barron Ego-Strength Scale and the verbal funniness ratings for the subjects of both groups, and between the ego strength score and the number of laughs and smiles for the neurotic subjects. The third comparison between the tension score and the humor appreciation measures yielded significant results among the neurotics but not the T.B. subjects. Although Freud and others have emphasized the importance of humor in adjustment, this study represents one of the few experimental approaches to this topic.

The second hypothesis involved comparisons between the liking of cartoons dealing with specific themes and the presence of tension in these same theme areas. Significant relationships were found between neurotics' liking of humor dealing with self-aggrandizement, hostility, facing unpleasant situations, heterosexuality, and the presence of higher tension in these areas. None of these correlations was significant for the comparisons involving the T. B. group.

The test of the third hypothesis did not support Freud's and Mead's contention of a positive relationship between humor appreciation and role-taking facility. No significant

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relationships were found for these comparisons.

The findings of this study are consistent with Freud's assertion that humor can serve the individual as a mechanism for dealing with tensions and problems in a positive way. The main purpose of this investigation was to explore this idea. In general, the present results showed that persons who were able to use and enjoy humor the most scored highest on the adjustment measures.

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## CHAPTER I

### CURRENT STATUS OF HUMOR THEORY

#### Introduction

Why do we laugh? This question has plagued philosophers and men of letters for thousands of years, and many explanations and theories of laughter and humor have been offered. However, no more than a handful of scientifically designed studies have attempted empirical answers to this question. This is particularly remarkable inasmuch as the response of humor is one of the most common emotional reactions. It is a reaction probably unique to man; one that some philosophers have claimed distinguishes man from the animals. Hardly a waking hour passes that we do not find occasion to laugh, smile, or to react with humorous satisfaction to what goes on about us. Anthropological evidence suggests further that humor responses probably occur in all societies (14,27). Most of us are not aware of the frequency with which we engage in laughter, smiling, and humor every day of our lives. The casual observer in our own culture will notice that humor is one of the more common forms of emotional expression, perhaps more common than the extensively studied negative emotions of fear, anger, hostility, and the like. However, unlike these negative emotions, humor is one of the few kinds of affective behavior which are sanctioned culturally so that it can be easily and pleasurably expressed.

### Purpose of Study

It is the purpose of this study to test some hypotheses which are central to several theories of humor. The plan is to assemble a body of empirical data which will add to our understanding of laughter and humor, and which may assist the scientist in constructing a more adequate and inclusive theory of laughter and humor.

It should be noted at the outset that our interest here is not in humor alone, but rather in the more general topic of laughter and smiling of which humor is but one related aspect. The main focus in this study will be upon humor as a laughter-pleasure evoking experience. The reason for employing humor in this capacity is mainly for convenience. Humor is readily and easily experienced by most persons in our society and there is available a wide variety of laughter-pleasure evoking humor material in the form of cartoons and jokes.

The hypotheses which will be tested in this study are derived from the theories of humor of Freud and George H. Mead. These hypotheses state relationships between enjoyment of humor and psychological adjustment, degree of tension or need represented by the cartoons, and role taking facility.

### Some Definitions

There are several ways in which the word humor is frequently used. In order that the reader may better understand what follows, the way in which we will employ the term will be indicated.

Humor is sometimes used to refer to the pleasurable experience encountered when we read a joke or look at a cartoon. In this sense, the focus is upon an affective state accompanied by a feeling of pleasure, and in its extreme by laughter. It might be helpful in our thinking of humor as this kind of an experience, to consider a continuum of pleasurable affect. At the zero end of this continuum there would be no affect. When people report enjoying humor "inwardly" without observable affect they might be thought of as experiencing humor further along, perhaps near the middle, of the humor continuum. As we move toward the extreme, smiling would be evoked and finally laughter. There is empirical support for this view of humor to be discussed later, in that those subjects who rated the cartoons as being funniest also tended to respond to them with more laughs and smiles.

Another way of viewing humor is as a quality of a stimulus. This is the sense in which Drever defines the term (6). He says that humor is "that character of a complex situation exciting joyful, and in the main quiet, laughter, either directly, through sympathy, or through empathy".

As the term is used here, a humor-evoking stimulus refers to any stimulus which evokes a response of laughter, smiling, or a feeling of mirth. A humor experience refers to the pleasurable feeling which may be accompanied by smiling or laughter, which is in response to a humor-evoking stimulus.

### Previous Speculations

Philosophers have had much to say about laughter and humor. For our purposes only a few of the better known philosophical theories need be outlined. More detailed reviews are readily available (7,9,22).

Plato's viewpoint is one which is still commonly taken to explain laughter and humor (23). He thought that malice or hostility comprised the element necessary for laughter to be evoked. Plato maintained that both pain and pleasure had to be evoked simultaneously for humorous pleasure and laughter to occur. He likened this process to what occurs when we relieve an itch. Pain caused by the itch turns to pleasure when the itch is relieved by scratching. This is like the laughter evoking situation where malice provides the painful element and laughter serves to undo or to minimize the pain.

Descartes, in a position somewhat similar to that of Plato, held that laughter occurs when a mild state of joy occurs along with some other element such as hostility, surprise, or shock (4).

Hobbes was the first to hold that laughter grows out of the feeling of superiority which we experience in ourselves in contrast to the position of inferiority which the characters in the joke often assume (15). Hobbes thought that laughter represented a state of sudden glory, heightened self esteem, which arises when we suddenly experience this superiority. This theory too is one which is still popular today.

Spencer's theory of laughter is a physiological one (28). He thought of laughter as a sort of safety valve, providing for

an overflow of excess nervous energy. Spencer pointed out that this surplus energy finds its outlet through those muscular channels which are most habitually used by persons, namely the small muscles around the mouth and the respiratory apparatus. Spencer's viewpoint bears strong resemblance to the current tension or drive reduction theory of laughter which holds that laughter serves the function of need satisfaction or of drive reduction.

The first philosopher to emphasize the basically social nature of laughter was Bergson (2). Bergson pointed out that all laughter resides in something human, or indirectly human. When we laugh at an animal, he points out, it is because in some way the animal's actions have a resemblance to our own. He further regarded laughter as being corrective in its social function. He thought that by laughing at others, we are indirectly trying to correct them. It is of interest to note that anthropological evidence suggests that laughter does indeed play an important social corrective aspect in several primitive societies (16,24).

George H. Mead is also specific in making laughter dependent upon the social situation (17). He points out that the reason we laugh at the person who falls on the banana peel is that in taking the attitude of the falling person we are saved the pain and embarrassment he experiences. Mead holds that laughter is a derivative of the social act which results from one's ability to identify empathically or to assume the role of the characters in the comical situation.

McDougall held that laughter is a biological device for protecting us against the danger of excessive sympathy (18). This serves the function of preventing us from being overly disturbed at the misfortunes of others, which as social beings we have to share. Without such a mechanism, McDougall held, our burdens would become intolerable.

Freud's position is in many ways similar to that of George Mead (11,12). His viewpoint on humor is one that has been frequently misunderstood by psychologist and layman alike. Freud does not present a complete theory of laughter. He deals with only three laughter-producing situations which he names wit, the comic, and humor. Laughter is evoked in all three situations, he maintains, as a manifestation of an economy in the expenditure of psychic energy. More specifically, in the instance of the humorous situation, the pleasure we experience comes, Freud says, from an economy in the expenditure of feelings or emotions. The process is as follows. The listener observes the joke character in a situation which would ordinarily call forth some sign of emotion or feeling. He expects the person to show anger, elation, fear, or some other emotion. The observer of the joke is prepared to follow this lead and to call up the same feelings. However, he is fooled. The joke character does not display the expected affect; he makes a joke. It is from the ensuing saving in the expenditure of feeling that Freud claims the listener derives his humorous satisfaction. Both Freud and Mead relate laughter and humor to role-taking facility, or to the calling up of emotions and attitudes in oneself similar

to those which are aroused in the joke characters. The satisfaction of a repressed wish is secondary to this saving of feeling, if the repressed wish is involved at all.

In his system, Freud places humor beside the neuroses and the psychoses as one of the basic defense mechanisms available to man for adapting to suffering. Until very recently there have been few experimental attempts to verify the various aspects of the Fruedian humor theory, or of humor theory in general.

### Empirical Investigations

Ruth Washburn made one of the few systematic attempts to study the laughing and smiling of infants and young children (30). She found that with children, similar situations evoke both smiles and laughs, which suggests that the difference in the affect is one of degree rather than of quality. She concludes from this that both smiling and laughter are expressions of similar affective states. In this same regard it is of interest to note that the methods of stimulation which elicited the first smiles in infants were also successful in eliciting their first laughs. Both laughs and smiles occurred as reactions to specific stimulation. The type of stimulation which aroused the earlier laughs and smiles seemed to depend highly upon the distance between the subject and the experimenter. The closer the physical proximity of the experimenter and the more intense the stimulation, the greater was the tendency to smile and to laugh. Washburn's study is particularly important to the psychologist

for supporting the contention that both laughter and smiling arise from social interaction.

Henry Murray conducted the first experimental study which suggested a relation between areas of tension and repression, and liking for humor dealing with similar themes (20). Murray had thirteen college subjects respond to ten jokes of an aggressive nature, plus six control jokes of a non-aggressive nature. The subjects' enjoyment of aggressive humor correlated highly with their performance on the Conservative-Radical Sentiments test and the Social-Asocial Sentiments test. Murray's conclusion is that the enjoyment of aggressive humor is associated with individualistic, aggressive, and derisive sentiments. He interprets this finding as evidence for a possible relationship between repressed wishes or conflicts, and liking for certain types of humor.

Redlich, Levine, and Sohler have done one of the more intensive clinical investigations of humor to date (25). Their main interest was to test the hypothesis, from Freud, that "instinctual needs which have been inhibited may achieve momentary release through response to humor". The specific hypotheses they postulated were as follow:

- 1) When a stimulus elicits a humorous response it is assumed that there has been a momentary release of some primary suppressed or repressed need, without the usual accompanying anxiety.
- 2) When a stimulus, ostensibly humorous, is responded to with indifference, it is assumed that either:
  - a) no conflictual needs are involved; that is, the needs are ego-syntonic;
  - b) the needs are so deeply repressed that no affective participation is possible; or
  - c) rigid ego control is involved.



- 3) When a stimulus, ostensibly humorous, evokes anxiety, disgust, shame, guilt, or horror, it is assumed that the threat of some primary suppressed or repressed need produces a threat with the resulting affect of displeasure.
- 4) When a humorous stimulus evokes expressions of intense feelings either of (a) pleasure or (b) displeasure, it is assumed that the threat of need release is especially great and anxiety-provoking.

Their method consisted of presenting a series of thirty-six cartoons to mental hospital patients for ranking according to their funniness. The authors used cartoons representing eleven themes. An inquiry was conducted to the cartoons to determine the extent to which each subject understood the point of the humor and to elicit more specific individual reactions to the cartoons.

On the basis of the responses to the cartoons, a diagnostic statement was made about each subject and these were compared with the clinical diagnoses independently arrived at by the hospital staff. The authors state that, "in practically all cases we were able to form significant and valid propositions about fundamental needs, such as aggressive, dependent, and various sexual needs and conflicts in these spheres". Since no statistical data are presented to indicate the significance, if any, which can be attributed to their findings, we must regard their conclusions as only suggestive of areas for further empirical study. The authors conclude that the response to cartoons of neurotic subjects showed less disturbance than that of psychotics. In the case of the neurotics, the disturbance was less diffuse and more specifically linked to the dynamics of the case, than with the psychotic subjects. They further indicate that organics had difficulty understanding the point

of most jokes and that in general the more intelligent the subject, the more rapidly he comprehended the point of the humor. The authors conclude that the analysis of their test results tends to corroborate their hypotheses. Some of the results of the present study provide empirical support to certain of these qualitative conclusions. These will be discussed later.

Frankel compared performance on the Blacky Pictures and preference for certain types of cartoon humor (10). She administered a test of 30 cartoons, 5 representing each of six psychosexual dimensions measured by the Blacky, to 82 subjects. In her study Frankel attempted to test three hypotheses: (1) that people with personality disturbance along one of the psychosexual dimensions would like jokes in that area more than persons with less disturbance; (2) that persons with relatively strong disturbance would dislike the cartoons more than would persons with milder disturbance, and (3) that disturbed people would in general show both extremes of like and dislike in comparison to more neutral attitudes of persons with little disturbance. The results of her study supported only the second hypothesis. She found that disturbance in a given dimension was associated with dislike for cartoons dealing with the same dimension. The first hypothesis making the opposite prediction, and the third hypothesis predicting a relationship between conflict and the presence of both humor likes and dislikes, were not confirmed.

Weiss formulated some additional hypotheses concerning the relationship between psychosexual conflict, as measured by the Blacky Pictures, and humor preferences (31). In addition to attempting to confirm Frankel's findings, he studied: (1) the role of defense mechanisms in humor preference, (2) the effect of psychosexual conflict upon the recall of jokes, and (3) the importance of defense mechanisms in humor recall.

Forty-five members of a social fraternity served the author as experimental subjects. He used the Blacky Pictures and an auxiliary measure, the Picture Problem Ranks, to evaluate the intensity of conflict related to five dimensions of early psychosexual development. The Defense Preference Inquiry for the Blacky Pictures was utilized for the assessment of preferences among five defenses.

Weiss found that individuals with strong conflict in a given psychosexual dimension repressed, within 30 minutes, cartoons relevant to that dimension. Subjects who preferred the defense of avoidance were found to repress the cartoons which represented conflicts for them. He also found that disturbance in Oral Sadism was associated with a dislike of humor relevant to that dimension. This accords with Frankel's findings. Contrary to Frankel's findings, however, he found that conflict concerning Anal Expulsiveness was related to enjoyment of anal humor. Enjoyment of cartoons and jokes was also found to relate positively to a preference for the defense of regression.

The past two years has shown a sudden spurt of interest in the topic of humor. Better than half a dozen studies are reported

in the literature. Most of these studies are not directly relevant to our purpose here, and it will suffice to devote our attention to just a few of these.

