

HUMOR APPRECIATION, SELF - ESTEEM, AND CREATIVITY

Thesis for the Degree of M. A. MICHIGAN STATE UNIVERSITY HAROLD S. STEINITZ 1973

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ABSTRACT

HUMOR APPRECIATION, SELF-ESTEEM, AND CREATIVITY

by

Harold S. Steinitz

One hundred and two college upperclassmen were administered the Tennessee Self-Concept Scale (TSCS), Barron-Welsh Art Scale (BW), and a humor appreciation test adapted from the Institute for Personality and Ability Testing Humor Test. The adaptation was that Ss were asked to rate the 130 jokes and cartoons on funniness on a scale from 1-5 such that a total humor appreciation score could be derived.

It was hypothesized that self-esteem (as measured by the TSCS), creativity (as measured by the Barron-Welsh Art Scale), and humor appreciation would all be positively related. Some authorities maintain that humor and creativity are adaptive mechanisms for dealing with tension. Hence, individuals who utilize these mechanisms would deal with stress on a high adjustment level, and would presumably score higher on a measure of self-esteem. In addition, individuals who utilize humor and creativity would likely be similar, especially in their flexibility. The analysis of the data did not yield statistically significant results. Several further analyses were performed to determine whether a subject's group status on one measure was predictive of group status on the remaining two measures. These too did not indicate statistically significant relationships.

Among the reasons for the lack of significant findings were that the humor items were not current, and therefore not perceived as humorous, thus producing a skewed distribution on the humor appreciation test. It was also suggested that the Barron-Welsh Art Scale may not be a satisfactory measure of creativity. On the other hand, the relationships may be more subtle.

HUMOR APPRECIATION, SELF-ESTEEM, AND CREATIVITY

Ву

Harold S. Steinitz

A THESIS

Submitted to Michigan State University in partial fulfillment of the requirements

for the degree of

MASTER OF ARTS

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This study is dedicated to all persons who make this world a little brighter with their humor, a little more interesting with their creativity, and a little warmer and receptive with their good will and kindness.

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CHAPTER I

HUMOR

A. Theories

Humor is one of those elusive topics about which everyone knows, but no one understands. The difficulty is not unfounded. There are various theories of laughter, some complementary, others contradictory. Let me begin by reviewing some of these. What follows is patterned after Eastman's (1922) outline, but is a summary of the different theoretical orientations. Flugel (1954) too was particularly useful, especially in his enumeration and discussion of more modern theories.

An early theory.--The earliest theory was that of the Greek philosophers who felt that "pleasure at the comic" was enjoyment of others' misfortunes, humiliations and embarrassments (Aristotle, 1902). He assays that comedy concerns itself with the flaws of mankind. However, even he realized that scorn was not the only reason men laughed. He felt that the comic experience was a mixture of many things, including "deceived expectation."

The decision theory.--Later, Cicero (1855) attempted to combine the Greeks' approach with his own, and did so by determining that laughter is always <u>at</u> someone, but is at

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ourselves when we are deceived by a joke. Similar beliefs were held over many centuries until Thomas Hobbes and the 1600's arrived with a reemphasis of derision as the basis of laughter. He maintained that it was the "sudden glory" from others embarrassment and lack of abilities that initiated laughter, and that it is those who are most conscious of their deficits who seek out the imperfections in others.

Alternatives to this "derision theory" have been suggested. Hobbes (1651) himself felt that there could be laughter without offense if it was at absurdities. Others, notably Groos (1899), thought that laughter was caused by a shock to one's system with an almost immediate resolution; "a counter shock of enlightenment after deception."

Schauer (1910) suggested that it was not the triumphing that was important, but the "joy of play" of the jesters. Not so, maintained Lamennais (1841) who thought that superiority, both real and imagined was a vital factor in laughter. Bergson (1911) primarily agrees but adds that laughter and emotion are incompatible; laughter is impossible if one's sympathy or pity has been aroused. He states that life's drama can turn to comedy only with a person as a disinterested spectator. Furthermore, he holds that we are laughable as we approximate a machine in our automatic gestures; comedy directs our attentions to the involuntary gestures rather than to deliberate actions. He sees laughter's function as a corrective that other

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members of society maintain against one who has taken liberties. For laughter to occur though, a situation must not arouse our feelings. Voltaire (1785), taking one step further, spoke of laughter as occuring in the absence of contempt and indignation and in the presence of a gay disposition.

The disappointment theory.--There were many, notably Spinoza (1934), who did not believe the notion that scorn was the overriding part of laughter. He pursued earlier assertions that laughter was due to the discrepancy between what one expects and what one finds (dubbed "the disappointment theory"). Hazlitt (1819) more succintly expressed it: "We weep at what thwarts or exceeds our desires in serious matters, we laugh at what only disappoints our expectation in trifles." He elaborates by saying that it would be difficult on people if they were pained by every weakness. Consequently, people, in the absence of any more serious emotion, and stimulated by surprise or contrast, will laugh. If, however, the sudden change threatens serious consequences, a person's tendency to laugh turns to tears.

The theory of benign humor.--Other theorists, such as Jean Paul (1804), put forth a more optimistic view of humor and its causes; it was felt that benign humor existed, and that it had "no other purpose but its own being." With this, he also criticized Hobbes' theory of superiority. He maintained that usually laughers laugh with those they

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laugh at. Furthermore, he notes that laughers would not be pleased, as they generally are, at having many laugh with them if they were only concerned with being superior (of course, it is possible that a laugher can feel "superior" to a "victim" while simultaneously seeking social approval of other non-victims. That is, he need not feel "above" all others at once).

The mechanical theory.--A "mechanical theory" of laughter - one espoused by men such as Herbert Spencer (1928) should also be included. His essay on "The Physiology of Laughter" suggests an energy model, a model which speaks of reservoirs, overflow, and channels. Laughter occurs, he says, when something small follows a grand expectation causing superfluous energy to stimulate voice muscles and facial grimace. That others' misfortunes or self elevation is not the cause of laughter seems evident to him because, he notes, that there are many situations of that kind where laughter does not occur.

That laughter occurs as an outlet of built up energy seems plausible. For instance, people often laugh when they are surprised with something pleasant, and they also laugh when something good is expected and it <u>does</u> occur. Too, many have a "nervous" laugh, or an "embarrassed" laugh. From the above, one can see how the theory of laughter as a releaser of tension came to be. Passing from the serious to the trivial often facilitates laughter, sometimes causes it. Laughter often marks the end of a

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period of stress, and so, in this case, its connection with humor is secondary. This is essentially Dewey's (1894) position, however he also indicates that liberty alone is not laughter for we do many other things after periods of stress besides laugh.

Laughter as liberty.--Freud (1905) incorporated parts of this idea of "laughter as liberty" in his own theories. His most important contribution is the theory that witticisms are frequently employed to release suppressed motives from the unconscious. He suggested that humor was derived from "the release of our mind from the constraints of reason." The jest is often a conscious expression of unconscious hostile or sexual tendencies, and this he dubs "tendency wit." This type is usually expressed in disguised form. He contrasts this to "harmless wit" which is really playful in content.

He likens jokes to dreams turned inside out. Whereas dreams keep the forbidden out of consciousness by not making sense, jokes let these impulses into consciousness by making sense. It gives us "the pleasure of something that we desire more than we dread."

Freud too placed some importance on the energy model. He stressed that pleasure from "tendency wit" is the energy previously utilized to prevent fulfillment of impulses. His elaboration of the energy scheme combined with the incongruity notion arrives at an "economy of expenditure feeling" theory. This suggest that our relief

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at saving passion when we discover our prepared feeling was too great stimulates laughter; "it seems that one important function of humor is to relieve us from the burden of reality, and its pleasure depends upon the satisfaction derived." Humor, like dreams, is subject to displacement and condensation, and its unrealism smatters of a childlike quality. Unlike dreams and neurotic symptoms however, humor and wit remains under control (a relaxation of the ego) which points to the "normality" and healthiness of humor. It seems to be an adaptive mechanism.

Instinct theory.--Eastman (1922) argues that humor is an instinct, and finds support for this in the early and apparently spontaneous presence of laughter. Furthermore, he asserts that all primary instincts are capable of sympathetic induction. That is, they are infectious and can be conveyed via suggestion, which certainly seems to be the case with humor.