More and Roberts tested some societal variations in responses to cartoons (19). They had 72 subjects, representing both sexes as well as social class, age, and racial differences, rate a group of 56 cartoons into four funniness categories. They found that social class, age, sex, and racial differences were related to the types of cartoon themes which the subjects regarded as funniest. Middle-class adults felt that hostility toward peers in cartoons is much funnier than did the lower-class persons; but the lower class found hostility toward authority figures much funnier than the middle-class subjects. In general, males found cartoons dealing with hostility to peers and hostility to authority figures significantly funnier than females. Negro subjects were found to prefer cartoons dealing with money and narcissistic themes compared to non-Negro subjects. Negroes found cartoons dealing with suppressed wishes about average in funniness while non-Negroes found this to be an extremely funny category.

The authors' results accord fairly well with expectations on the basis of a humor theory they offer and with various social stereotypes. They point out that an understanding of the areas of humor responses may provide an important direct clue to the major areas of tension-producing conflicts within a given societal or cultural group.

Dorris and Fierman tested some relationships between humor and anxiety (5). They had 28 "high-anxious" and 28 "low-anxious" college subjects, differentiated on the basis of responses to a general anxiety questionnaire, rate a group of 18 cartoons. These cartoons had been rated by judges as to the extent that they showed sexual, aggressive, and non-sense themes. The authors found that the "high-anxious" group rated cartoons of an aggressive content as being less funny than did the "low-anxious" group.

Byrne reports a study designed to explore further the relationship between the possession and expression of hostile sentiment with the liking for cartoons dealing with hostile themes (3). He had a group of 45 psychiatric patients respond to a set of 16 cartoons of a hostile nature and 16 cartoons which were non-hostile in nature. Judges rated each patient as being "overtly hostile", "covertly hostile", or "non-hostile". It was found that those subjects who frequently express hostility, either overtly or covertly, find hostile cartoons significantly more amusing than do subjects who fail to express hostility. Furthermore, those subjects who frequently express hostility are better able to differentiate between hostile and non-hostile cartoons than subjects who do not express hostility.

Grziwok and Scodel have recently reported the results of a study in which they had 140 male college students rate a series of 40 cartoons (13). The cartoons were comprised of four categories as follows: (1) humorous effect based upon aggression, (2) humorous effect obtained by a parody on sex, (3) humor based on the exaggeration or paradoxical use of social stereotypes, and (4) humorous effect based upon logical incongruity. The humor preferences of each subject were compared with each subject's stories to seven Thematic Apperception Test cards and also with each subject's performance on the Allport-Vernon-Lindzey study of values. The authors found that subjects high on TAT aggression prefer aggressive humor while those low on TAT aggression prefer non-aggressive cartoons dealing with exaggeration or logical incongruity. With respect to value orientations, subjects high on the aesthetic scale prefer logically incongruous cartoons whereas those who are low on this scale prefer aggressive humor. Subjects high on the social scale also prefer aggressive cartoons and those low in the theoretical value show a preference for sexual cartoons. In general, the authors conclude that a preference for aggressive and sexual cartoons as opposed to "cognitive humor" seems to be characterized by more fantasy aggression, more extraversion or outgoingness, less preoccupation with intellectual values, and less psychological subtlety or complexity.

Roberts and Johnson tested two hypotheses concerning humor (26). The first hypothesis, which was derived from Freud's and G. H. Mead's theories of humor, is that the perceived funniness of a humor stimulus is positively related to the degree to which

the perceiver is able to empathize with the characters depicted in the humor stimulus.

Their second hypothesis was that a positive relation exists between the degree of reality contact of an individual and his perception of humor stimuli as being funny.

They went about testing these hypotheses by comparing the funniness ratings given to cartoons by 25 mental hospital patients with several measures of empathy and reality contact. Individuals who rank cartoons as being particularly funny tend to assume the roles of the cartoon characters to a significantly greater extent than persons who do not perceive the humor stimuli as being so funny. Significant relationships were found in a positive direction among all three measures of empathy employed and the subjects' responses to the cartoons. The high-empathy subjects judged the cartoons funnier than the low-empathy subjects. These findings bear out the main assumptions underlying the theories of humor offered by Freud and Mead. It was further found that those subjects who appreciated the cartoons to the greatest extent tended to be in better reality contact and they tended to comprehend the point of the jokes to a greater extent than subjects who did not rate the cartoons as being so humorous.

#### General Remarks

Several themes are apparent throughout these accounts. A number of writers have attempted to relate specific personality features such as value orientation, conflict, defense preferences, etc., with liking for certain kinds of humor. For the most part

these studies represent attempts to understand the psychology of humor by seeing what kinds of individual personality factors correlate with a liking for humor of various types. With the exception of a few studies which stem from psychoanalytic theory, most of these studies do not appear well grounded in any body of theory. It may be concluded from these reports that various relationships do exist between humor preferences and such factors as age, sex, extent of repressed hostility, value orientation, social class background, intelligence and various other individualistic tendencies.

A few writers have also emphasized the basically social nature of laughter and humor. Their emphasis is upon humor and laughter as social interaction derivatives, stemming from the philosophical work of Bergson and Mead. Washburn's study of laughter in children is particularly important for indicating the basically social nature of laughter and smiling.

It should be noted that while philosophers and psychological theorists have stressed the functions which humor serves a person, most of the experimental studies have focused upon the various qualities of the stimuli which evoke humorous reactions. There have been relatively few attempts to investigate the functions that laughter and humor may serve the individual. We do not know, for example, if laughter serves to protect us from the danger of excessive sympathy as McDougall suggests, or if it spares us an experience of pain as hypothesized by Mead. Nor have experimental studies been addressed to investigating the relationship between psychological adjustment and the ability



to appreciate humor which Freud postulates. The present study will attempt to explore some of these functional aspects of laughter and humor which Freud and others have suggested.

## CHAPTER II

### EXPERIMENTAL DESIGN

#### Hypotheses

##### I-Psychological Adjustment and Enjoyment of Humor

The capacity of an individual to derive humorous satisfaction, laughter and pleasure, from cartoons is positively related to that individual's general psychological adjustment.

This hypothesis was derived from a consideration of Freud's remarks on humor. We noted earlier that Freud placed humor beside the psychosis and the neurosis as a basic mechanism for adaptation to suffering (11). Unlike the psychosis which is also a basic mechanism for adapting to pain, Freud regarded the effects of laughter and humor as being of positive benefit to the organism. Speaking of humor, he stated,

"By its repudiation of the possibility of suffering, it takes its place in the great series of methods devised by the mind of man for evading the compulsion to suffer. A series which began with the neurosis and delusions, and includes intoxication, self-induced states of abstraction and ecstasy. It is distinguished from many other members of the series by a peculiarly liberating and elevating effect." (12)

In considering these remarks, it becomes clear that Freud suggests that persons endowed with a good sense of humor and persons who can appreciate humor, have in their possession a valuable tool for dealing with problems and tensions in a pleasurable fashion. It follows that persons who have such a means of dealing with tensions at their disposal should on the average tend to be better adjusted individuals than persons who are not

able to use and appreciate humor so readily. The popular view is in some ways very similar to this position which stems from psychoanalytic thinking. The person devoid of a sense of humor is suspect. The well-adjusted person is thought of as being able to "laugh it off". Few men are willing or able to admit having a poor sense of humor.

The relationship between adjustment and ability to laugh and enjoy humor has not, to the writer's knowledge, been the subject of experimental investigation. It is the main purpose of this study to test this relationship as stated in the first hypothesis. To make this test, it is necessary to obtain measures of humorous satisfaction to cartoons as well as measures of the psychological adjustment of the subjects. In attempting to obtain measures of psychological adjustment, the researcher is confronted with the problem of first defining what he means by psychological adjustment. The term is used in many ways and depending on how it is defined many measuring devices are available. In order to increase the generalizability of the results and to explore the hypothesis with more precision, several measures of psychological adjustment were utilized. These will be described more fully later. Comparisons were made between the following adjustment and humorous satisfaction measures:

Measures of psychological adjustment:

- 1) The absence or presence of severe psychopathology as indicated by whether or not the patient is hospitalized for a psychoneurotic condition.
- 2) Score on the Barron Ego-Strength Scale.

- 3) The relative absence of strong tensions and conflicts as indicated by the total tension score from the Need-Tension Inventory.

#### Measures of humorous satisfaction:

- 1) Subjects' funniness ratings to the cartoons.
- 2) Number of laugh and smile responses to the cartoons.

#### II-Tension Level and Humor Preference

The funniness of a cartoon to any individual will be positively related to the degree of tension or need represented by the type of humor-evoking stimulus to which the individual is responding.

The second hypothesis stems in part from Freud's remarks on humor and also as an outgrowth of the first hypothesized relationship between humor and psychological adjustment. If humor does serve as an outlet for tensions and conflicts, then we would expect that on the average a liking for humor dealing with specific themes would be positively associated with the presence of high tension or need in the same theme areas.

To test this hypothesis, comparisons were made between the two measures of humorous satisfaction to cartoons, and measures of psychological tension derived from the following tests:

- 1) A measure of "need" from Edwards' Personal Preference Schedule.
- 2) A measure of tension from the Need-Tension Inventory.

#### III-Role-Taking Facility and Humor Preference

The funniness of a cartoon will be positively related to the degree to which the perceiver is able to take the role of the other.

The third hypothesis stems from the theorizing of Freud and Mead in regard to humor. Freud regarded the pleasure from humor as coming from a saving in the expenditure of feeling. This economy of affect is the result of the listener or observer calling up the same feelings as the character in the joke, only then being suddenly deceived. Mead in a similar position held that we laugh, because having taken the attitude of the joke character, we are saved the unpleasant feelings he experiences. Both Freud and Mead emphasize the ability of the observer to assume the role and attitudes of the joke characters. Therefore, we would expect individuals who can most easily take the role of another to derive more satisfaction from cartoons than those less facile in role taking. Roberts and Johnson in their previously cited study present evidence which supports this view.

It is the purpose here to further test this hypothesis by comparing cartoon funniness ratings and the number of laughs and smiles to cartoons with measures thought to relate to role-taking facility derived from the following:

- 1) Scores on the test of Ability to Predict Average Behavior.
- 2) Scores on the Warmth Scale.

#### The General Task

The experiment consisted of presenting a series of 35 cartoons, two at a time, to a group of 25 subjects free of manifest psychopathology, and 25 psychoneurotic subjects.

Each subject was asked to indicate which of the two cartoons he thought was most funny and to provide a numerical rating from 0 to 6 to each cartoon. During this time the overt reactions, laughs and smiles, were recorded. Following the presentation of the cartoons each subject was asked to describe what the thoughts and feelings of the characters might be for certain of the selections. These responses were recorded. The humor appreciation measures were then compared with the subject's performance on several personality tests which are described later.

### The Humor-Evoking Stimuli

The 35 cartoons which comprised the final selection, arranged by themes in the order of their presentation, are given in Appendix B. These cartoons were selected from a collection of several thousand culled from joke books and from popular magazines such as the Saturday Evening Post and Colliers. They represented largely middle-class selections as opposed to the more subtle type of humor found in magazines such as the New Yorker. This type of selection was employed because the subjects were largely lower-middle-class and would be expected to prefer this type of humor. It was also thought that such selections would be more easily understood by the subjects of this study.

The question may arise why cartoons were employed in place of some other type of laughter-evoking stimulus. The main reason is that there was a better source of cartoons

available with themes that represented problem areas for most people, than was available with other laughter-evoking stimuli. It was also felt that cartoons represent a familiar type of humor-evoking stimuli to most middle-class subjects and that they were not as likely to be misunderstood as written or verbal jokes.

As a preliminary step, the collection of cartoons was categorized into dominant themes on an intuitive, face-validity basis by the writer. Whenever a cartoon appeared to represent more than one theme or when a dominant theme was uncertain, the cartoon was excluded. Thus, 70 cartoons representing 7 distinct themes were chosen. The themes and their descriptions are as follows:

A-heterosexuality

Male hero kisses, makes love to, or engages in physical sexual contact with a female. To become sexually excited. To enjoy observing partially nude, or attractive females.

B-hostility to others

Male hero causes harm or pain to someone. To tell others unpleasant things about themselves. To make fun of others or to cause them embarrassment. To criticize others, to enjoy the suffering of another.

C-affiliation themes involving "non-hostile" attitude to others

To enjoy the company of others, to help others, to treat others with kindness, to do pleasant things with friends. To seek or meet new friends. To greet others.

D-self-aggrandizement

Male hero exhibits an exaggerated self-enhancing view of himself. Exaggerated view of the worth of one's accomplishments. To exhibit admiration for oneself or one's accomplishments. To accomplish great things. To express admiration of one's physical body or parts thereof.

E-self-abasement

Main male character views self as inferior, weak, inadequate, or unworthy. Regarding one's physical self as ugly or inadequate. Considering one's self as lacking in good sense, or as being a "nobody".

F-withdrawal, or running away from unpleasant situations

Male hero runs away, attempts to escape, or hides from an unpleasant situation or a fear-evoking situation. An expressed desire to run away from an unpleasant situation or environment.

G-facing unpleasant situations

Male hero faces a task or situation that might ordinarily be expected to cause withdrawal or running away. Male hero faces or remains in a situation that evokes fear. Facing or putting up with a task or situation that might ordinarily be regarded as unpleasant.

The question may arise as to why these specific humor themes were used. First, there were sufficient cartoons, ten or more, available in each of these relatively pure thematic categories. Second, these particular themes are ones which represent very common tension or problem areas for most persons in our culture. Also, there are several tests available from which quantitative measures of need and tension can be obtained for these categories which would permit a test of the hypothesized relationship between tension areas and liking for certain types of humor.

Ten cartoons for each of these 7 themes, making a total of 70, comprised the selection which was presented to four different psychologist judges for classifying.<sup>1</sup> The instructions to the judges were as follows:

Your task is to categorize the cartoons into seven thematic groups described below. Go through the entire group of cartoons and any which you believe fit the description given for theme A, place in that

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<sup>1</sup>The author wishes to thank the following faculty and graduate students for serving as judges: Dr. Charles Hanley, Dr. John Hurley, Mr. John Reisman, and Mr. Selwyn Fidelman.



category. Then, proceed for theme B with the entire group of cartoons, and so on through theme G. In classifying the cartoons, keep in mind that the description of the themes given below is meant to apply primarily to the hero, or to the main male character depicted in the cartoon.

The descriptions referred to were those given above in describing the themes. The final selection of 35 cartoons represented items that all four judges had agreed represented the themes for which they were originally selected. Although each cartoon was agreed upon by all four judges as representing this originally selected theme, there were six separate cartoons which one judge of the four also thought represented one additional theme. In each of these six instances, one judge of the four had classified that cartoon in one other category in addition to the one for which it was designed. Thus, for the final selection of cartoons, the agreement among the judges as to the themes represented by the cartoons was 96%.

In the experiment, two cartoons were presented to each subject at a time and his task was to indicate which of the two seemed funnier, and to provide each cartoon with a numerical rating on a scale of funniness. For providing this rating the subject was presented with the following instructions and scale of funniness:

You are to give each cartoon a score according to how funny it seems to you. If a cartoon does not seem at all funny to you, give it a 0. If it is slightly funny, score it a 1. If it is funny, but below average in funniness, give it a 2 and if it is of average funniness, score it 3. If it is somewhat funnier than average, score it 4 and if it is very funny, give it a 5. If it is extremely funny to you, score it 6. Remember, there are no right or wrong answers, it's just how the cartoon appeals to you.

Score

- 0 not funny at all
- 1 slightly funny
- 2 funny but below average
- 3 average funniness
- 4 somewhat funnier than average
- 5 very funny
- 6 extremely funny

The cartoons which were paired for presentation to the subjects represented crude thematic polarities. It was hoped in employing such polarities that certain predictions could be tested. Cartoons of the following themes were paired.

- 1) Theme B, "hostility to others" with theme C, "non-hostile affiliation".
- 2) Theme D, "self-aggrandizement" with theme E, "self-abasement".
- 3) Theme F, "running away from unpleasant situations" with theme G, "facing unpleasant situations".

Cartoons of theme A, "heterosexuality" were presented individually to the subjects for rating.

The Trial Run

A trial run of the cartoons was conducted using twelve male patients from a surgical ward of Dearborn Hospital. This was done to arrive at an objective basis for pairing the individual cartoons with one another, so that selections representing roughly the same degree of "intrinsic funniness" could be presented together. Essentially the same method was used for presenting the cartoons and for having the subjects rate them as

was used in the final procedure. These patients rated the cartoons on the funniness scale of 0 to 6 and a record was kept of their laughs and smiles. A measure of the "intrinsic funniness" of each cartoon was arrived at by averaging the ratings of the total group for each cartoon. These ratings were then employed in pairing the final selections so that cartoons that were rated as being equally funny were paired together wherever possible. Also, to compensate for possible satiation effects, those pairs of cartoons that were rated the funniest were presented toward the end of the series in the final test. This was done even though no over-all satiation effect was manifested during the trial run by the group.

The trial run also served to provide data on the reliability of the verbal funniness ratings. One week following the first trial run, the same subjects were again given the cartoons for rating. Comparisons were then made between the sum of the group ratings for these two presentations. A test-retest reliability coefficient of .87, (N=35) significant at better than the 1% level was obtained.<sup>1</sup>

Another measure of the reliability of the verbal funniness ratings was obtained by comparing the subject's ratings with the number of laughs and smiles he gave to the cartoons. If verbal funniness ratings are indeed an adequate measure of a subject's

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<sup>1</sup>It may be of interest to note that there was a slight trend of the subjects to rate the cartoons lower on the second presentation. Also, there were a little less than half as many laughs and smiles given to the cartoons the second time.

humorous appreciation of cartoons, then we would expect responses of laughing and smiling to occur most frequently to those cartoons rated as being the funniest. This comparison was made for the subjects of both experimental groups. A correlation coefficient of .64 significant at better than the .01 level for the neurotic group, and one of .46, also significant at .01 for the normal group were obtained. This indicates that those subjects who gave the high ratings to the cartoons also tended to respond to them with more laughs and smiles. Thus, we have an example of demonstrated agreement between overt humor behavior and the subjects' verbal reports. This relationship will be discussed in greater detail later.

### Cartoon Presentation

Each subject was given the following general statement about the experiment. He was told:

This is a study to find out why people think certain things are funny. Your task will be to look at the two cartoons I will give you each time, and tell me which one seems funnier.

Following the presentation of the first set of two cartoons, he was told, "Now I want you to give a number to each of the cartoons according to how funny they seem to you", and he was handed the instructions and scale of funniness given on page 25 above. After presenting the last pair of cartoons the subject was told, "Now the rest of these will be singles. You just give each one a number according to how funny it seems to you".

Following the cartoon presentation, each subject was asked to describe what the thoughts and feelings of the cartoon characters might be for four of the cartoons. The selections used represented four different themes and they were cartoons which permitted empathic identification. The same four cartoons were presented to each subject.<sup>1</sup>

### The Subjects

The subjects were 50 hospitalized men from two Veterans Administration hospitals. A group manifestly free of psychopathology, hereafter referred to as the T.B. group, in contrast to a psychoneurotic group were employed in order that certain comparisons could be made to test several of the hypotheses of this study. The patients in both groups were of the same general socio-economic background. Most were lower-middle-class while a few came from lower or middle-class backgrounds. The groups were matched with respect to sex, age, and education. Tables I and II present more detailed information about the composition of the groups.

The T.B. group was composed of 25 recovered, or nearly recovered, male tuberculosis patients who were hospitalized at Dearborn General Medical Hospital. These subjects were selected in consultation with the ward psychologist who knew most of the

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<sup>1</sup>The four cartoons used in the order of their presentation to the subjects are as follows: 1-theme F, running from situation, cartoon by Wyma; 2-theme G, affiliation, cartoon by Walker; 3-theme B, self aggrandizement, cartoon by Smits; and 4-theme A, heterosexuality, cartoon by Caplan.

TABLE I  
COMPOSITION OF THE  
TUBERCULOSIS GROUP

Subject Number	Age	Years Education	Marital Status	Stated Occupation
1	37	12	Married	Buffer
2	24	14	Single	Student
3	26	12	Single	Tool & Die
4	41	11	Single	Labor
5	25	15	Married	Student
6	26	7	Single	Stock Boy
7	28	16	Married	Student
8	35	10	Divorced	Truck Driver
9	24	10	Single	Shipping Clerk
10	51	13	Divorced	Bookkeeper
11	35	12	Married	Lineman
12	31	9	Married	Sailor
13	25	12	Married	Design
14	20	12	Single	Air Force
15	41	12	Married	Storekeeper
16	25	13	Married	Student
17	34	11	Separated	Truck Driver
18	39	10	Single	Navy
19	27	11	Married	Machine Repair
20	30	8	Single	Polisher
21	34	12	Married	Carpenter
22	46	9	Married	Salesman
23	23	7	Married	Painter
24	26	5	Married	Labor
25	28	8	Separated	Sales Clerk
<hr/>				
Mean	31.2	10.8		

TABLE II  
COMPOSITION OF THE  
NEUROPSYCHIATRIC GROUP

Subject Number	Age	Years Education	Marital Status	Stated Occupation	Hospital Diagnosis
1	39	12	Divorced	Salesman	Anxiety State
2	32	7	Married	Plasterer	Psychoneurosis, Anxiety State
3	30	12	Married	Painter	Anxiety Reaction
4	40	10	Married	Guard	Psychoneurosis with Shiz. Tendencies
5	19	12	Single	Marines	Severe Anxiety Reaction
6	33	12	Married	Guard	Conversion Reaction
7	32	12	Divorced	Labor	Anxiety Reaction
8	32	10	Married	Labor	Anxiety Reaction
9	32	12	Divorced	Carpenter	Anxiety State
10	21	12	Single	Labor	Acute Situational Maladjustment
11	23	12	Single	Painter	Psychoneurosis, Anxiety State
12	24	8	Separated	Farmer	Anxiety Reaction
13	26	7	Single	Salesman	Psychoneurotic
14	42	10	Married	None	Passive-Dependent Personality
15	48	14	Married	Chemist	Psychoneurotic Anxiety State
16	32	10	Married	Salesman	Anxiety Reaction
17	45	10	Single	Labor	Anxiety Reaction
18	30	12	Married	Plasterer	Anxiety Reaction
19	39	12	Married	Inspector	Passive-Dependent React. with Depression
20	33	11	Single	Labor	Severe Anxiety Reaction
21	30	14	Single	Office Clerk	Hysteria
22	27	12	Married	Printer	Anxiety Reaction Panic State
23	26	9	Divorced	Machinist	Anxiety Reaction
24	33	11	Separated	Foreman	Passive-Aggressive with Anxiety
25	39	9	Single	Construc- tion Labor	Passive-Aggressive Personality
Mean	32.3	10.9			

patients, and only those patients who were judged to be relatively free from psychological disturbance were included. Patients who had suffered a neurotic or psychotic break at some past date were excluded from the sample. The average age of this group was a little over 31 years and the mean number of years of schooling was 10.8 years.

The psychoneurotic group was composed of 25 hospitalized male patients all of whom had been classified as suffering primarily from a psychoneurotic condition by the staff of the Ft. Custer Veterans Hospital. All cases involving epilepsy or possible brain damage as complicating factors were excluded from the sample. The diagnosis of each patient given in Table II was assigned during the formal hospital staff procedure by one psychologist and two or more psychiatrists. A word of caution should be included regarding the composition of this group. These patients were on the average much more severely disturbed than the typical psychoneurotic as indicated by the very fact that they were hospitalized. Nonetheless, all of the subjects were in sufficiently good contact that they could understand and respond to the cartoons and could follow the test instructions. The mean age of the neurotic group was 32.3 years and they had completed 10.9 mean number of years education.

#### Personality Assessment Procedures

Following the presentation of the humor stimuli, each subject was given a series of paper-and-pencil personality tests. Copies of the tests employed are given in Appendix A with the



exception of the Edwards Personal Preference Schedule and the Barron Ego-Strength Scale. The instructions were printed on the first page of each test sheet, and they were read to each subject. To insure that the subject fully understood the directions, the examiner went over the first few items of each test with the subject. In an attempt to obtain the maximum degree of truthfulness and cooperation, each subject was told that the psychologist would later be willing to discuss the meaning of the subject's test scores with him. Most subjects indicated a desire and eagerness to do this. The average subject required around three hours to complete the test battery.

A brief description of the tests employed is given below:

Edwards Personal Preference Schedule. This test is designed to provide a measure of a number of relatively independent normal personality variables. The inventory is composed of 225 pairs of items. The subject's task is to choose which of two items is most characteristic of himself. The statements comprising the items have their origin in the list of manifest needs presented by Henry A. Murray. Test-retest reliability measures are available for each of the scales comprising the test. They range from a low of .74 to a high of .88 for those scales which were used in this study. Other reliability and validity measures are also available (8). One of the disadvantages of the Edwards for our purpose is the fact that the scales of "needs" are not independent of each other; they are ipsative scales. High scores on several scales necessarily will depress the scores on the other scales. It is impossible

to have all high or all low scores on all of the scales. Like a balloon, if one part is squeezed, other parts must expand. For this reason it is not possible to assign an absolute value to any scale score. In spite of this limitation, this test was included in the battery because it is one of the few tests available which does give a measure of need in several areas which were also represented by the cartoon themes.

Need-Tension Inventory. This inventory consists of 70 statements which the subject rates on a 5 point scale according to how much he agrees or disagrees with each item. The questions along with the directions to the subject and the rating instructions are given in Appendix A. The items in this inventory were assembled from questions originally used by Henry Murray to provide a measure of various personality variables, including needs and sentiments. These items arranged according to the personality variables they were designed to measure are discussed in full in Explorations in Personality (21). The specific items used here were those which would provide a measure of need or tension in the thematic areas represented also by the cartoons. Ten items each for the following seven areas were employed: need-heterosexuality, n-aggression, n-affiliation, n-exhibition, n-abasement, endurance, and emotionality.

Barron Ego-Strength Scale. This scale consists of 68 items from the Minnesota Multiphasic Personality Inventory. The items are answered by the subject as being true or false about himself. The test purports to measure a general factor or capacity for integration, or ego-strength, which is one aspect of psychological

adjustment. It is reported to be a good predictor in "situations in which an estimate of personal adaptability and resourcefulness is called for" (1). The test-retest reliability is .72, while odd-even reliability for a psychiatric population is .76. The test was included in the battery to obtain a measure of psychological adjustment defined as the possession of high ego-strength.

Warmth Scale. The Warmth Scale is composed of 30 statements to which the subject responds indicating whether each item is or is not true regarding himself. A copy of this scale, devised by Henry C. Smith, is given in Appendix A. The test-retest reliability for this scale is .65 and the split-half reliability is .63 for a college population. The items are phrased so that persons who are generally accepting of others might be expected to answer in a given direction. This scale was included because acceptance of others and sensitivity to their feelings may be regarded as an important aspect of empathy and role-taking facility, and would thus help facilitate a test of the hypothesized relationship between role-taking facility and the enjoyment of humor.

Test of Ability to Predict Average Behavior. This scale, also devised by Henry C. Smith, consists of 30 pairs of occupations or activities from which the subject is asked to indicate which item he thinks college students would like or enjoy the most. A score is computed on the basis of how well the subject's choices correspond with the actual preferences of college students.

The split-half reliability of this test is .69 for a college population. In spite of the possible limitations due to using this test on a non-college population, this test was included because it measures one type of role-taking facility. A copy of this test is given in Appendix A.

## CHAPTER III

### RESULTS

The problem has been defined, the methodology and instruments discussed, and we are ready to consider the results. The findings which relate to the hypotheses of this study will be presented in this chapter.

#### Hypothesis #1

The capacity of an individual to derive humorous satisfaction, laughter and pleasure, from cartoons is positively related to that individual's general psychological adjustment.

In order to test this hypothesis, the subjects' verbal ratings to the cartoons and their overt humor responses, laughs and smiles, were compared with three different measures of psychological adjustment.