Burt (1945) suggests "that we can distinguish various kinds or nuances of laughter according to the emotion being discharged." In conjunction with this, Flugel (1954) states that the special character of humor "performs in each case a somewhat different psychological and social function."

Humor as an adaptive mechanism. -- Another view of humor is expressed in a quote by Lord Byron (1957): "If I laugh at any mortal thing, 'tis that I may not weep." This really succintly expresses the tragedy which often permeates the comic. Following this line of thought, McDougall

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(1923) suggests that "laughter is a biological device for protecting us against the excessive pity and sympathy to which we should otherwise be exposed because of the capacity for tender emotion and for realizing and sympathizing with the misfortunes of others." Laughter, he maintains, is a response to pain; a "reaction formation" as it protects us from suffering around us (one may see how easily one could lose his sense of humor by being overcome with the suffering of the world, even though this may not be adaptive). Humor or laughter then is a defense mechanism. This can also be seen in times of stress where the "superego consoles the ego," and, in a sense, lets it know that reality is not so bad and even worth joking about.

McDougall accepts that Spencer's overflow hypothesis can be true <u>at times</u> (in the case of the nervous laugh, for example), but that it cannot explain all laughter. McDougall believes that laughter is an instinct and must serve some biological advantage; he concludes that laughter <u>itself</u> does us good physiologically and psychologically. He finds laughter to be the compromise by which man can be a social animal by cooperating and showing care for others "without rendering him essentially helpless with sympathetic pain."

Desai (1939) discovered that surprise intensifies any following emotions, but that surprise is not invariably associated with laughter. He also found that laughter occurs out of embarrassment following a perceived inappropriate emotion.

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Most authors and theorists agree that having a "sense of humor" is something positive; it serves mainly as a releaser of daily tensions, and therefore is a mechanism of adjustment. As was mentioned, this was the position taken by Freud, especially in his later paper (Freud, 1928). He maintained that it was an adaptive form of unconscious expression, and therefore ego-syntonic. Superiority, aggression, sympathy, sorrow, fear, anxiety, and sex all find relief in humor. The emergence of humor is a triumph of the pleasure principle - it is effective in removing part of painful reality, and in this regard is similar to neuroses, delusions or intoxication. Also in this paper, Freud makes a distinction between the <u>unconscious</u> contribution to wit, and the superego contribution to humor.

At this point, I find it useful to digress. A distinction between "being humorous" and having a "sense of humor" should be noted. The latter is usually passive the person is a recipient of material. He must be free enough to permit himself to lose a little control. The former is active by comparison, and can be an aggressive technique for being superior by disarming people (Levine and Redlich, 1955). This is especially true of one who uses wit.

Theories supported by certain persons often depended upon how many varied types of humor were observed and included. Some (Eastman, 1922; Wright, 1939) have attempted to categorize "humor" and have found that useful. For

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instance, Wieck (1967) delineates laughter situations (a) where nothing and no one are laughed at, (b) where <u>someone</u> is laughed at, and (c) where <u>something</u> is laughed at. Typing laughter gives an indication of whether hostility may be involved or social identification, or other factors.

Humor and the discovery theory.--Another theory is that espoused by Arieti (1950) who, in effect, says that laughter is a reaction to following a line of faulty logic and discovering its absurdity. Laughter is a signal that the error has been found and corrected.

Somewhat akin to this is the theory by Carpenter (1922) who maintains that laughter is "a glory in sanity." It permits and demonstrates a clear picture of reality and indicates the irrationality of one's anxieties, thereby giving that individual some freedom from them. Carpenter cites four prerequisites to the comic situation and ultimately to laughter: the proposition must be (1) perceived as false, (2) perceived as deceptive, (3) be suddenly presented, and (4) have a free field in which its effect is not submerged by stronger emotions. He rejects a cruel element that others assume to be present when a person laughs at another's stumbling. At a bad fall, a person does not laugh; only at a fall which turns out all right does he exult in his judgment of recognizing a defused catatrophe.

Social components of humor.--Contrary to Freudian theory of repression and disguised unconscious desires is

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a theory by Dresser (1967). She offers joking "as a technique for the circumvention of social rather than ego defensive obstacles." Jokes, to her, depend largely upon shared inhibitions and associations, and therefore joking serves to "accommodate aggressive and affiliative tendencies which might otherwise conflict." When others laugh at a hostile joke, they join in the aggression. Fenichel (1945) concurs. He states that "the motive for telling a joke always consists of an attempt to get the approval of the audience for the underlying guilt in the offensive impulses concealed in the joke." Sharing guilt is important; if one can get another to do the same thing, guilt is reduced.

Zuk et. al. (1963) suggests laughter as a socially acceptable cloak for feelings which may be socially unacceptable. This differs from Freudian theory only in its identifying society as the censor rather than the individual himself.

Keith-Spiegel (1972) provides a rather complete summary of the various theoretical positions regarding humor. It seems fairly clear that there is no overriding, comprehensive theory that covers why people laugh in many situations.

B. Research

Various experiments have been conducted in the area of humor, but like the theories on which they are based, many of the results are contradictory. Most have been

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dealing with humor and its personality correlates though some have attempted to clarify theoretical issues. It seems that a "humorous stimulus" does not exist in an absolute state. Discriminative stimuli "kick off" different things in the observers.

I. External Variables Affecting Humor

1. <u>Humor over Time and Culture</u> - Byrne (1956, 1957) noted that humor preferences are relatively stable over time, and do not depend on motivational states as suggested by Strickland (1959). That <u>individual</u> humor preferences are consistent was supported by Cattell and Luborsky (1947). Though Eysenck (1942) and Redlich et. al. (1951) believe ethnic, cultural, and geographical differences in humor to be not very large, More and Roberts (1957) found significant differences between <u>groups</u> in types of humor preferred. This issue is apparently still largely unresolved.

2. <u>Humor Under Various Conditions</u> - Humor related to environmental situations have also been tested and discussed. What may be viewed as offering contrary evidence to Freudian theory, Byrne (1956) found no increased appreciation of wit (which is aggressive) under insulting conditions. Doris and Fierman (1956) demonstrated that previously appreciated jokes lose their value for individuals when changes in the environment alter the defenses of highly anxious subjects. They also found that preference for aggressive cartoons increased or decreased depending on susceptibility to anxiety and which subject was tested

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by which experimenter. Aggressive jokes were more likely to be laughed at in front of a male experimenter.

Gutman (1968) located a further extraneous influence. He discovered that hostility is lower when there is justice in the social relations between story characters. Others found that aggressive humor could be better tolerated if the victim of the humor is seen to have deserved it (Flugel, 1954).

Hollingworth (1911) found that repetition increased or decreased laughter depending on the type of joke. Objective or naive jokes were found <u>more</u> humorous upon repetition, while puns, retorts and occupational jokes were less humorous.

3. <u>Humor and Groups</u> - This leads us to viewing the effects of groups on humor. Many have dealt with the social functions of laughter (Hertzler, 1971; Zuk et. al., 1963; Dresser, 1967). Audiences and groups facilitate greater laughter responses (Morrison, 1940). Laughter provides a "shortcut to consensus," for we can laugh only with those who have common concerns. There is more laughter in groups than when alone, not only because it is contagious, but also because people feel "left out" if they do not laugh. People will admit to many things, but not having a sense of humor is one which most would not readily acknowledge. Laughter "helps individuals adapt as members of collectivities to the values of the group or society." When anyone laughs at aggressive humor, he

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has accepted the invitation to join the assault. All humor is aggressive in the sense that it "invites the listener to withdraw from the business at hand" (Hertzler, 1971). It is a diversionary tactic.

4. Other Humor Influences - A number of findings may be helpful in any further tests of humor. At least for patients, spoken jokes had more impact and subsequent responses than did visual ones. It seems that through the sense of hearing is the way to get patients' attention; that is, they can more easily "tune in" to audio messages. Whether visual jokes' failure is due to "noise" in the form of hallucinations is questionable. Omwake (1939) however, found that visual presentation (as opposed to audio) promotes comprehension. The combined results suggest that if one can get an individual to really attend to visual jokes, he will comprehend it better. The problem with patients is often their lack of concentration and attention. Too, reading jokes takes more "work" than listening to deliveries. To further confuse the issue, Perl (1933) says that visual jokes are perceived as funnier than vocal ones. She contends that with visual material, the individual has more time to "get the point" of the joke, and hence more laughter and smiles.