For the first measure, psychological adjustment was defined as the relative absence of psychopathology. Here it is hypothesized that the hospitalized neurotic group will on the average derive less satisfaction from the cartoons than will the T.B. hospitalized group. It is to be expected that the T.B. group will tend to rate the cartoons higher and evidence more laughs and smiles in response to them than will the "poorer adjusted" neurotic group. The results of the comparisons made to test these predictions are presented in table III. In this table, and in those to follow, N-2 degrees of freedom were used. Correlations when reported are all product moment correlations.

TABLE III  
 RESPONSES TO CARTOONS BY  
 T.B. AND NEUROTIC PATIENTS

	T.B. N = 25	Neurotics N = 25	Difference	<u>t</u>
Mean funniness rating per cartoon	2.50	2.03	.47	1.99*
S.D.	.72	.89		
Mean number of laughs and smiles to cartoon series	9.88	6.12	3.76	1.74*
S.D.	6.28	8.14		

\*Sig. .05, one-tail test

The results of these comparisons support the hypothesis. The T.B. group did in fact give significantly more laugh and smile responses to the cartoons than did the neurotic group, and they tended to rate them as funnier. Because of the large standard deviations obtained for the mean number of laughs and smiles for both groups, Bartlett's test for homogeneity of variance was made between the group comparisons. The results of this test were not significant which justifies the use of t for evaluating the difference between the group means.

For a second test, psychological adjustment was defined in terms of the subjects' performance on the Barron Ego-Strength Scale. Here it was predicted that those subjects who scored lowest on the scale, that is those who gave the fewest number of responses indicative of ego strength, would manifest the fewest number of laughs and smiles to the cartoons and they would tend to rate them as being less funny. It was further expected that the T.B. group would score significantly higher on this scale in the direction of greater ego strength, than the neurotic group. Table IV summarizes the results of these comparisons.

Significant correlations in the hypothesized direction were obtained for three of the four comparisons. In the fourth comparison, that between the number of laughs and smiles and the scores on the Ego-Strength Scale for the T.B. group, the correlation coefficient was in the hypothesized direction but was not sufficiently high to reach statistical significance. The expectation that the T.B. group would score significantly

TABLE IV

CORRELATIONS BETWEEN RESPONSES  
TO CARTOONS AND SCORES ON BARRON  
EGO-STRENGTH SCALE

	T.B. N = 25	Neurotics N = 25
Funniness ratings vs. Ego-Strength score	.474**	.365*
Number of laughs and smiles vs. Ego-Strength score	.168	.348*

\*Sig. .05, one-tail test

\*\*Sig. .01, one-tail test



higher, that is in the direction of greater ego strength, was also found to be true. The T.B. group obtained a mean ego strength score of 49.08 (S.D.= 3.78) while the neurotics obtained a mean score of 35.64 (S.D.= 7.33). A  $t$  of 7.93, significant at .001 was obtained. Bartlett's test for homogeneity of variance was applied to this data because of the discrepancy between the standard deviations of the two groups. A significant chi-square value was obtained indicating that the samples probably did not originate from a population with a common variance. For this reason, the median test in addition to  $t$  was used to evaluate the difference between means. A chi-square of 29.75 (d.f.= 1) significant at .001 was obtained which indicates that the T.B. subjects scored significantly higher on ego strength than neurotics.

For the third test of this hypothesis, psychological adjustment was defined as the relative absence of strong tensions and conflicts. A measure of total tension in the cartoon theme areas was derived on apriori grounds by the author. By taking the sum of the scores on the Need-Tension Inventory for each of the various tension areas, an over-all measure of tension in the cartoon theme areas was obtained for each subject. Table V summarizes the results of the comparisons between this over-all tension score for the subjects of both groups with their ratings and responses to the cartoons. Preliminary comparisons showed that this total score did not differentiate between groups, but that it did differentiate within the neurotic group as indicated by the results in table V. Further study showed that this total

TABLE V

CORRELATIONS BETWEEN OVER-ALL TENSION  
SCORE AND RESPONSES TO CARTOONS

	T.B. N = 25	Neurotics N = 25
Tension score vs. funnyness ratings	.057	-.478**
Tension score vs. number of laughs and smiles	-.100	-.487**

\*\*Sig. .01, one-tail test

tension score is related to another measure of adjustment for the neurotic but not the T.B. group. A correlation of .38, significant at .05 for the one-tail test was obtained between the neurotics total tension score and their scores on the Barron Ego-Strength Scale. For the T.B. group a correlation coefficient of .03 was obtained which is not significant. Thus, the total tension score appears to differentiate only within the neurotic group. Mean tension scores obtained for the groups were T.B., 194.30 (S.D. = 16.61), and neurotics, 195.72 (S.D. = 22.86). The  $t$  between these mean tension scores was not significant. Significant correlations in the hypothesized direction were obtained only in the neurotic group between the over-all tension scores of the subjects and their funniness ratings, and between tension scores and number of laughs and smiles.

### Hypothesis #2

The funniness of a cartoon to any individual will be positively related to the degree of tension or need represented by the type of humor-evoking stimulus to which the individual is responding.

For the first test of this hypothesis it was predicted that subjects who scored as having strong need in a given area on the Edwards Personal Preference Schedule would enjoy humor in that same area to a greater extent than persons with lower need in that same sphere.

Specific comparisons were made between liking for the following cartoon themes, and areas of need for the two groups.

<u>Cartoon theme</u>	<u>Edwards PPS "need"</u>
Self-aggrandizement	n-exhibition
Self-abasement	n-abasement
Hostility to others	n-aggression
Non-hostile affiliation	n-affiliation
Facing situations	n-endurance
Running away from situations	n-endurance
Heterosexuality	n-heterosexuality

In table VI where these comparisons are reported, as well as in later tables where comparisons by themes are reported, verbal funniness ratings are the only humor appreciation measure employed. Laughs and smiles were not used in these instances because when divided into themes the frequencies of laughs and smiles given were so small as to minimize the likelihood of obtaining statistically significant results. The reader who is interested in the mean number of laughs and smiles by themes is referred to table XIV in Appendix C. Also, in table VI, and in other tables which follow, one-tail tests have been employed since a positive relationship was hypothesized between liking of humor and tension in the same theme area. The comparison between liking of running away humor themes and n-endurance does not involve similar themes, but rather opposite themes. Inasmuch as hypothesis two does not state the direction of response when dissimilar themes or opposite themes are involved, a two-tail test was employed for this comparison.

TABLE VI

CORRELATIONS BETWEEN HUMOR PREFERENCES  
AND SCORES ON THE EDWARDS PERSONAL  
PREFERENCE SCHEDULE

Cartoon theme	Need	T.B. N = 25	Neurotics N = 25
Aggrandizement	n-exhibition	-.144	-.042
Abasement	n-abasement	-.059	-.227
Hostility	n-aggression	.001	.076
Affiliation	n-affiliation	.238	-.073
Run-away situations	n-endurance	.054	.207
Face situations	n-endurance	.112	-.002
Heterosexuality	n-heterosexuality	.084	.423*

\*Sig. .05, two-tail test

The results of the comparisons between humor preferences by themes and scores of need in the same theme areas from the Edwards Personal Preference Schedule are given in table VI. The only significant finding here was a positive correlation between liking of cartoons dealing with sexual themes and n-heterosexuality on the Edwards scale for the neurotic subjects. A correlation coefficient of .423, significant at .05 was obtained.

A second test of this hypothesis was made by comparing the subjects' preferences for specific humor themes with their scores on the Need-Tension Inventory. Here again it was predicted that the liking of humor of a given theme would be correlated positively with higher tension in that area as measured by the subjects' responses to items on the Need-Tension Inventory. One-tail tests were again employed for the running away from situations theme, compared with n-endurance. The results of these comparisons are summarized in table VII.

None of the comparisons for the T.E. group reached significance, while four were significant for the neurotic group. Significant correlations in the hypothesized direction for the neurotic group were found between liking for self-aggrandizement cartoons and n-exhibition, between liking of hostility cartoons and n-aggression, liking of running away cartoons and n-endurance, and between the liking of facing situations cartoons and n-endurance. The one comparison which proved significant with the Edwards scale, that between heterosexuality cartoon themes and n-heterosexuality, did not yield a significant

TABLE VII

CORRELATIONS BETWEEN HUMOR  
PREFERENCES AND SCORES ON THE  
NEED-TENSION INVENTORY

Cartoon theme	Need-Tension theme	T.B. N = 25	Neurotics N = 25
Aggrandizement	n-exhibition	.016	.366*
Abasement	n-abasement	.001	-.021
Hostility	n-aggression	-.057	.340*
Affiliation	n-affiliation	.066	.282
Run-away situations	n-endurance	-.144	.559**
Face situations	n-endurance	.254	.350*
Heterosexuality	n-heterosexuality	.119	.242

\*Sig. .05, one-tail test

\*\*Sig. .05, two-tail test

correlation with the Need-Tension Inventory comparison of heterosexuality themes with n-heterosexuality. The correlation coefficient was, however, in the hypothesized direction for both the T.B. and neurotic groups.

The question might arise about the relation between the performances on the Edwards and the Need-Tension tests. Since both devices supposedly give a measure of need in similar areas, we might expect fairly high positive correlations between similar scales on these tests. The results of these correlations are presented in table VIII. Eight of the twelve correlations were statistically significant.

The comparisons summarized above in tables VI and VII provide the main test of the second hypothesis.

### Hypothesis #3

The funniness of a cartoon is positively related to the degree to which the perceiver is able to take the role of the other.

The first test of this hypothesis involved a comparison between the responses to the cartoons with performance on the test of Ability to Predict Average Behavior. This test involved predicting the job preferences of college students, which can be thought of as one type of role-taking. It was expected that the T.B. group being less disturbed would do better on this test than the neurotic group. Table X shows the results of the correlations. The T.B. subjects obtained a mean score of 18.48 (S.D. = 2.77) while the neurotics had a mean score of 16.72 (S.D. = 4.03). Bartlett's test for homogeneity of variance yielded a non-significant chi-square



TABLE VIII

CORRELATIONS BETWEEN SCORES ON EDWARDS  
PERSONAL PREFERENCE SCHEDULE AND  
NEED-TENSION INVENTORY

Need	T.B. N = 25	Neurotics N = 25
n-exhibition	.145	.192
n-abasement	.431*	.076
n-aggression	.528**	.550**
n-affiliation	-.001	.417*
n-endurance	.379*	.522**
n-heterosexuality	.683**	.729**

\*Sig. .05, one-tail test

\*\*Sig. .01, one-tail test

TABLE X

CORRELATIONS BETWEEN SCORES ON  
THE TEST OF ABILITY TO PREDICT AVERAGE  
BEHAVIOR AND RESPONSES TO CARTOONS

Comparison	T.B. N = 25	Neurotics N = 25
Total funniness rating vs. prediction scores	.247	-.183
Total number of laughs and smiles vs. prediction scores	-.195	.031

which justifies the use of t for evaluating the difference between group means. A t of 1.77, significant at .05 for the one-tail test was obtained. None of the correlations reached significance.

The second test of the hypothesis involved a comparison of the responses to the cartoons with performance on the Warmth Scale. A generalized acceptance of others, as measured by this scale, might be considered an important component of empathy and role-taking facility. It was expected that those subjects who scored highest on this scale would tend to rate the cartoons the highest and would show the greatest number of laughs and smiles. It was also predicted that the T.B. group would score highest on this dimension. The results of these comparisons are presented in table XI. None of the correlation coefficients reach statistical significance. The mean Warmth Scale score for the groups was 15.56 (S.D. = 3.94) for the T.B. group, and 15.22 (S.D. = 5.39) for the neurotics. A t of .18 was obtained between the mean scores, which is not significant.

These comprise the various tests of the hypotheses. A discussion of the meaning and significance of the results is given in the next chapter. First we will consider some additional results.

TABLE XI

CORRELATIONS BETWEEN SCORES  
ON THE WARMTH SCALE AND  
RESPONSES TO CARTOONS

Comparison	T.B. N = 25	Neurotics N = 25
Total funniness rating vs. Warmth Scale score	-.158	-.037
Total number of laughs and smiles vs. Warmth Scale score	-.356	.176

### Related Findings

There are other ways that the data can be viewed which, though not directly related to the hypotheses of this study, do provide additional facts that may increase our understanding of laughter and humor.

It will be recalled that the cartoon themes were assembled to include certain polarities. It was thus possible to compare how the two groups responded to cartoons dealing with opposite themes. It was expected that the neurotic group, being more disturbed, would show greater extremes in their reaction to each of the polarities. Thus, if the neurotic group tended to rate one theme as being relatively funny, it was expected that compared with the T.B. group they would rate the opposite theme as being less funny. To test this prediction a comparison was made between the mean funniness scores assigned to the cartoons representing these polarities for each group. By taking the difference between these mean scores we obtain a measure of the extent to which the members of the group rated a theme as being funnier, or less funny than its opposite. The larger the difference between these mean polarity scores, the larger the discrepancy in the liking of the two themes. As indicated above, it was expected that the neurotics would show the greater difference between these mean polarity scores. The results of these comparisons are summarized in table XII. It will be noticed that the differences between the mean polarity scores in each instance were larger for the neurotics, although

TABLE XII

## FUNNINESS RATINGS OF CARTOONS BY THEMES

Cartoon Theme	T.B. Group N = 25		Neurotics N = 25		Between groups N = 50					
	Means	S.D. Diff. t	Means	S.D. Diff. t	Diff. t	t				
Face situations vs. Running away	2.17	.92	.72	2.69*	1.69	.87	.87	4.80**	.48	1.87
Abasement vs. Aggrandizement	2.89	.92			2.56	1.21			.33	1.08
Hostility vs. Affiliation	2.17	.82	.11	.49	1.60	.97	.14	.52	.57	2.20*
Heterosexuality	2.06	.71			1.74	.84			.32	1.44
	2.73	.95	.21	.92	2.32	1.09	.44	1.47	.41	1.52
	2.52	.92			1.88	.99			.64	2.58*
	2.94	1.10			2.46	1.44			.48	1.30

\*Sig. .05, two-tail test

\*\*Sig. .01, two-tail test

for the most part these differences were so small as to be unreliable. This finding does, however, suggest that neurotics are more extreme in their response to cartoons representing opposite themes. The t tests between the mean funniness ratings by polarity themes were significant for both T.B. subjects and neurotics only on the facing situations versus running away set.

The reader may be interested in knowing if there are certain cartoon themes which appeal more to one group than to another. To determine this, t tests were run between the mean funniness ratings assigned to the cartoon themes for the two groups. The results of these comparisons are also presented in table XII in the last column. A t significant at .05 (d.f. = 48) was obtained between the mean funniness ratings of the two groups for two themes. In both instances, T.B. subjects rated cartoons dealing with abasement and affiliation as being funnier than did neurotics. Inspection of the results presented in table XII indicates that the T.B. subjects rated the cartoons funnier for each of the seven themes than did the neurotics. Furthermore, for each of the seven themes, with the exception of "facing situations", the neurotic subjects showed greater variance in response to the cartoons as indicated by the larger standard deviations. This relationship also holds true for the comparisons between laughs and smiles for the groups. Table XIV in Appendix C shows that for each theme, the T.B. subjects gave more laughs and smiles to the cartoons, and that for five of the seven themes the T.B. subjects showed

less variance in their reactions to the cartoons than did the neurotic subjects.

We noted earlier that there was close agreement between overt humor behavior and the subjects' verbal reports about cartoon funniness. Total laughs and smiles correlated with the verbal ratings .636 for the neurotic subjects and .462 for the T.B. group. These coefficients are significant at the .01 and .05 levels respectively. Those subjects who gave the high ratings to the cartoons also tended to respond to them with more laughs and smiles. In order to demonstrate more precisely the nature of this relationship, some graphs are presented below. These results are also included because it is felt that they may be of methodological value to other research workers in this area, since they provide information about the relationship between verbal ratings and overt laughter and smile reactions to cartoons.

Each of the 25 subjects in the two groups responded to 35 cartoons. Figure 1 shows the frequency of each funniness rating as well as the frequency of laughs and smiles for the corresponding funniness ratings. Thus, of the total number of 875 cartoon responses (25 subjects X 35 cartoons) given by neurotics, 190 received zero funniness ratings and no laughs or smiles were given to these cartoons by the neurotic subjects. At the other extreme there were 30 ratings of 6, extremely funny, and in 28 instances either a laugh or a smile accompanied the presentation of these cartoons.

Figure 2 presents the data in still another way. This graph shows the percentage of laugh and smile responses which



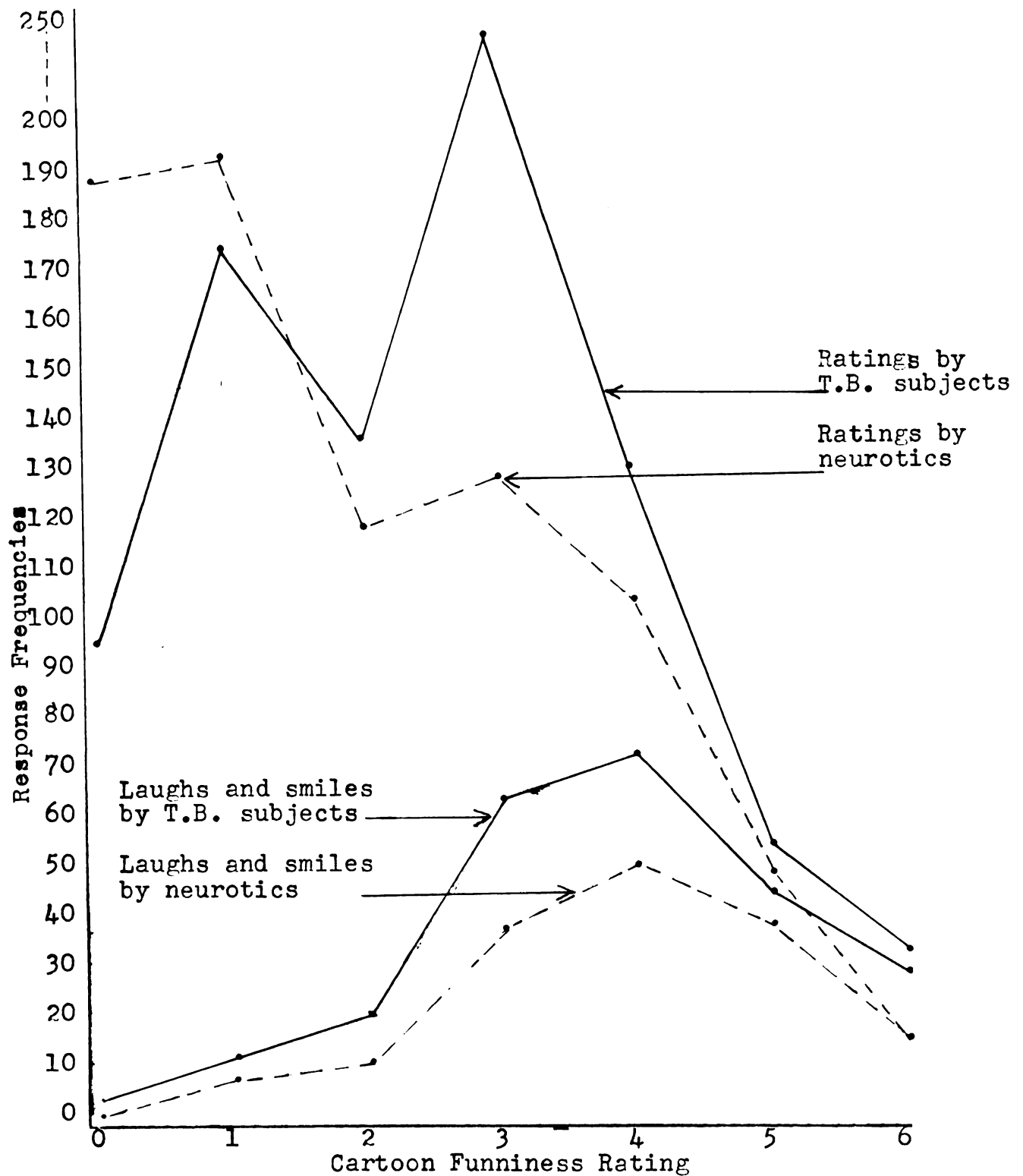


Figure 1. Frequency of Funniness Ratings of 35 Cartoons by 25 T.B. Subjects and 25 Neurotics, and Frequency of Laughs and Smiles at each Rating.

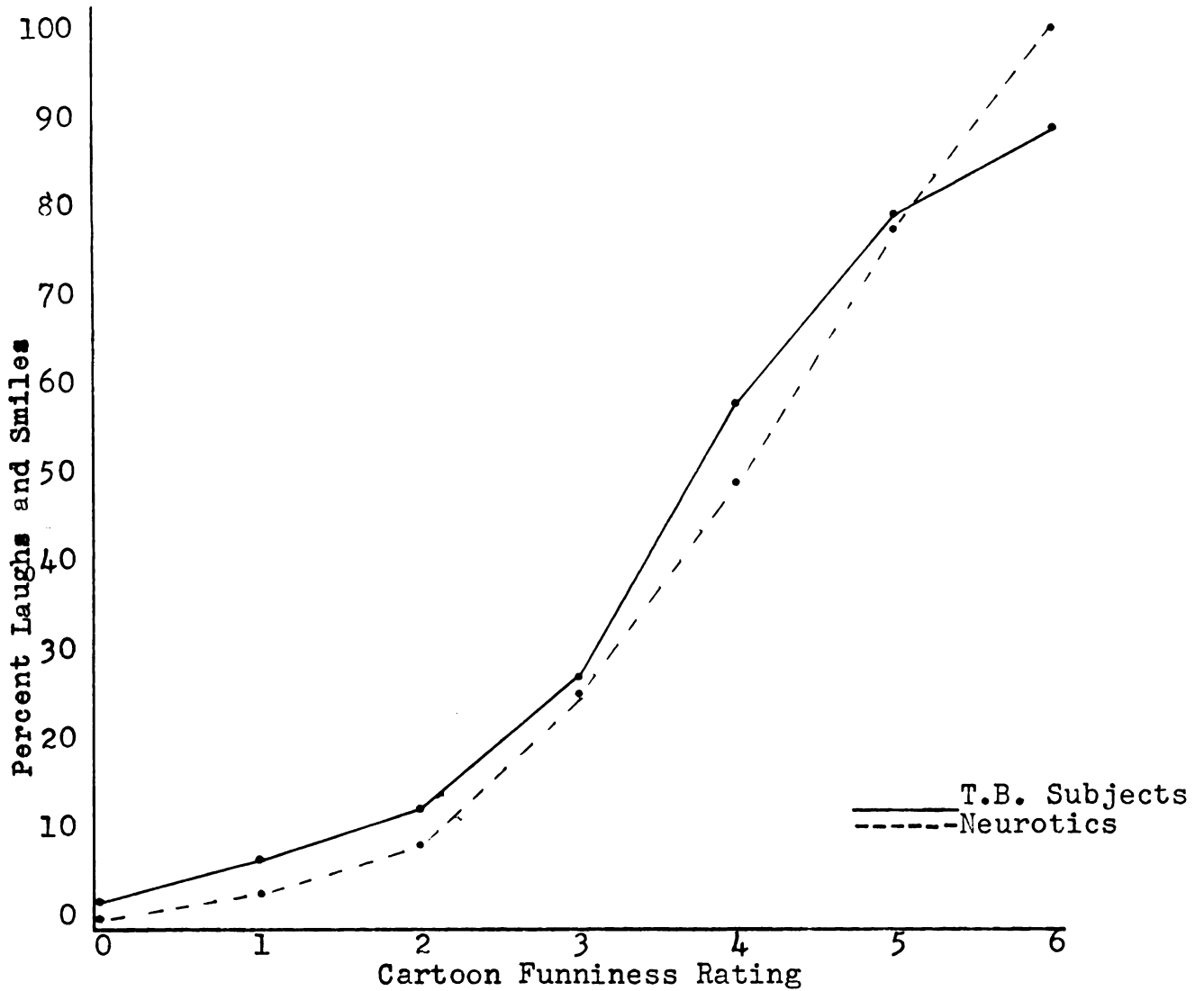


Figure 2. Percent Laughs and Smiles to Cartoons Assigned Various Cartoon Funniness Ratings.

were given to cartoons assigned various scores from 0 to 6 on the funniness scale. Thus, while cartoons scored a zero by the neurotics evoked no laughs or smiles, all of the cartoons scored a 6 were responded to with a laugh or a smile by the neurotics. Similarly, while cartoons scored a zero by the T.B. subjects evoked one overt humor response, eighty-three percent laughs and smiles accompanied cartoons which the T.B. subjects scored a 6.

It would be expected from the above that cartoons rated at the high end of the scale would evoke more laughs than smiles, while cartoons rated at the lower end would evoke fewer laughs. We would expect this to be so if a laugh is indeed quantitatively different from a smile, and indicative of greater humorous pleasure. Figure 3 shows the proportion of laughs to laughs and smiles for the different funniness scores. The data presented are for the combined groups inasmuch as the comparisons by separate groups yielded highly similar results. Thus, while nearly thirty-four percent of the overt humor responses to cartoons that were scored a 1, were laughs (and sixty-six percent were smiles), over eighty-five percent of those cartoons scored a 6 were responded to with a laugh (and fifteen percent were given smiles). We will have more to say about the meaning of these results in the next chapter.

Some significant relationships were observed between the length of stories subjects told in describing the cartoons and their ratings and laughs and smiles to the cartoons. A positive relationship between these variables might be expected for

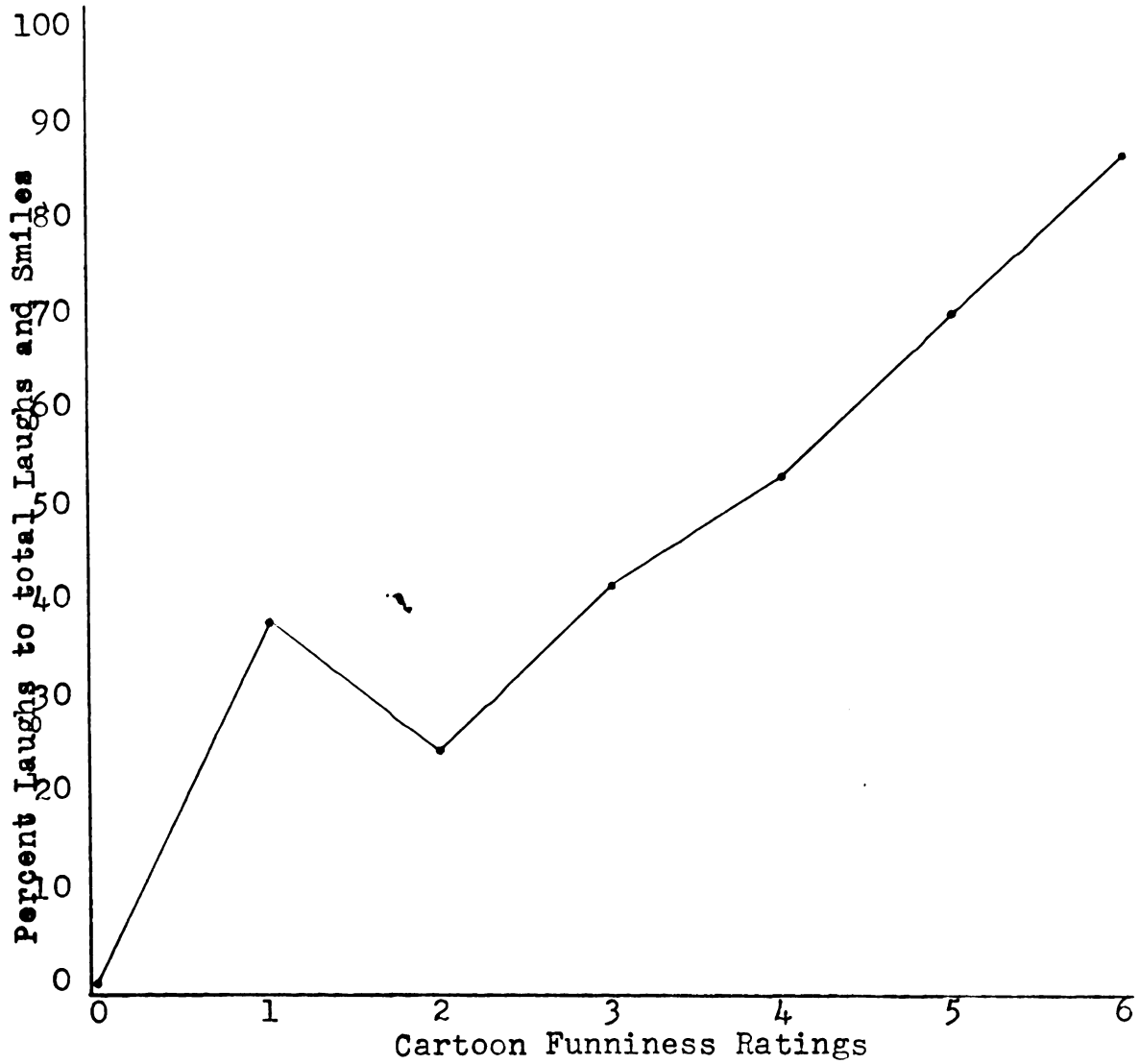


Figure 3. Proportion of Laughs to Laughs and Smiles for Different Cartoon Funniness Ratings.