One further suggestion is that made by Barry (1928). He suggests that "introspections tend to be unreliable because of the repressions induced by the unpleasant component of the perception and because of an apparent tendency for the subjects to rationalize."

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II. Internal Variables Affecting Humor

1. <u>Humor and Personality</u> - Many have maintained the notion of an important connection between problem areas and humor enjoyed. Frankel (1953) found that jokes reflecting problems were <u>not</u> appreciated. This suggests that the fewer problem areas, the more things an individual will find humorous.

Levine and Redlich (1955) found that failure to <u>understand</u> humor permits avoidance of preconscious conflict, and is closely related to personality dynamics. Somewhat contrary evidence of this relationship was Andrews' (1943) noting that reponses to certain types of humor may serve as subtle indicators of basic personality traits, and Cattell and Luborsky's (1947) finding a relationship between joke clusters and overt personality traits; for example, they suggest that an individual who likes hostile humor may be more hostile than one who prefers other kinds of humor.

Whereas Levine and Redlich (1955) maintain that one does not appreciate humor that is closely matched to one's personality characteristics, Byrne (1956) holds that an individual likes jokes which parallel his personality traits. Byrne found a high positive correlation between appreciation of hostile jokes and the individual's expression of aggressive sentiments. Too, Zwerling (1955) suggests that one's favorite joke is related to some central emotional conflict which can be of use in diagnosis and

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therapy. Resolving this somewhat is the discovery of Redlich, Levine and Sohler (1951) that intense feelings of pleasure or displeasure suggest a nuclear need.

Freud's idea of humor as camouflaged expression of unconscious impulses found some support in an experiment by Murray (1934). His results show that laughter at derisive jokes was the consequence of repressed hate. Others also support the notion of the comic as defense against anxiety (Collier, 1960; Zwerling, 1955).

Feshbach (1955) found experimental evidence for the drive reducing function of fantasy behavior and humor. He discovered that fantasy expression of hostility will partially reduce situationally induced aggression, and expressed a belief that fantasy behavior is an adjustment mechanism which reduces tension.

Ghosh (1939) established that jokes are often distorted to fit into the pattern of the subjects' mental states. Eysenck (1942) found that introverts prefer complex jokes while extroverts prefer simple ones. Further information on preferences were delineated by Grziwok and Scodel (1956). They gave evidence that those who preferred humor based on sex or aggression (as opposed to other humor) were more extroverted, had more fantasy aggression, and less preoccupation with intellectual values. These results are in direct contrast to those of Landis and Ross (1933) who found, among other things, that introverts prefer jokes having to do with repressions such as fear of sex.

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<u>Humor - Sex and Intelligence</u> - Landis and Ross
(1933) found sex differences in joke preference. O'Connell
(1960) not only found differences based on sex, but also
in stress conditions and "adjustment" of individuals.

Some suggest that ability to get "the point" of a joke may be a useful device for testing intelligence. Byrne (1956) found a positive correlation between intelligence and ability to identify hostile and non-hostile cartoons. Landis and Ross (1933) suggest however that personality type and intelligence influence <u>categories</u> of jokes preferred, but do not affect humor appreciation in general. Hester (1924) gives evidence that humor among "normals" is unrelated to intelligence.

3. <u>Humor and Mental Health</u> - The experimental evidence of the well-adjusted having more appreciation of humor lent support to Freud's contention of humor as an adaptive mechanism. Loos (1951) found that those judged to possess a sense of humor rank low on "neuroticism." Roberts' (1958) study was particularly valuable. He found significant relationships between an absence of psychopathology and various humor measures. He discovered a close agreement between overt humor behavior and subjects' verbal reports about funniness. Results demonstrated that those with higher ego strength rated the cartoons as being funnier than those with lower ego strength. It appears that having a strong ego allows for some "letting go" in terms of identifying with others, and in terms of laughing

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at oneself. One interpretation he offers is that absolute tension is not as important a factor in adjustment as is the means the person uses to deal with his tensions and problems. Neurotics exhibit tension in bodily symptoms or anxiety, while the better adjusted person may utilize humor as a release.

Roberts also suggests that disturbed persons may be more "personal" in their humor, reacting more to emotional content of humor themes while others may react to intellectual things such as the quality of drawings.

Roberts and Johnson (1957) advance the idea that perceived funniness of a humor stimulus is positively related to the degree to which the perceiver is able to empathize with the depicted characters. This raises some interesting questions. Can a person empathize so much that he does not laugh because he "feels" the pain or embarrassment? Are these people too sensitive for their own good? Could it be an over-identification with characters of life that precludes a good sense of humor, and is that a concomitant of mental illness? Questionable of course is the generality of empathy with joke characters and people in everyday life. Maybe the authors are correct that high empathy breeds high laughter. I raise the possibility that too much empathy breeds no laughter. Then one would expect those high in empathy not to laugh at certain types of jokes, especially those of an aggressive nature.

Questions Involving Mental Health and Humor -4. Mead (1934) suggests that we are saved the feelings of pain when someone slips on a banana peel and so laugh. It follows then that those who do not laugh are not saved from that pain. This suggests that being too sensitive or overidentifying is not adaptive. Maybe the "mentally ill" are not flexible, or resilient, or callous enough? Is there a fine line between empathy and pathology? Does the person who does not laugh see the tragedy through the wit work? As was mentioned earlier, McDougall says laughter protects us from being torn by our sensitivity - we laugh to avoid crying. Laughter is a response to pain. Some have offered that schizophrenics often see tragedy in the comic, and therefore have no sense of humor. Possibly, these persons are more perceptive than others. More likely however, is that they internalize everything around them in a selfcentered fashion, and therefore everything is, in a sense, happening to them.

A variation on the "chicken or the egg" controversy is a valid issue to introduce here: Does low ability to laugh at oneself and others contribute to "mental illness," or does an individual's sense of humor leave <u>after</u> the onset of mental illness? This is important as it raises whether indeed a sense of humor is necessary to mental health. Is the absence of a sense of humor just another effect of depression, anxiety, or other pathological states? It is clear though that disturbances in humor behavior are

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associated with disturbances in other emotional areas (Redlich et. al., 1951).

Roberts and Johnson (1957) furnish at least one piece of evidence against any tenable contention that the mentally ill are perhaps more perceptive than others, and that takes the form of results which show a positive relationship between reality contact and an individual's perception of a humor stimulus as being funny. Their study was carried out on 28 mental hospital patients. The Ss were individually given a series of 12 cartoons by the authors, and were rated with regard to reality contact by two or more hospital psychologists who knew the Ss. Reality contact ratings were significantly correlated with humor ratings, cartoon empathy rating, and understanding the point of the humor.

Another interesting question arises from a study by Nussbaum and Michaex (1963). They pose whether responses to humor can be used as indicators of patient change. A schizophrenic's ability to experience humor, they maintain, is "impaired by conceptual disorganization which interferes with 'getting the point' of a joke." If he does "get" the point, then lack of humor may be due to a "freeze" in affect.

Psychologists and psychiatrists have begun encouraging a sense of humor in their patients as an "antidote to emotional distress" (Mindness, 1971). To facilitate this practice, many have attempted a closer look at the peculiar

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frame of mind and qualities that characterizes a sense of humor and its adjoining attitude toward life. To Mindness, this includes a) flexibility b) spontaneity c) unconventionality d) shrewdness 3) playfulness, and f) humility.

It would seem to be both interesting and fruitful to examine the idea of tapping an emerging sense of humor as an index of psychological adjustment. Furthermore, Nussbaum and Michaex used "depressed" persons as subjects. It might be useful to test out similar questions with other populations. As early as 1947, Cattell and Luborsky suggested that humor tests could be used to "discover the degree of emotional maturity and recovery from repression."

To summarize, there are two classes of variables which affect one's perception of stimuli as humorous: (1) variables in the observer due to experience, present attitude, emotional complexes, and (2) variables in the comic situation including speed of presentation, number of repetitions, group size.