several reasons. First, if a subject did not understand a joke, he probably would have greater difficulty describing the cartoon. Also, positive relationships have been found between the length of thematic productions and the extent of identification with persons in the stimulus cards.(29). It is also possible that length of stories told to cartoons might be a function of a general trait of expressiveness, as might the tendency to laugh and smile at cartoons. On the basis of the present study, it has not been possible to isolate to what extent these various factors have contributed to the significance of the findings. The highly significant results summarized in table XIII would suggest the value of further exploring this relationship, and attempting to ascertain the contributing factors, in future studies. Each of the correlation coefficients within groups exceeded the .001 level. Both neurotic and T.B. subjects who told the longest stories to cartoons rated them the funniest and gave the most laughs and smiles to them. The mean number of words used in describing the cartoons by the T.B. subjects was 93.24 (S.D. = 31.45), while for the neurotics it was 78.28 (S.D. = 32.40). The  $t$  for this comparison was not significant.

Throughout this study, the relationships between personality measures have been more extreme and more significant results have been obtained with the comparisons involving neurotics. Also, the neurotics showed greater variance in their responses as indicated by the larger standard deviations shown in tables III and XII, as well as in the references cited in the text. The implications of these findings will be discussed in the next chapter.

TABLE XIII

CORRELATIONS BETWEEN LENGTH OF STORIES TOLD  
IN DESCRIBING CARTOONS AND RESPONSES TO CARTOONS

	T.B. N = 25	Neurotics N = 25
Total funniness ratings vs. length of stories	.788*	.551*
Total number of laughs and smiles vs. length of stories	.785*	.589*

\*Sig. .001, one-tail test

## CHAPTER IV

### DISCUSSION

This study has sought to investigate several aspects of the theories of humor offered by Freud and George H. Mead. Three hypotheses were derived from these humor theories, which state relationships between appreciation of humor and various facets of human behavior. To test these hypotheses, two indices of humor appreciation, a verbal funniness rating, and the number of laughs and smiles to cartoons, were compared with measures of psychological adjustment, tension and need, and role-taking facility. In this chapter we will consider the meaning of the findings and the implications for future research which this investigation suggests.

#### Humor Appreciation Measures

The comparisons between the two humor appreciation measures, funniness ratings to cartoons and number of laughs and smiles to cartoons, reveal good general correspondence. If verbal funniness ratings are indeed a reliable and valid measure of a subject's humorous appreciation of cartoons, we would expect responses of laughing and smiling to occur most frequently to those cartoons rated as being the funniest. Total laughs and smiles correlated with verbal funniness ratings .636 for neurotic subjects, and .462 for T.B. subjects. The graphical results presented in figures 1 through 3 indicate more precisely the nature of this relationship. There is

nearly perfect correspondence at the extremes of the funniness scale between both humor response measures. A cartoon rated zero is almost certain not to evoke laughs or smiles, while a cartoon given a score of six will nearly always evoke a laugh or a smile. In general, the higher the funniness rating the more frequent are the laugh and smile responses. Furthermore, the higher the rating the greater is the likelihood that a laugh instead of a smile will occur. These findings will be discussed later. The important point here is that agreement was obtained between the two humor response measures employed in this study.

#### Psychological Adjustment and Appreciation of Humor

Significant relationships were observed between several of the measures of psychological adjustment and the humor appreciation measures. Table III indicates that the T.B. patients tended to express humor to a significantly greater extent than did the neurotic patients. This was evidenced by their rating the cartoons higher, and their responding to them with more laughs and smiles. This relationship held not only for the total group comparisons, but also for the comparisons by themes. For each of the seven themes the T.B. subjects rated the cartoons as being funnier, and responded to them with more laughs and smiles than did the neurotic subjects. If psychological adjustment is defined as the absence of psychopathology so



severe as to require hospitalization, these findings support the hypothesis. These data also lend support to the qualitative findings of Redlich, Levine, and Sohler concerning psychologically disturbed subjects (25). The statistical findings in the present study provide confirmation for their observation that the least disturbed subjects appreciated humor the most. However, these earlier observations were based upon a comparison of neurotic with psychotic subjects and a critic might ask if the psychotic subjects failed to grasp the meaning of the jokes because of their poor reality contact. The findings summarized in table III suggest that psychological disturbance in itself tends to limit the response to humor.

It might be thought that hospitalized neurotics would view cartoons as less humorous as a function of being hospitalized. This is not sufficient to explain the difference between the groups in response to humor. It fails to account for the fact that the M.B. subjects had on the average been hospitalized for a longer period of time than the neurotic subjects. Thus, the obtained differences in response to humor would seem to reflect more basic psychological factors related to general adjustment.

In accord with the hypothesized expectation within each group, those subjects who scored as having the most ego strength on the Barron scale rated the cartoons as being funnier and responded to them with more laughs and smiles. This relationship was generally supported by the data for both

neurotic and normal subjects except for the correlation between ego strength and laughs and smiles for the T.B. group. However, even in this instance the correlation coefficient was in the expected direction.

The present results also support the construct validity of the Barron Ego-Strength Scale. It would be expected that if the Barron scale is in fact a valid measure of psychological adjustment, T.B. subjects would score as having greater ego strength than neurotic subjects. Chi-square was significant at the .001 level when the median test comparison was made.

The results of the third test of this hypothesis are not so clear. Table V indicates the correlations between the measures of humor appreciation and the overall tension score obtained from the Need-Tension Inventory. While significant relationships in the hypothesized direction were obtained for the neurotic group on both measures of humor appreciation, the correlations did not even approach significance for the T.B. group. One interpretation of these data is that the absolute tension level is not as important a factor in adjustment as is the means the person uses to deal with his tensions and problems. Thus, while the T.B. group manifested nearly as much overall tension as indicated by the mean tension scores, their method of dealing with these tensions may have been more adaptive. The finding, that subjects' scores on the Barron Ego-Strength Scale correlated with the overall tension

score for the neurotics but not for the T.E. subjects, suggests that overall tension differentiates between degrees of adjustment only among psychologically disturbed persons, such as hospitalized psychoneurotics.

The finding reported in table V that the neurotic subjects who scored highest on overall tension enjoyed humor the least supports Dorris and Fierman who found that "high-anxious" subjects rate cartoons less funny than "low-anxious" subjects (5). It would be expected that subjects who score highest on overall tension would be more anxious than lower scoring subjects inasmuch as anxiety is often thought to be a result of states of blocked tension or conflict. One possibility consistent with the present findings is that the T.E. group, though nearly as high on overall tension in the areas measured, had more effective ways of dealing with these tensions, while the neurotics had less skill in effective, socially-acceptable tension reduction and tended more to express these tensions in less beneficial ways such as in bodily symptoms or in anxiety. It is suggested here that anxiety is among the several psychological manifestations of underlying blocked tensions which we might expect to correlate negatively with the ability to appreciate humor.

The findings summarized in tables III, IV, and V are in agreement with Freud's view of humor as a means for dealing with problems. They support his contention that persons who are able to laugh and enjoy humor the most are on the average

better adjusted individuals. The manifest-psychopathology-free-subjects rated the cartoons as being funnier and they responded to them with more laughs and smiles. The subjects in both groups who scored in the direction of greatest ego strength also rated cartoons as being funnier. The subjects in the neurotic group, but not the T.E. group, who scored lowest on overall tension rated cartoons as being funnier and responded to them with more laughs and smiles. It was the main purpose of this study to test this relationship between adjustment and response to humor. Though Freud emphasized the importance of humor in adjustment, this study, to the author's knowledge, represents the first experimental attempt to directly investigate this topic.

#### Tension Areas and Appreciation of Humor

The results reported in tables VI and VII disclose a positive relationship between liking for cartoons dealing with certain themes and the presence of greater need in these same theme areas only among members of the neurotic group. Liking for cartoons dealing with heterosexual themes for the neurotic group was associated with higher scores on need-heterosexuality as measured by the Edwards Personal Preference Schedule. This finding was not supported by the corresponding comparison between liking of heterosexual cartoons and n-heterosexuality as measured by the Need-Tension Inventory. However, a liking of cartoons dealing with aggrandizement, hostility, running away from situations, and facing situations for the

neurotic group was associated with higher tension in these areas as measured by the Need-Tension Inventory. It will be noted that none of the correlations involving the T.B. group turned out significant. Our hypothesis predicts a liking for cartoons representing higher tension and need areas for all persons, normals and neurotics included. Since this is so, we must conclude that the data do not support the hypothesis in general. They are, however, suggestive of a relationship between the liking of humor representing specific themes and the presence of higher tension and need in these same areas for psycho-neurotic subjects.

There are many factors which probably relate to the lack of findings supporting this hypothesis for the total group of subjects. It is of course possible that the relationship as hypothesized does not exist for subjects free of psychopathology. Another possibility concerns the adequacy of the two scales of need. The results presented in table VIII show that the correlations between the Edwards and the Need-Tension tests although significant, for the most part, are of low to moderate magnitude with the exception of the heterosexuality comparisons. It is possible that these two devices may not have been measuring the same underlying needs as it was hoped they would. It is difficult to evaluate these findings because of limited information about the Need-Tension Inventory. Also, the correlations are based upon small samples of highly selected subjects and may thus represent low estimates of the true correlation. Had more reliable and valid measures of need

and tension been available for the themes represented by the cartoons, positive results for the T.B. group may have been obtained. The lack of positive findings for the T.B. group raise questions about the adequacy of the hypothesis even though positive results were found for the neurotic group. Further exploration of the hypothesis itself as well as study with more precise measuring devices is merited.

### Role-Taking Facility and Appreciation of Humor

The findings with respect to the appreciation of humor and role-taking facility are negative. This may reflect the fact that the measures of role-taking facility employed were not suitable for the present purpose and that extraneous factors may have served to lessen the likelihood for significant results. This may account for the lack of positive results with the Warmth Scale and with the test of Ability to Predict Average Behavior. Further study using other measures of role-taking facility might reveal a positive relationship and provide support to Freud's and Mead's contention that humor appreciation is related to empathy or role-taking facility.

### Additional Results

The findings of this study point to a fairly high relationship between a subject's enjoyment of humor and his tendency to rate cartoons high and to laugh or smile at them. The results presented graphically in figures 1 through 3 show that a subject is almost certain to laugh or smile at a

cartoon that he rates as being very funny or extremely funny. If he rates a cartoon as being devoid of humor, or only slightly funny, it is unlikely that he will respond overtly with laughs or smiles.

The results shown in figure 3 further support the contention that a laugh is quantitatively indicative of greater humorous satisfaction than a smile. Cartoons rated at the most funny extreme of the scale were responded to mostly with laughs, while the lower a cartoon was rated the fewer the laughs and the more smiling was evoked. This finding is what we might expect from common sense. However, to the author's knowledge this has never before been demonstrated empirically. These findings strongly suggest that laughter and smiling might be regarded as being on a continuum. At the one extreme we might place the absence of a humorous experience. As we move toward the "very humorous" end of the continuum, smiles are evoked, and finally, laughter.

Throughout this study the relationships between personality measures have been more extreme and more statistically significant results have been observed with the comparisons using neurotic subjects. Also, the neurotics showed greater variance in responses as indicated by the larger standard deviations shown in tables III, XII, and XIV. This suggests that psychologically disturbed persons may be more "personal" in their humor, reacting more to the emotional content of the humor themes, while less disturbed persons may be more intellectual, reacting to such things as the quality of the

drawing, its cleverness.etc., to a greater extent than to the thematic content. These observations may be of some value to the future worker in this area. He may obtain more statistically significant results by using neurotic subjects than subjects free from psychopathology. This suggests that if his interest is to study the dynamics of humor, the relations would probably be more pronounced in a neurotic than a less disturbed group.

The finding that subjects who told the longer stories in describing cartoons also rated them funnier and gave more laughs and smiles to them suggests several areas for further exploration. Studies aimed at exploring the relationship between general expressiveness as a trait and response to humor, as well as studies aimed at exploring the extent of the subjects' identification with cartoon characters as a factor relating to the length of stories they tell, would be of value. Because these factors were not controlled, it is difficult to draw precise conclusions regarding this finding. Further study of this phenomenon seems worthwhile.

#### Implications for Further Research

Several directions of further exploration are suggested by this study. Perhaps what is most needed is research into some of the earlier and more primitive laughter responses. The present study has attempted to investigate the relationship between psychological tension areas and appreciation of certain types of humor. Very little is known about how



conditions of physical tension are related to laughter and humor. It would be of value to determine whether various measures of physical tension, such as CSR, relate to humorous appreciation of cartoons and with the tendency to laugh or smile while responding to humor.