C. Various Humor Tests

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There have been scattered attempts at objectively measuring "humor." Tollefson and Cattell developed the <u>IPAT Humor Test of Personality</u> which came out in 1963. Cattell had earlier been involved with the <u>Cattell</u>-<u>Luborsky Humor Test</u> published in 1949. A useful measure is that formulated by Redlich et. al. Coined the <u>Mirth</u> Response Test, it was an attempt at psychodiagnostic

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assessment through analysis of humor disturbances. They felt that disturbances could be exhibited in expressive behavior, cartoon preferences and rejections, misunderstanding cartoons, errors and distortions in perceiving cartoon details, and in personal references and associations. The authors found that 1) a stimulus eliciting a humorous response assumes release of repressed need without usual accompanying anxiety, and 2) when something seemingly humorous is responded to with indifference, it is assumed that a) no conflictual needs are involved, or b) the needs are deeply repressed, or c) rigid eqo control is involved. They also condensed all humor into recurrent themes. That the following themes occur so often in humor is evidence for basic concerns common to all men:

- 1) aggression against authority
- 2) sexual aggression
- 3) aggression between male and female
- 4) homicide and suicide
- 5) distortion of body image
- 6) acquisition
- 7) aggression against social institutions
- 8) insanity
- 9) sibling relations
- 10) parent-child relations
- 11) nonsense and omnipotence

O'Connell (1962) developed the <u>WHAT</u> (Wit and Humor Appreciation Test), and used item analysis to gain some insight into personality and humor correlations. It was formulated around psychoanalytic views, and makes a marked distinction between wit (which is hostile) and humor (which is presumably not). The test itself consists of thirty jokes (ten each of humor, nonsense wit, and hostile wit), randomly presented. Subjects were asked to rate them on a five point scale ranging from "dislike very much" to "like very much."

Byrne (1957), in his doctoral dissertation, originated a test which derived humor preference scores. He found, not surprisingly, that humor appreciations may reflect attitudes, beliefs, and other habits.

D. Selected Methodologies

Of the many methodologies used, a number are worth noting. Young and Frye (1966) used a five point rating scale with different types of jokes: that is, they divided jokes into humor, wit, nonsense, and sex types, and then asked subjects to rate "dislike very much, dislike, neither like nor dislike, like, like very much," and whether the joke best represented one of the types. They also included "this joke doesn't fit any one category," and "this joke fits more than one category." They used this procedure to see if there was any increased appreciation of wit under insulting conditions. They found none.

Grziwok and Scodel (1956) used five categories with three judges to assess some correlates of humor preferences. The categories were as follows:

- humorous effect based on aggression either explicit or deliberately understated
- 2) based on parody of sex
- 3) based on exaggeration or paradoxical use of social stereotypes
- 4) based on obvious logical incongruity
- 5) no category applicable, or two or more

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They found that subjects high in TAT aggressions prefer aggressive humor, and those low in TAT aggressions prefer social commentary humor. Furthermore, subjects high on an aesthetic scale prefer logically incongruous humor, while those low, prefer aggressive cartoons.

One of the better methods used was that by Cattell and Luborsky (1947). Using Wolff's et. al. (1934) indications of reliable subjective reports of funniness (opposed to previously mentioned results by Barry), the authors decided on asking the subject how funny he considers a joke. This they found could be done basically three ways: "a) by having several jokes ranked, b) by having preference between two jokes, or c) by having a rating of each joke." The authors give various reasons for and against the three approaches, but favor the third. The forced choice may eventually be valuable, but they feel that, at present, without knowing the "loadings" of items, it would involve blind comparisons.

The authors used simple rating alternatives: "mediocre joke, or very good?" They attempted to discover what primary tendencies (groupings of response) are expressed in humor reactions, and so subjected their one-hundred jokes to cluster analysis in order to find functional unities (to find jokes which measure the same "trait"). To assess joke reliability, they set up the experiment in two parts. First, the joke list and questionnaire including personal questions and questions dealing with the enjoyment

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of the jokes; secondly, the same jokes were given six months later. They derived contingent labels for thirteen clusters, and recombined these to form five major factors (general personality factors): good-natured self-assertion; rebellious dominance; easy going sensuality vs. sex repressed aggressiveness; resigned derision; urbane sophistication.

Much of this method was taken from an experiment by Andrews (1943). He provided a sense of humor test using jokes, puns, cartoons, and limericks, and found six common factors but no one general factor involved in all comic material.

Singer et. al. (1967) attempted to test the psychoanalytic view of "internalized prohibitions against free expression of needs." They showed cartoons of low, mild and high aggression to one group, and benign pictures to the control group. The subjects of both groups were then asked to rate funniness on an eight point scale. Their hypothesis that "marked heightening of inhibitions surrounding the expression of aggression will result in decreased ability to enjoy aggressive humor, but will not affect non-aggressive humor" was confirmed.

Omwake (1939) found it useful to have each subject rank order the jokes (also using an "X" indicating a failure to see the point). Martin (1905) used three methods to discover what was funny. She utilied and undirected introspection, psychological physical methods, and directed introspection.

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O'Connell (1960) notes that there is usually an inverse relationship between repression and overt behavior but a direct relationship between repression and appreciation of wit. To test wit and humor, and its relation to adjustment, he used the Self Activity Inventory (SAI) which gives discrepancies between self rating and ideal. Rogers' self theory provides the rationale behind the assumption that tension is experienced when an individual is aware of this discrepancy. Studies have shown the inverse relationship between adjustment and the SAI score (Worchel, 1957).

O'Connell attempted to test humor appreciation in stressful vs. non-stressful situations thinking that groups exposed to stress would appreciate wit more than non-stress groups. Furthermore, he felt that under non-stressful conditions, the maladjusted should appreciate with more than the well-adjusted, but when stressors are applied, the well-adjusted should appreciate hostile wit more. The former was not confirmed, but the latter was.

Roberts and Johnson (1957) in their attempt to test empathy's role in humor perception gave a series of twelve cartoons individually to twenty-eight mental hospital patients. The subjects were asked to rate jokes on a five point scale, and an examiner recorded all laugh and smile responses as well. "After completing the series, each subject was asked (a) to describe the point of the humor for each cartoon, and (b) to tell what the thought and feelings of the cartoon characters might be." In addition, the

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subjects were given a seventeen item empathy inventory questionnaires. Two judges rated subjects associations to cartoons in terms of empathy. Results showed a high positive correlation (.78) between subjects who rated cartoons most humorous and those who gave the most emphatic responses to the cartoons.

Roberts (1958) demonstrated high adjustment for those who were able to use and enjoy humor. He defined adjustment measures as 1) presence or absence of severe psychopathology (as indicated by whether or not the patient was hospitalized) 2) score on the Barron Ego Strength Scale, and 3) relative absence of strong tensions as indicated on a need-tension inventory. As measures of humorous satisfaction, he used 1) subjects funniness ratings and 2) number of laugh and smile responses.

Seventy cartoons were collected and placed into seven dominant themes as judged by four judges. The cartoons were then given two at a time (35 series) to 25 subjects free of manifest psychopathology (TB patients) and 25 hospitalized neurotic subjects. Each was asked to indicate which was funnier, and to rate both on a scale from 0 to 6. A trial run was conducted to make objective pairings, and to provide reliability.

His results are suggestive of a positive correlation between funniness of any cartoon and degree of need or tension for that individual. His last hypothesis linking funniness to the degree to which the perceiver is able to take

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the role of the other (as measured by the test of Ability to Predict Average Behavior, and the Warmth Scale) was not confirmed.

Nussbaum and Michaex (1963) hoped that clinicians could chart the course of the "illness" in depressed patients using increases in humor as a measure. Using Levine and Redlich's (1955) distinction of failure to understand with failure to enjoy, the authors pose whether the depressive patient suffers from the first or second of these two possible reasons for absence of a humorous response. Eighteen women patients diagnosed as depressives were given either an anti-depressant drug or a placebo. Humorous riddles were then given verbally, and the non-verbal response noted. It was ascertained whether the patient understood the semantics, and she was then asked whether she considered the joke funny. The MMPI and Beck Depression Inventory was administered before, immediately following, and two weeks after the intervening phase started to test They tentatively concluded that the humor adjustment. response could be an evaluator of health and predictor of treatment outcome.

A number of possible interferences should be noted. It may be that the hospital atmosphere itself depressed patients, and that it affects the staff as well. Does the staff have significantly greater humor appreciation than the patients? To be valid, one should really test sense of humor as a patient enters, after six months, two years, and

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upon leaving (if ever). Roberts though feels that hospitalization is not sufficient to explain the difference between TB and neurotic subjects, for it fails to account for the fact that the TB subjects had on the average been hospitalized for a longer period of time than the neurotic Ss.

A further question arises. Is it that a maladjusted individual has less or no sense of humor, or is it what he attends to that is different? Can it be that he finds humor in different things than the average person, and this is why we say he has no sense of humor? Maybe some event caused a realignment of his approach and outlook on the world, and that what we call lack of affect at "humorous" stimuli is just a change in perception of these stimuli.

The main controversy is really whether with more problem areas, fewer things are funny, or whether we laugh at what concerns us. I theorize that laughter is a release of tension, but that "sense of humor" is limited in the extent to which it can serve as an adjustment mechanism. More concisely, to a point, humor can suffice, but beyond that, the individual may turn to other mechanisms; when the stress becomes too much, he may withdraw into any one of the many pathological states. It is difficult to pinpoint what is humorous material. It is what each person brings with regard to personality, mood, and life experiences, in addition to the environmental situation which determines what content will be funny.

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The field is in relative disarray, and any attempt to delimit "sense of humor" would be rash. The results, when taken as a whole, remain inconclusive, and only indicate how little distance we have come from the starting point.

CHAPTER II

CREATIVITY AND THREE DUAL RELATIONSHIPS

A. Theories

Creativity is the characteristic most responsible for man's constant discovery of the external physical world and of the capabilities within himself. Creativity has recently become an area of great interest for educators and psychologists.

To create, one must have many ideas and one must be flexible. Being creative is the process by which something new is produced, which includes a new form or arrangement of old elements. The creative person questions beliefs with great zeal. For the creative person, truths should be the result of examination of all options in an open reflective situation. A creative person "interprets, combines, analyzes, probes and pioneers" (Torrance, 1965).

Basically, there are as many definitions as there are researchers (and we would expect that to be the case if they are creative thinkers). Mednick (1962) suggests that "creativity consists of forming of elements into new and <u>useful</u> combinations." He includes the appropriateness of the responses because he maintains that they must be feasible at some level and be adaptive to reality. More

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fully, he uses this requirement of usefulness to distinquish between creativity and originality. Furthermore, he states that a creative response will be less likely, given a large number of previous problems solved with a certain set. One can infer then that any set rules, any conformity, or any attempt at "right" answers would substantially deaden the creative response. This indeed has been the criticism of traditional teaching methods.

A clarification is necessary at this juncture in order to avoid a grave misconception which has dominated thinking. Creativity is not an "all or none" quality. Certainly, particular innate qualities if properly stimulated, predispose some to be more creative than others, but the important thing is that creativity is <u>relative</u>. There are degrees of creativity, but everyone has creative potential. Furthermore, originality (which is an associate and component of creativity) as well must be compared to a reference group or point to be meaningful.

Barron (1955) maintains that in addition to everyone having degrees of creativity, there are some who regularly are able to produce original responses. He maintains that these highly creative individuals have paradoxically a "highly organized system of responding" to the world; that is, a "set" of flexibility and probing.

Torrance (1965) broadly defines creativity as

a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on: identifying the difficulty; searching for solutions,

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making guesses, or formulating hypotheses about deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results.

Ausubel (1963) does not see this definition as differing much from general problem solving though.

According to Freud (1958),

Creativity, mainly in art, is attributed to the temporary removal of the repression of the unconscious impulse and a regression to infantile modes of thought and experience. The result of such a regression will be considered creative, if the product is compatible with ego standards...the process is similar, in this respect, to the one of enjoying humor, or any other means of expressing unconscious material in a way acceptable to our superego.

Kris (1952), in an elaboration of Freud's theory, views creativity as "regression in the service of the ego" where "constructive use is made of the primitive, irrational, primary process thought modes." Usually the ego is relatively passive during "regression in the service of the defenses," however during creative work, the ego plays an active role and regulates the regression. Kris separates the creative process into two parts: during the first, a "brainstorming" occurs where all possibilities are conjured up without critical analysis; during the second part, all ideas are subjected to reality testing.

For Fromm (1959), creativity is more an attitude than an art: "to see the other person creatively means to see him objectively, that is without projections and distortions, and this means overcoming in oneself those neurotic 'wills' which necessarily leads to projections and distortions." Furthermore, Gur (1971) paraphrases Fromm: "to avoid conflict is to avoid wondering and to become a smoothly running machine where all feelings are flattened out . . . so the creative attitude requires the ability to accept conflict and the tensions of polarity."

Kubie (1961) holds that the preconscious is responsible for creativity for, unlike our conscious, it is not anchored to reality and conventional connections, and, unlike our unconscious, it is not anchored to sterile memory traces of the past, but is free to assimilate and use data. To be creative, one must temporarily free himself from the inflexibility of the competing systems.

One question upon which researchers are in conflict is that of whether or not creativity can be taught. Some suggest that flexibility and originality can be taught, while other, notably Wolman (1966), believe to the contrary. I am partial to the position that creativity cannot be taught; however, I do think that encouraging individuals to make new and even "wild" responses can increase the likelihood of latent creative tendencies coming to the forefront.

B. Creativity and Humor

There has been some research that has demonstrated a relationship between creativity and humor. Smith and White (1965) showed a positive correlation between wit and creativity. Getzels and Jackson (1962) found that children

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who were highly creative but only moderately high in IQ valued and used humor more than those with high IQ alone. The most important component of their work has been the discovery of a consistent use of humor by creative people. A further finding was that the fantasies of highly creative adolescents seem more expressive of frequently inhibited impulses.

Recently, Goodchilds and Green (1971) suggest that there is a difference between creating humor and creating humorously. They hold that Ss' observable demonstrations of humor do not differ between Ss' creating the humorous and creating the serious, and further that subjects can create humor on demand.

Treadwell (1970) found that creativity is related to humor use, but not necessarily humor appreciation. This brings us to an important distinction - that between creator and consumer of humor. How different are these individuals, and how different are the component elements of "being humorous" and "having a sense of humor"?

Koestler (1964) called a successful witticism a creative act. In essence, he suggests that humor is a branch of creativity. Furthermore, he holds that humor depends on surprise, and to gain that, one must have the ability to "break away from stereotypic routines of thought."

Barron (1963) among others found non-conformity, willingness to recognize irrational impulses, and humor as correlates of creativity. Self reports, through a <u>Creative</u>

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<u>Personality Self Descriptions Checklist</u>, demonstrate that highly creative high school students perceive themselves as willing to take risks, always asking questions, and having a sense of humor (Dauw, 1965).

C. Humor and Adjustment

As has been mentioned earlier, various sources have found that humor appreciation was positively correlated with adjustment and mental health (Frankel, 1963; Loos, 1951; O'Connell, 1960; Nussbaum and Michaex, 1963; Flugel, 1954; Freud, 1928). Roberts (1958) discovered that normal hospitalized patients tended to express humor to a greater extent than did the neurotic patients. His findings "suggest that psychological disturbance in itself tends to limit the response to humor," and support Freud's belief that those who are able to enjoy humor are more adjusted individuals.

The use of humor as an adaptive tension reducer is supported by McGhee (1971) who maintains that the basic motive in initiated humor is the "overcoming of distress and momentary release from frustration." Wolfenstein (1954) holds that one uses jokes to express impulses which are increasingly restricted by society. O'Connell suggests however that though <u>humor</u> may be adaptive, <u>wit</u> can be a hostile device employed by less adjusted persons.

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D. Creativity and Adjustment

The last dual relationship to be looked at separately is that between creativity and mental health. Long and Henderson (1964) found that highly creative persons would be better able to withstand the uncertainty of an undecided state and to resist premature closure. Inherent in the figural forms of the <u>Torrance Tests of Creative Thinking</u> (1966) is an individual's ability to delay gratification and to reject a tendency to complete tasks in the simplest and easiest way. The original response will occur when the individual can avoid a strong gestalt closure tendency which will alleviate the tension of incomplete sets.