It would be of value to know more about the conditions where negative, distrust, or dislike reactions occur to humor evoking stimuli. Observations of negative humor responses by a few subjects in this study suggest that strong conflicts, possibly of a suppressed or even repressed nature are involved. Practically nothing is known of the intensities of conflict and tension which will produce a humorous experience on the one hand, or a negative reaction on the other. Research aimed at investigating the extent to which a subject is aware of conflicts and tensions in himself, or the extent to which these factors are repressed or unconscious and how this relates to humor would provide much needed clarification.

An analysis of the themes of jokes in different societies might be a unique and valuable way of obtaining information about national character. Knowledge about common tension and need areas for the members of a culture might possibly be gained through such a method. Similarly, studying the humor themes that a given individual most enjoys might provide a picture of that person's problem areas. Such a method would have an advantage over the more traditional measurement devices in catching the subject off his guard.

The commonly held view is that we laugh at "what is funny", and because people are not aware of the significance of their responses to humor-evoking stimuli, the psychologist may have here a powerful tool for exploring the psychological storehouses of the individual. Moreover, most individuals enjoy reading jokes or looking at cartoons. Few psychological measuring devices provide such a built-in reinforcing agent to the subject, and for this reason we might expect persons to be more open and less defensive in responding to humor than with the less pleasant devices. Studying the manner in which a person responds to humor, whether he characteristically laughs, smiles, or what, may reveal valuable psychological information. Further studies, perhaps of an intensive clinical nature, are needed to explore these possibilities.

It would be of value to test the responses of other psychopathology-free groups. Although the author feels that we are on fairly safe ground in generalizing the findings on the T.B. group to lower-middle class males in general, it is possible that T.B. patients may differ from this broader population in unknown ways which might affect their response to humor. If anything, one might expect that because they were hospitalized, T.B. patients would rate cartoons as being somewhat less funny than would a comparable non-hospitalized group.

Evidence has been presented in this study which indicates a good correspondence between overt humor behavior, laughs

and smiles, and verbal reports concerning the funniness of cartoons. There are very few affective states which can be studied psychologically where subjects' verbal reports can be checked and immediately and directly compared with overt behavior. To date, little advantage has been taken of the possibilities afforded by this method.

Above all, there is a paucity of inclusive psychological theory concerning laughter. Although many individual philosophers and scholars have advanced theories as to why we laugh at jokes, cartoons, and other humorous material, there is yet no theory sufficiently broad to explain why we also laugh when we are tickled, when we experience joy, when we feel relief from strong tensions, or when we become hysterical. We have suggested some answers in this study but still the question, "Why do we laugh?" remains largely unanswered.

## CHAPTER V

### SUMMARY

Humor, a topic of considerable philosophical speculation throughout the ages, has until recently been an area much neglected by the psychologist. Though humor may be the most common form of emotional expression in our culture, there have been few scientifically designed experiments aimed at exploring the relationship between humor and personality.

The present study is an outgrowth of the theorizing of Freud and George H. Mead on humor. A consideration of their remarks led to the formulation of three hypotheses stating relationships between personality variables and the appreciation of humor.

Twenty-five hospitalized male adults diagnosed as psychoneurotic and twenty-five nearly recovered male adult tuberculosis patients served as the subjects of the study. A series of thirty-five cartoons representing seven distinct themes was presented to the subjects for rating. Two measures of humor appreciation were derived from the responses: (1) a verbal funniness score, derived from each subject's ratings of the cartoons on a seven point scale of funniness, and (2) the number of laughs and smiles. These measures were compared with three personality variables: general adjustment level, amount of tension in the cartoon theme areas, and role-taking facility.

The first hypothesis involved a comparison between the

humor appreciation measures and three ways of defining psychological adjustment: (1) the absence of severe psychopathology, (2) high ego strength on the Barron scale, and (3) the absence of strong tensions. Significant relationships were found between the absence of psychopathology and both humor appreciation measures, between scores on the Barron Ego-Strength Scale and the verbal funniness ratings for the subjects of both groups, and between the ego strength score and the number of laughs and smiles for the neurotic subjects. The third comparison between the tension score and the humor appreciation measures yielded significant results among the neurotics but not the T.B. subjects. Although Freud and others have emphasized the importance of humor in adjustment, this study represents one of the few experimental approaches to this topic.

The second hypothesis involved comparisons between the liking of cartoons dealing with specific themes and the presence of tension in these same theme areas. Significant relationships were found between neurotics liking of humor dealing with self-aggrandizement, hostility, facing unpleasant situations, heterosexuality, and the presence of higher tension in these areas. None of these correlations was significant for the comparisons involving the T.B. group.

The test of the third hypothesis did not support Freud's and Mead's contention of a positive relationship between humor appreciation and role-taking facility. No significant

relationships were found for these comparisons.

The findings of this study are consistent with Freud's assertion that humor can serve the individual as a mechanism for dealing in a positive way with tensions and problems. The main purpose of this investigation was to explore this idea. In general, the present results showed that persons who were able to use and enjoy humor the most scored highest on the adjustment measures.

## APPENDIX A

## PERSONALITY ASSESSMENT PROCEDURES

## Need-Tension Inventory

The statements below represent experiences, preferences, ways of doing things, and ways of behavior that are both agreed with and disagreed with by many people. Read each statement and try to be frank in expressing your own personal agreement or disagreement with any item. There are no "right" or "wrong" answers.

Please read each statement and then place a number next to the item in the following manner:

- 1-Strongly agree. A true statement about me.
- 2-Mildly agree. Somewhat true, or often true about me.
- 3-Neither agree nor disagree. Neither true or false about me.
- 4-Mildly disagree. Usually not true about me.
- 5-Strongly disagree. A false statement about me.

Please give an opinion for each statement even though this will not always be easy.

- 
- 1. When a friend of mine annoys me, I tell him what I think of him.
  - 2. I do not enjoy getting a person's goat.
  - 3. I am usually able to hold up my end in a fight.
  - 4. When something goes wrong I am more apt to blame myself than to blame the other fellow.
  - 5. I do not particularly enjoy kissing.
  - 6. I spend a great deal of time thinking about sexual matters.
  - 7. I like to have people watch me do things which I do well.
  - 8. I am seldom apt to show off in some way, even if I get a chance.
  - 9. I make special efforts to promote good feeling when I am with other people.
  - 10. I feel that friendship is more important than anything else.
  - 11. I often act on the spur of the moment without stopping to think.
  - 12. I waste no time in asking for what I want.
  - 13. I can work at a difficult task for a long time without getting tired of it.
  - 14. I can not stand long periods of hard work.
  - 15. I protest sometimes when a person steps in front of me in a waiting line.
  - 16. I treat a bossy or domineering person as rudely as he treats me.
  - 17. There are hardly ever any times when I act like a coward.
  - 18. Sometimes I feel that my bad and weak points outnumber my good points.
  - 19. I do not fall in love easily.

20. I enjoy the company of women more than men.
21. I boast a bit about my achievements from time to time.
22. I act on the principle that a man will never get ahead if he does not blow his own horn from time to time.
23. I do not particularly enjoy myself at parties or social gatherings.
24. I am very free in expressing warm feelings and goodwill to others.
25. When I have to act, I am usually quick to make up my mind.
26. I am not easily carried away by my thoughts and feelings.
27. I am a horse for work. I am seldom exhausted.
28. I finish most everything I begin.
29. I get into a fighting mood when the occasion seems to demand it.
30. I seldom get angry or express my annoyance when I am treated with disrespect.
31. My friends think I am too humble.
32. I feel nervous and anxious in the presence of superiors.
33. I seldom daydream about sexual matters.
34. I sometimes have difficulty controlling my sexual feelings.
35. I sometimes exaggerate my part in an event in order to make myself appear in a better or more favorable light.
36. I do not feel dissatisfied if I remain unnoticed.
37. I have a good word for most people.
38. I take pains not to hurt the feelings of other people.
39. I am apt to say anything--though I may regret it later--rather than keep still.
40. I am considered somewhat excitable by my friends.
41. I can enjoy long spells of continuous activity.
42. I stick to a job even though it seems I am not getting results.
43. When a good fight is on, I am one of the first to pitch in.
44. I usually keep my irritation to myself rather than express it.
45. I am rather submissive and apologetic when I have done wrong.
46. I tend to be shy and restrained in my relations with women.
47. I am attracted by every good-looking woman I see.
48. I prefer women who have a strong sexual appeal.
49. I seldom think about how I look or what impression I am making upon others.
50. I talk a good deal about myself, my experiences, my feelings and my ideas.
51. I go out of my way to comfort people when they are in misery.
52. I am considered, by some of my friends, to be too good-natured, too easily taken in.
53. I am rather sensitive, impressionable, and easily stirred.
54. I have strong likes and dislikes.
55. I do not enjoy long discussions. They usually tire me.
56. I am able to keep working, day in and day out, without getting bored or tired.
57. I seldom let myself go when I am angry.
58. I enjoy a good hot argument.
59. I am sometimes depressed by feelings of my own unworthiness.
60. There are times that I feel that I want to be punished.



61. I have had a good deal of actual sex experience.
62. I do not like to flirt.
63. I don't pay much attention to my appearance: clothes, hats, shoes, neckties.
64. I have great faith in my own ideas and my own initiative.
65. I enjoy putting my own affairs aside to do someone a favor.
66. I sympathize with people more often than I blame them.
67. I show my temper when the occasion demands it.
68. I am influenced in the things I do by how I happen to be feeling at the time.
69. I usually persist in whatever I do. My motto is, "Never say die."
70. When the going gets rough I usually give in.

### Warmth Scale

The statements below represent experiences, preferences, ways of doing things, or beliefs that are true of some people but are not true of others.

Read each statement and decide whether or not it is true of yourself. Draw a circle around the number of the item if it is true or mostly true of yourself. Draw an X through the number of the item if it is not usually true or is not true at all of yourself. Be sure to mark every item.

1. I am somewhat intolerant of people who bore me.
2. I get annoyed when people take up my time for no purpose.
3. I am critical of people whose ideas are not very good.
4. I sometimes ignore people I dislike.
5. I take great pains not to hurt the feelings of even unpleasant people.
6. I always feel even the minor interests of others as if they were my own.
7. I am considered, by some of my friends, as too good-natured.
8. I always try to praise people who are discouraged by their failures.
9. I genuinely like everyone I get to know.
10. I am as helpful as possible with everyone I meet.
11. When a friend of mine does something that bothers me, I tell him about it.
12. I avoid making people angry at considerable sacrifice of my own interests.
13. I generally try to get things done the way I think is right even when it is an inconvenience to others.
14. I never blame other people even when they seem to be at fault.
15. I enjoy helping people with their personal problems.
16. I ignore the personal feelings of other people when it is necessary.
17. I generally criticize my acquaintances when I disapprove of their behavior.
18. I have sometimes used threats of force to accomplish desirable goals.
19. I treat a domineering person in the same way he treats me.
20. I say what I think about important things even if it hurts the feelings of some people.
21. I generally criticize people who do things that are wrong.
22. I insist on being able to come and go as I want.
23. When I disagree with people, I tell them so.
24. I believe that everyone's intentions are good.
25. I sometimes tell people frankly what I think of them.
26. I almost always forgive people who hurt me.
27. I am very generous with my acquaintances.
28. I approve of the things that all the other members of my family do.
29. I like everyone I meet, even those with different interests and goals from mine.
30. I have always been very close to my parents.

### Test of Ability to Predict Average Behavior

College students were asked to tell their likes and dislikes among the following occupations, school subjects, amusements, activities, and kinds of people. Read each of the following pairs and draw a circle around the number, "1" or "2", which you think more students said they liked. Be sure to answer every item.

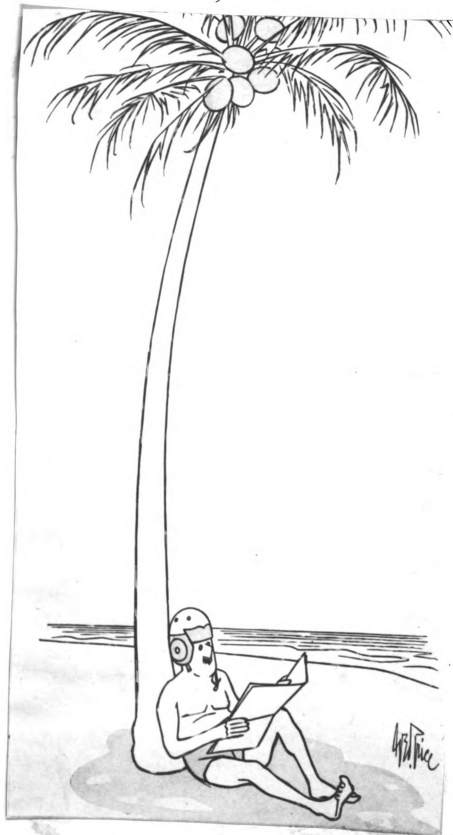
1. (1) author of novel; (2) auto salesman.
2. (1) building contractor; (2) chemist.
3. (1) carpenter; (2) consul.
4. (1) civil engineer; (2) manufacturer.
5. (1) hotel keeper; (2) civil service employee.
6. (1) draftsman; (2) judge.
7. (1) employment manager; (2) factory manager.
8. (1) inventor; (2) foreign correspondent.
9. (1) sales manager; (2) marine engineer.
10. (1) mining superintendent; (2) stock broker.
11. (1) real estate salesman; (2) music teacher.
12. (1) retailer; (2) photo engraver.
13. (1) civics; (2) botany.
14. (1) chemistry; (2) economics.
15. (1) literature; (2) geology.
16. (1) history; (2) nature study.
17. (1) military drill; (2) mathematics.
18. (1) golf; (2) poker.
19. (1) collecting postage stamps; (2) chopping wood.
20. (1) symphony concerts; (2) musical comedy.
21. (1) making a radio set; (2) amusement parks.
22. (1) educational movies; (2) driving an automobile.
23. (1) hunting; (2) picnics.
24. (1) progressive people; (2) thrifty people.
25. (1) repairing a clock; (2) interviewing prospects in selling.
26. (1) opening conversation with a stranger; (2) meeting and directing people.
27. (1) drilling soldiers; (2) acting as yell-leader.
28. (1) interviewing clients; (2) operating machinery.
29. (1) methodical work (2) developing business systems.
30. (1) looking at shop windows; (2) cabinet making.