Smith and White (1965) found a negative correlation between defensiveness and creativity; this, however, probably "explains what limits creativity rather than what produces it." Goldstein and Palmer (1963) raise questions which have, in some form, been asked before: (a) "is neurosis greater in creative artists than other subgroups (b) is neurosis necessary to be creative, or are creative people more likely to develop involved emotional conflicts? (c) what is likely to happen to a creative, but neurotic, artist who is cured of his neurosis through psychotherapy?"

This is a good place to make mention of the conception, or, more accurately, the misconception, which a good part of the public has concerning creative people. This misconception is that many creative people, particularly many creative artists, are "crazy." While there may be some

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"imbalanced" creative artists, for the most part, this misconception is indeed a faulty generalization. The basis for this misconception is the fact that a creative person can appear at times to be "imbalanced" due to the fact that he puts aside basic psychological constancies in order to explore new regions of mental functioning (Barron, 1963).

Kubie (1961) discusses this issue more fully. He believes that creativity and the neurotic process are largely incompatible. Creativity evolves out of "a pattern of living, a philosophy of freedom and life" which contrasts with the rigidity of a neurosis. To be creative cannot in itself insure the absence of mental illness, but relative freedom from mental illness permits ellicitation of creative potential. Whereas mental illness is a freezing of behavior into unalterable patterns, creativity is an expansion into new realms of possibilities. Kubie assays that creative potential and neurotic potential are universal in all, and suggests dreams as evidence of inherent creative processes; potential for neurosis and creativity evolve out of early experiences. He holds that "neurosis exacts man's creative potential," and creativity's vulnerability to distortion is the main topic of his book. He submits that one measure of mental health is flexibility - "the freedom to change with changing internal and external circumstances."

Torrance (1966) uses various verbal and figural activities in his attempt to measure creativity. He

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derives a total creativity score from a combination of three basic factors: <u>fluency</u> which reflects the test taker's ability to produce a large number of ideas; <u>flexibility</u>, which represents a person's ability to produce a variety of kinds of ideas, to use various strategies and approaches; <u>originality</u>, which represents the subject's ability to produce ideas that are away from the commonplace or obvious.

Not surprisingly, Davis and Belcher (1971) found extremely high and significant part-whole correlation between total creativity with the three individual scores; originality correlated .92 with the total score.

Barron (1955, 1963) has done much research dealing with creativity in general and originality in specific. Defining originality as "adaptive responses which are unusual," he found it partially a function of the objective freedom of an organism. He suggests that "environmental and private inner constraints on freedom (as in totalitarian states or a neurosis) decreases the possibility of original responses." He continues that "originality flourishes where suppression is at a minimum and where some measure of disintegration is tolerable in the interests of a final higher level of integration." His results demonstrate that original persons prefer complexity (using the <u>Barron-Welsh Art Scale</u>), are more complex psychodynamically, and reject suppression as a mechanism for the control of impulse.

CHAPTER III

EXPERIMENTAL DESIGN

A. Hypotheses

Combining the preceeding, I have derived a single

broad hypothesis:

Hypothesis 1: There will be a positive correlation between creativity and humor appreciation, between creativity and self-esteem, and between selfesteem and humor appreciation. There are several general sub-hypotheses:

- Hypothesis 1A: Those persons who rate high on self-esteem will rate highly on creativity and humor appreciation as well.
- Hypothesis 1B: Those persons who rate in the middle range on self-esteem will also be in the second third with regard to creativity and humor appreciation.
- Hypothesis 1C: Those persons in the lowest third on self-esteem will also rate in the lowest third with regard to creativity and humor appreciation.

More specifically:

- Hypothesis 1A: Those persons who rate in the upper third on the TSCS will score in the upper third on the Barron-Welsh Art Scale and the adapted humor appreciation scale.
- Hypothesis 1B: Those persons who rate in the middle third on the TSCS will score in the middle third on the

Barron-Welsh Art Scale and the adapted humor appreciation scale.

Hypothesis 1C: Those persons who rate in the lowest third on the TSCS will score in the lowest third on the Barron-Welsh Art Scale and the adapted humor appreciation scale.

Though Nussbaum and Michaex (1963) found humor development as a good predictor of depressive patients' progress, and Roberts (1958) found humor appreciation to correlate with psychological adjustment, this is the first study (to my knowledge) to test humor appreciation and self-esteem in a normal (unhospitalized) population with the added variable of creativity.

B. Instruments

(1) To test "creativity," the <u>Barron-Welsh Art Scale</u> was chosen (this is a scale on the larger <u>Welsh Figure Preference Test</u>). Barron, at the Educational Testing Service conference (1962), maintained that an "esthetic orientation to experience is essential to creativity." His Art Scale discriminates between artists and people in general, and is based on preferences of complexity versus simplicity. He submits that "preference for complexity is associated with a perceptual attitude which seeks to allow into the perceptual system the greatest possible richness of experience even though discord and disorder result," while preference for simplicity implies allowing into the system only as much as can be integrated without discomfort. It was in 1955 that Barron confirmed his hypothesis of original persons' preference for complexity.

Later he became more definite: "only a person who can live with complexity and contradictions and who has some confidence that order lies behind what appears to be confusion would be able to bear phenomenal discord" (Barron, 1963). He discovered that high scores on the <u>Barron-Welsh Art Scale</u> is related to originality, verbal fluency, and expression as opposed to repression of impulse.

Expression of impulses seems to be a healthier way of dealing with them. As long as some ego controls remain active, it seems preferable to admit the child within and to notice its calling. Other supportive data was a finding of his that "preference for the complex proved significantly related to rated originality in graduate work" (Barron, 1963). Whittemore and Heimann (1965) also found, among other things, that original and non-original persons differ in regard to complexity preference. The steps from complexity to originality to creativity are apparently then not major ones, and are founded on considerable theory and research.

(2) The <u>IPAT Humor Test of Personality</u> (Tollefson and Cattell, 1963) was selected as a measure of humor appreciation. Form B was used because the jokes were offered singly (and not in pairs as in form A), and therefore allowed derivation of a "total funniness" score. It seems

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helpful to quote from the IPAT manual, "the joke items in the present test are a select group of survivors from a much larger comprehensive original pool, tried out on normal and abnormal populations. The joke sample was initially groomed for simplicity, brevity, range of appeal, variety of dynamic tendency, and relative cultural timelessness." Attempts were made to include all different types of jokes (that is, puns, poems, cartoons, stories) and different themes (see page 21).

(3) Finally, the <u>Tennessee Self Concept Scale</u> was selected to measure self-esteem. From the shortened counseling form, one can derive a "total P score" which consists of three positive scores. These three positive scores convey three messages about a person "(1) this is what I <u>am</u>, (2) this is how I <u>feel</u> about myself, and (3) this is what I <u>do</u>." The "total P score" reflects overall level of self-esteem; "people with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves, and act accordingly" (Fitts, 1965).

On the more complex "Clinical and Research Form" there is a derivable general maladjustment (GM) scale. This scale serves as a general index of adjustmentmaladjustment but provides no clues as to the nature of the pathology. While the GM score correlates -.93 with the total P score, the correlation may be spuriously high because of overlapping items. For a measure of adjustment,

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the total P score seems sufficient. There is much evidence of self-esteems' relation to mental health. Chase (1957) found that a Q-sort of "the self" could discriminate between "adjusted" and "maladjusted" individuals. Searles (1965) discovered that "a very low self-esteem is one of the characteristics of a schizophrenic and is basic to his pathological communication." Atchinson (1958) found that delinquents had lower total P (overall self-esteem level) and higher variability scores (amount of inconsistency from one area of self perception to another) than nondelinquent high school boys.

The total P has a test-retest reliability (over a two week period) of .92, and therefore seems highly consistent. The total P (as well as the entire test but for a few exceptions) has proven effective in discriminating psychiatric patients from non-patients, as well as locating distinctions between a norm group and those high in personality integration (Piety, 1958).

C. Methodology

(1) <u>Subjects</u> - The subjects were 102 juniors and seniors (31 males and 71 females). They were all asked to give their identification number, age, class and sex. Several instructors offered extra credit for those who attended the test sessions (which were generally held in the evening).

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(2) <u>Procedures</u> - Subjects were told that the tester was interested in individual preferences on humor, art, and the kind of people who have those preferences. The humor test was given first to give Ss a feeling that the testing would be an enjoyable experience. They were told that "this is a study to find out what people think is funny." Form B of the IPAT was distributed as printed, though there were certain deviations in administration. Ss were told to disregard the instructions on the cover, and were asked to use the specially printed answer sheet.

Ss were asked to rate each joke on a five point scale:

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 1. If it is mildly funny, score it a 2. 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. Remember, there are no right or wrong answers, it's just how the joke appeals to you.

Next, the <u>Tennessee</u> <u>Self Concept Scale</u> (TSCS) was distributed as printed, along with the counseling form combination packet answer sheets. The scale is typically finished in between 10 and 20 minutes with a mean of 13 minutes. The scale is self-administering for either individuals or groups.

The Ss were then given the BW Art Scale which is in a specially printed booklet. This too is self administering and takes approximately ten to fifteen minutes to complete.

CHAPTER IV

RESULTS

A. Sex Differences

By inspection of Table 1, one can see that no significant sex differences existed in this study on the TSCS or Barron-Welsh. However, an analysis of variance for use with unequal cell size was used to determine the significance of sex with humor appreciation.

TABLE 1

	Mean	Standard Deviation
HUMOR		
Overall	261.35	69.96
Males	241.58	61.66
Females	269.99	71.99
TSCS		
Overall	345.43	32.28
Males	348.71	33.64
Females	344.00	31.80
BW		
Overall	28.74	13.27
Males	28.00	13.14
Females	29.05	13.41

MEANS AND STANDARD DEVIATIONS FOR HUMOR APPRECIATION, TENNESSEE SELF CONCEPT SCALE, AND BARRON-WELSH ART SCALE

TABLE 2

Source SS df MS F p BETWEEN 17410.76 1 17410.76 3.65 <.10</td> WITHIN 476868.53 100 4768.68

ANALYSIS OF VARIANCE OF HUMOR APPRECIATION AND SEX

Although females had somewhat higher scores on humor appreciation than males (see Table 1), the difference in scores was not statistically significant.

B. Primary Analysis

The primary statistical procedure was a Pearson Product Moment correlation. Table 3 indicates the relationships among the basic variables:

TABLE 3

CORRELATIONS AMONG TSCS, BARRON-WELSH, AND HUMOR APPRECIATION FOR SAMPLE OF 102 COLLEGE STUDENTS

Relationships	Uncorrected r	Corrected r ⁺	z*
TSCS and Barron-Welsh	06	06	6030
Humor and Barron-Welsh	12	13	-1.31
Humor and TSCS	.02	.02	.2010

+ corrected r=

r uncorrected

reliability

of test l

reliability

of test 2

$$z = r \sqrt{N-1}$$

Contrary to expectations, the TSCS and Barron-Welsh were essentially unrelated, as were humor apprdciation and the Barron-Welsh, and the humor appreciation and the TSCS. The r's were all corrected for attenuation which removes much of the measurement error. This correction is made utilizing test reliabilities.**

These corrected correlations were used in determining the significance levels of z, however none were found to reach statistical significance. These results already demonstrate some disconfirming evidence for hypothesis 1.

C. Further Analysis

Ss were then divided into three groups two different ways. First, high, middle and low groups were formed each containing equal numbers on one test (34 Ss), and then attempts were made to form statements about their scores on the other two tests using equal groups there as well. For example, the Barron-Welsh scores were divided up into three groups of 34; the low group's scores had a range of 4-20 with a mean of 13.44; the middle group had a range of 21-37 with a mean of 28.68; the high group had a range of 38-53 and a mean of 44.09.

^{**} Reliabilities on which the corrected r's are derived are as follows: TSCS (.92), humor appreciationsplit half (.88). There was no reliability available for the Barron-Welsh. The reliability of the Revised Art Scale (.94) which is derived from the Barron-Welsh was used for this purpose.

The TSCS scores were similarly divided with the low group's range 252-333, the middle group's range 334-362, and the high group's range 364-421.

Too, the low humor group's range was 154-224, the middle group's 224-289, and the high group's 290-438.

Three by three Chi-Square analyses were performed using these categories:

TABLE 4

		BARRON	-WELSH ART	SCALE	
		Low	Middle	High	
	Low	15	10	9	34
TSCS	Middle	8	15	11	34
	High	11	9	14	34
		34	34	34	102

CHI-SQUARE ANALYSIS COMPARING SUBJECTS SCORING LOW, MIDDLE, AND HIGH ON BARRON-WELSH AND TENNESSEE SELF CONCEPT SCALES

While the trend is in the expected direction, the derived χ^2 was 5.12 with 9.5 needed for significance (.05, df=4). By inspection, a chi-square analysis of the TSCS-humor appreciation data suggested statistically insignificant results.

An analysis was also performed comparing group status for Ss on the Barron-Welsh Art Scale and humor appreciation scale.

TABLE 5

CHI-SQUARE ANALYSIS COMPARING SUBJECTS SCORING LOW, MIDDLE, AND HIGH ON BARRON-WELSH AND HUMOR APPRECIATION SCALES

					1
N		BARRON Low	-WELSH AR Middle	F SCALE High	
IATIC	Low	7	11	16	34
PPREC CALE	Middle	15	11	8	34
MOR A S	High	12	12	10	34
ПH		34	34	34	102

The resulting χ^2 value of 6.00 was not statistically significant.

D. An Alternative Analysis

A further comparison was made to explore possible differences. Two <u>numerical</u> cutoffs were established and just the high and low groups were compared, eliminating the middle-manual norms. In order to make this comparison, an arbitrary cutoff of one-half a standard deviation from the mean for normal Ss (Fitts, 1965) was chosen. Thus, the high esteem group included those <u>above</u> 360 and the low esteem group were those below 330.

A similar procedure was followed with the Barron-Welsh Art Scale. The artists' average (Rosen, 1955) of 40 was used as the high group cutoff. The manual mean for women was 18, and since 2/3 of the Ss were women, this was taken to be the somewhat arbitrary lower group cutoff. Thus those scoring <u>below</u> 18 and <u>above</u> 40 were included in the two groups.

Table 6 gives a summary of the means between high and low groups using numerical cutoffs for the TSCS and Barron-Welsh:

TABLE 6

MEANS BETWEEN HIGH AND LOW GROUPS USING NUMERICAL CUTOFFS FOR THE TSCS AND BW

	high	low
Means of TSCS scores between high (n=28) and low (n=26) Barron-Welsh groups	351.64	343.31
Means of Humor scores between high (n=35) and low (n=28) TSCS groups	261.36	255.96
Means of Humor scores between high (n-27) and low (n=26 Barron-Welsh groups	239.81	264.04

Using these new cutoffs, an analysis of variance was performed comparing self-esteem scores between high and low creativity groups. The result did not reach statistical significance.

A similar analysis of variance was performed comparing humor appreciation scores between high and low TSCS groups. The results did not yield statistically significant findings.

A third analysis of variance was performed comparing humor appreciation scores between high and low Barron-Welsh groups. Results, did not reach statistical significance. A parametric summary using the numerical cutoffs for the Barron-Welsh and TSCS can be seen in Table 7:

TABLE7

SUMMARY OF SUMS, N'S, AND MEANS OF TSCS KNOWING HIGH, MIDDLE, OR LOW GROUP STATUS OF HUMOR AND BARRON-WELSH SCALES

		BARRO	N-WELSH ART	SCALE	
Z		Low	Middle	High	
0 1		$\Sigma = 4111$	Σ =3899	_Σ =3527	∑ =1153 7
T	High	N=12	N=11	N =10	N = 33
1		$\bar{x}=342.58$	x =354.45	x=352.70	x =349.6
ы С П С П		Σ=5199	Σ=3731	Σ=2710	Σ=11640
AN	Middle	N=15	N=11	N=8	N = 34
SC		X=346.60	x=339.18	x=338.75	x=342.4
R.		Σ=2384	$\Sigma = 4104$	Σ=556 9	Σ=12057
R	Low	N=7	N=12	N = 16	N=35
<u>Ж</u>		$\bar{x} = 340.57$	$\bar{x}=342.00$	$\bar{x} = 348.06$	x=344.8
Н		Σ=11694	$\Sigma = 11734$	Σ=11806	-
		N = 34	N=34	N = 34	
		x=343.94	x=345.12	x=347.24	

Graph 1 has been utilized to give an over view, and is taken from Table 7:

GRAPH 1

PARAMETRIC PLOT OF TSCS MEANS KNOWING GROUP STATUS ON STATUS ON BOTH BARRON-WELSH AND HUMOR SCALES



Even eliminating the middle group in each case so as to highlight possible differences, the results are clearly statistically non-significant. In summary, there seem to be no differences on humor appreciation or creativity between persons with high and low self-esteem, and no differences on humor appreciation between persons with high and low creativity. Thus hypothese 1A, 1B and 1C were not confirmed.