APPENDIX B  
THE CARTOONS

Theme G:  
Facing Situations



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Keate. By permission of the author.



"The natives seem restless tonight."

Johns. Reprinted by Special Permission  
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Fisher. Copr. 1955 The New Yorker Magazine, Inc.



Theme F:  
Running from Situations



Marcus. Reprinted by Special Permission  
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"Believe me, son, if running away ever solved anything, I'd pack a bag and go with you!"

Mulligan. Reprinted by Special  
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"All I wanted was a match."

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Farris. Reprinted by Special Permission of THE SATURDAY EVENING POST.



"It's for you, dear. Something about a summons!"

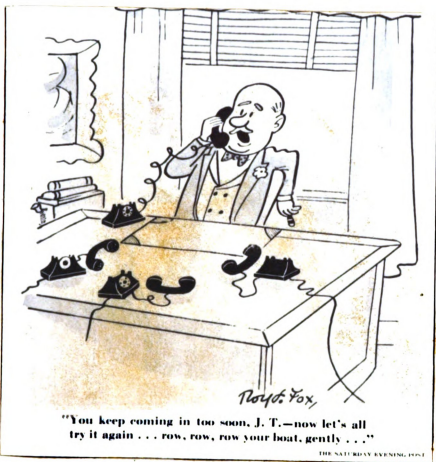
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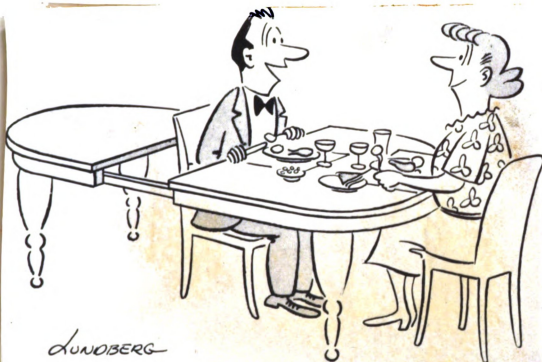
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Theme C:  
Affiliation



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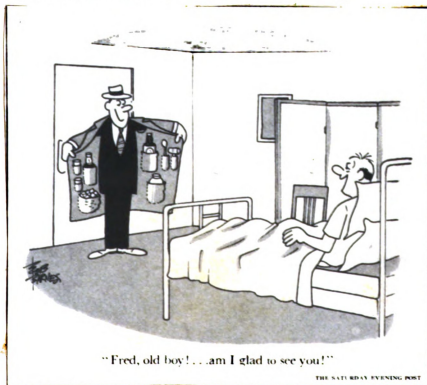


Lundberg

Saturday Evening Post

"Now, isn't this cozier?"

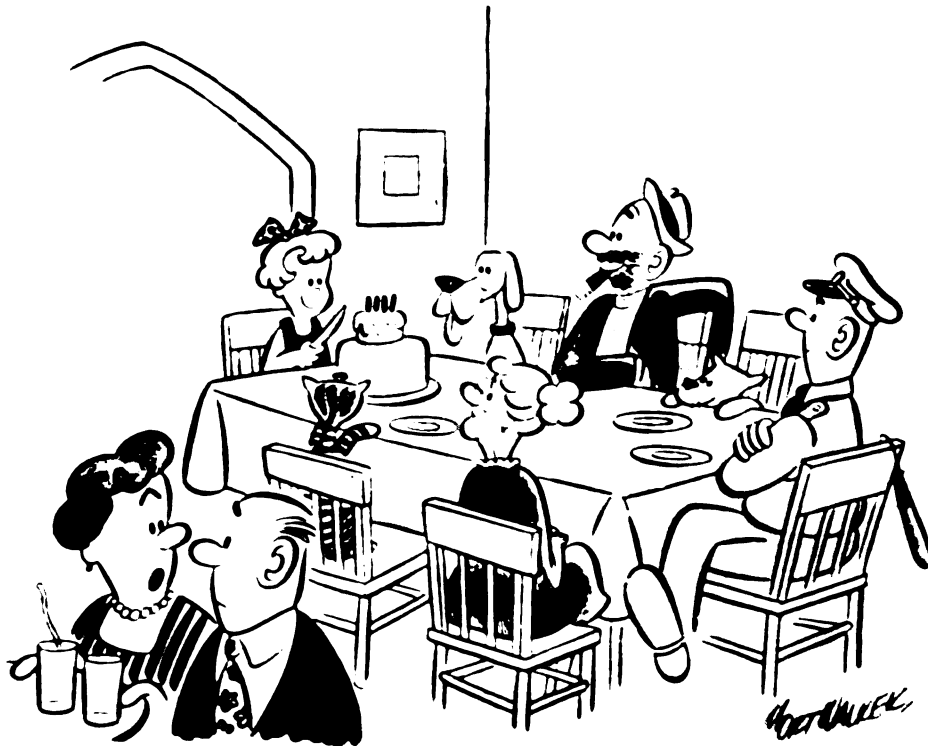
Lundberg. Reprinted by Special Permission of THE SATURDAY EVENING POST.



"Fred, old boy!... am I glad to see you!"

THE SATURDAY EVENING POST

Barnes. Reprinted by Special Permission of THE SATURDAY EVENING POST.



Walker

This Week

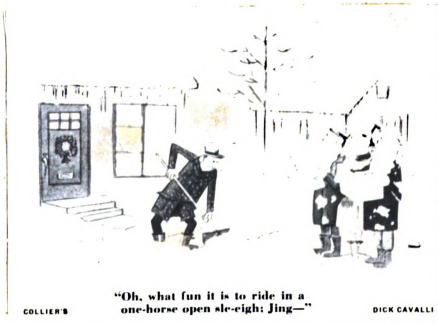
"I told her she could invite anyone she wanted."

Walker. Reprinted from THIS WEEK  
Magazine.

Theme B:  
Hostility

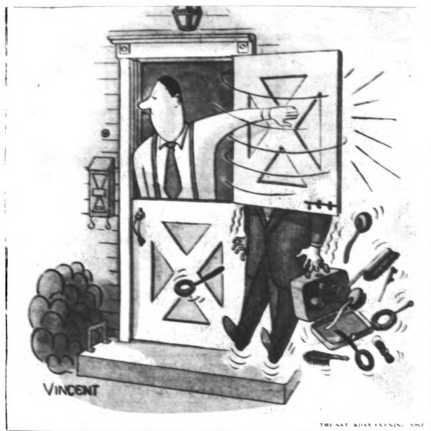


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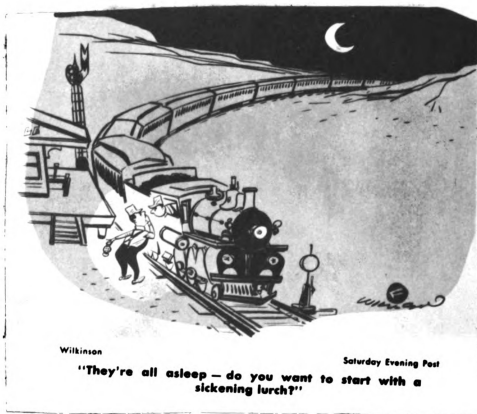


Cavalli. COLLIER'S.





Vincent. Reprinted by Special Permission of THE SATURDAY EVENING POST.



Wilkinson

Saturday Evening Post

"They're all asleep — do you want to start with a sickening lurch?"

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Keate

Argosy

**"No, thanks. If I have too many of those things, I say things that I later regret, you old bat you!"**

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Theme D:  
Self Aggrandizement



THE SATURDAY EVE

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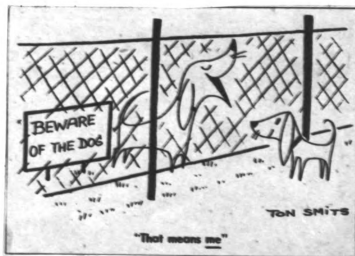


Kaufman

Saturday Evening Post

"All right, Marvin, let's get down to business!"

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Smits. Source unknown.

Theme E:  
Self Abasement



"It wouldn't be so bad being a hippopotamus if  
I just didn't have to look like a hippopotamus!"

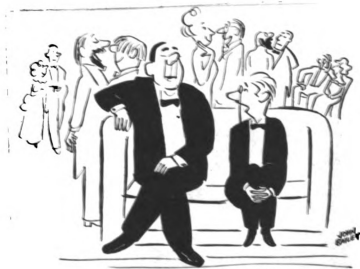
Nofziger. Source unknown.



Bernhardt. Reprinted by Special Permission of THE SATURDAY EVENING POST.



Nofziger. THE MAGAZINE PM.



*"I haven't just got an inferiority complex—I am inferior."*

BAILEY © Saturday Evening Post

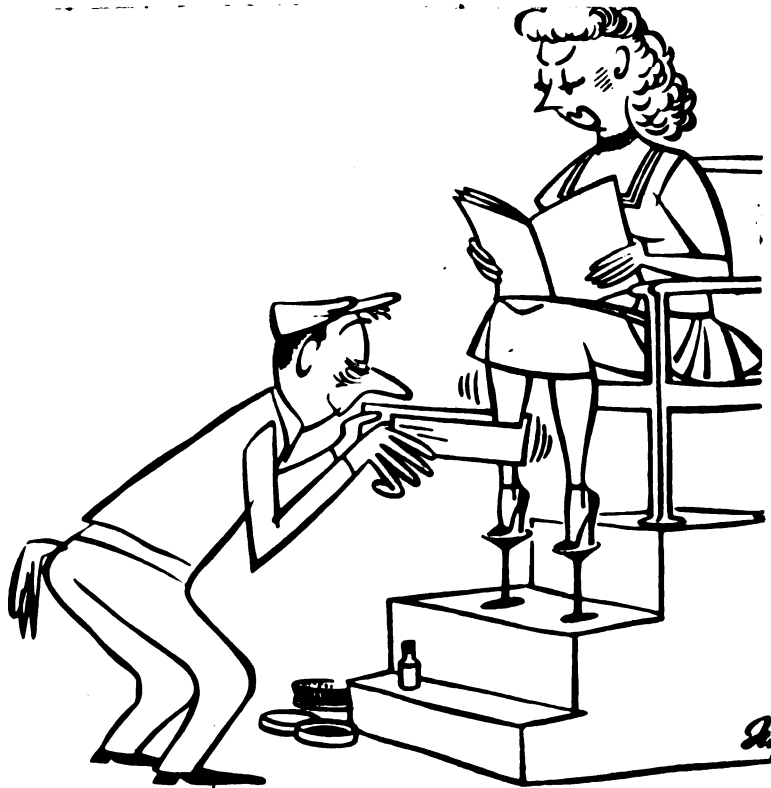
Bailey. Reprinted by Special Permission of THE SATURDAY EVENING POST.



*"If you have nobody special in mind, why not take me?  
I'm nobody special!"*

d'Alessio. Courtesy of Publishers Syndicate.

Theme A:  
Heterosexuality

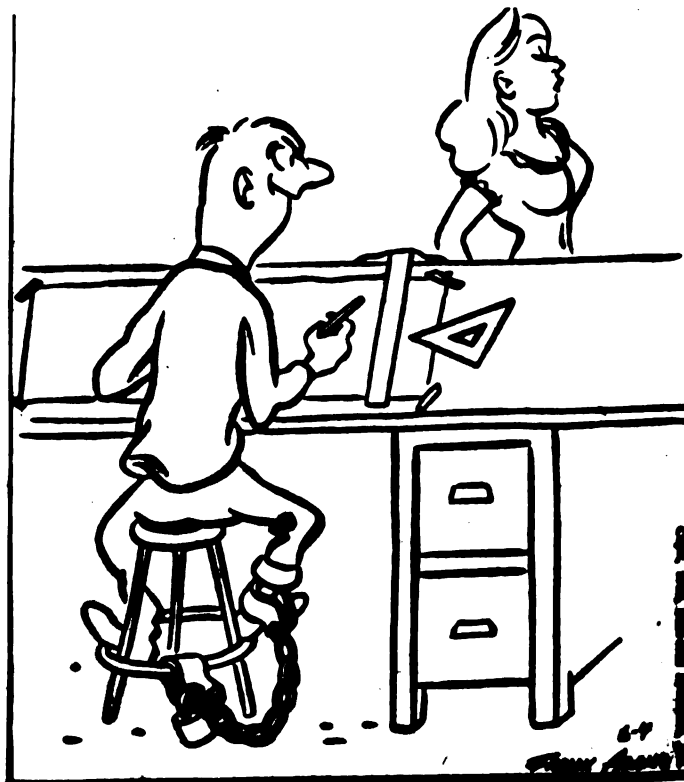


Caplan

Saturday Ev

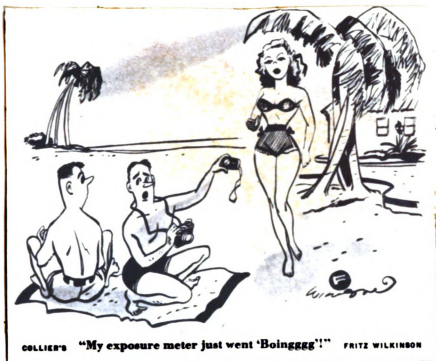
"Just the shoes, please."

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## APPENDIX C

TABLE XIV

## LAUGHS AND SMILES TO CARTOONS BY THEMES

Cartoon Theme	T.B. Group N= 25		Neurotics N= 25		Difference	<u>t</u>
	Means	S.D.	Means	S.D.		
Face situations	1.08	1.09	.64	1.29	.44	1.32
Running away sit- uations	1.96	1.45	1.28	1.33	.68	1.69*
Abasement	.68	.97	.47	.90	.21	.78
Aggrandizement	1.14	1.18	.64	1.19	.50	1.46
Hostility	1.77	1.14	1.08	1.54	.69	1.76*
Affiliation	1.56	1.27	.92	1.32	.64	1.62
Heterosexuality	1.77	1.68	1.12	1.73	.65	1.35

\*Sig. .05, one-tail test

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