E. Normative Data

The sample seemed to be closely akin to those of the normative populations as described in the test manuals. For example, the overall study mean on the TSCS was 345.43 (S.D.=32.28), which essentially matches the standardization sample mean of 345.57 (S.D.=30.70). Since sex differences were negligible, it seems apparent that my sample, at least on this measure, is a typical one (see Table 1).

Regarding the Barron-Welsh, the manual suggest that artists averaged 40 and non-artists 22. Again, sex differences were negligible. Because of the overall lack of sex differences, data was able to be combined for analyses.

F. Self-Criticism Scale

A noteworthy aspect of the 100 item TSCS is that the last ten items comprise a Self-Criticism Scale with statements to which a relatively healthy person would normally admit; for example, "I get angry sometimes." The scale's function is similar to that of the MMPI lie scale, and indeed is taken from it. The standardization sample mean and standard deviation were 35.54 and 6.7 respectively (Fitts, 1965), which closely approximate the study data. Table 8 summarizes the essential data of the Self-Criticism Scale:

TABLE 8

RELIABILITY, CORRELATION WITH TSCS, POSSIBLE AND ACTUAL RANGES, MEANS AND STANDARD DEVIATIONS (OVER-ALL, MALE, AND FEMALE) OF THE SELF-CRITICISM SCALE

	- L								
		relia [‡]	corrected	signif-	pos-	actual	over-	male	female
	ļ	bility	r with	icance	sible	range	all	mean	mean
			TSCS	of z	range		mean	and	and S.D.
_							and	S.D.	
ШS		i					S.D.		
citici	are	.75	28	-2.81	0-50	23-50	36.7	37.65	36.28
lf Cr	ň						5.45	4.69	5.73
Š									

*as stated in test manual (Fitts, 1965)

The corrected correlation of -.28 for the TSCS-Self Criticism Scale proved to be significant at the .01 level. The manual intercorrelation was -.10 however. Fitts (1965), in discussing data from other studies, states that "in general the correlations for the other groups are comparable to those of the norm group with the following exception: interrcorrelation between SC and total P scores are generally higher than -.10 (approximately -.30)." Thus it seems that -.28 is not an extraordinary result. It has interesting implications however. Essentially it means that people typically raise their total P score by being less honest about their foibles - in a sense throwing a question mark over the entire test validity. This is an extreme interpretation and should not be seriously upheld however since many cross-validations have proven the test a useful one.

Furthermore, if one checks the 95% confidence intervals of r = -.28, one can see that -.10 is within that range and so not out of the range of chance alone.

CHAPTER V

DISCUSSION

This study suggests no relationship among humor appreciation (as measured by an adapted IPAT humor test), self-esteem (as measured by the TSCS), and creativity (as measured by the Barron-Welsh Art Scale). It may be that humor is not a part of creativity as suggested by Koestler (1964), but is similar to and distinct from it. People have their particular way of dealing with tension, and so the stress may emerge primarily in one sphere or the other, but not both (or at least not as much in one as the other). That is, an individual alleviates as much stress as he can in his best personal stress-handling manner (which becomes that through learning and law of least effort and least pain).

This suggests a hierarchy of stress removal. A person unconsciously chooses a mechanism which reduces tension, but only a partial reduction is possible, so he tries a further mechanism (a less used one); that failing to remove the stress, he moves further down the line of defense, finally utilizing symptoms if the original tension is severe enough.

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Returning to the top of the hierarchy, certain mechanisms may have different loadings for different people, and this would determine which are primarily used. So, one may use humor, another creative paintings, still another, poetry.

Apparently, humor appreciation and creativity are not solely tension reducers, but serve in other ways as well. Creativity may not be just a response to pain in our lives, but also a positive spontaneous drive in itself. A more realistic relationship to measure is that between creativity and humor generation.

A more likely possibility is that sources of error may have erased possible relationships. One very blatant fact is the extremely low average humor appreciation score (see Table 1), and skewed distribution as evidenced below:

TABLE 9

	Possible Range	Actual Range
Humor Appreciation	130-650	145-438
TSCS	100-500	252-421
Barron-Welsh	0-62	4-53

POSSIBLE AND ACTUAL RANGES (FOR 102 COLLEGE STUDENTS) OF HUMOR APPRECIATION, TSCS, AND BARRON-WELSH SCALES

The overall mean was 261 which is an average response of "2" per joke item. This indicated that the Ss did not

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see the test as very humorous. Collier (1960) suggests that popular cartoons reflect prevailing anxieties. If in fact this is the case, then perhaps jokes need to be current to be humorous. Though humor themes are fairly standard over time, specific jokes on those themes need updating. The IPAT edition was printed in 1966, and formulated some time before that.

Another reason why the jokes were not perceived as humorous may be due to problems as those raised by Hall and Allin (1897). They note that repetition of jokes has various effects depending on the type of joke. Some jokes, notably naive jokes, normally are funnier upon repetition, whereas responses to retorts and puns typically wane with repetition. There should have been a check of how many were heard before as a control against these varying effects. They also mention a "fatigue curve" for humor. It may be that 130 humorous stimuli may have been too long, and since Ss knew in advance how many jokes there would be, they may have had a negative set.

This idea of "set" may have had a complicating affect elsewhere. Martin (1905) indicated that what precedes a "joke" may determine how humorously it is perceived. Thus, some early poor jokes in the IPAT test could have had a negative affect on the remainder of the test.

The cover of the IPAT test had a note which may have depressed some humor responses; it read, "Try not to disturb others by laughing out loud." Again, Martin advises

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us that "the involuntary restraining of the laugh tends to <u>decrease</u> the funniness of a comic picture." Furthermore, Morrison (1940) found that <u>social facilitation</u> had a great deal to do with audience laughter responses. With Ss encouraged not to laugh aloud, much of the social feedback as to others' reactions was substantially missing, thereby possibly having an adverse affect on individual humor perception; that is, "if no one is laughing, it must not be funny." The test should be controlled for this possible depressor.

As was mentioned earlier, there is disagreement as to the affects of arousal on humor preferences. Strickland's (1959) results demonstrate how sensitive humor appreciation is to situational influence. He suggests that responses to humorous material can be considerably controlled by arousing different types of motivation. If this is the case, it would be important to measure the extent to which Ss were in any way apathetic, or angry at having to take the tests since it involved extra time committment on their part. In addition, since the Ss were volunteers, a preponderance may have been either anxious Ss who were doing poorly and needed extra credit, or anxious Ss who typically do extra credit projects; in any case, the Ss were selfselected volunteers which raises a biased sample issue.

There was perhaps another important factor. The tests were given approximately just before or just after the quarter's midterm examinations, further increasing the likelihood of anxious Ss. Hollingworth (1911) assays that mood and circumstance, as well as individual temperment can greatly vary reactions to the comic.

Many studies have supported the idea that some tension and anxiety is necessary for optimal work. I suspect that this is valid for humor appreciation as well; that is, humor appreciation is contingent upon "some" but not too much stress or tension. Zuk (1963) for instance noticed laughter differences in families at certain particular times in the therapy hour. Berlyne in his chapter, "Humor and its Kin" in Goldstein and McGhee (1972) clearly supports a curvilinear relationship or inverted "U" shaped function between humor appreciation and arousal. Translated into operational terms - if the joke is on a topic to which the individual is indifferent, no laugh; if the joke essence is of a sensitive or nuclear nature to the individual, no laugh; only a moderately sensitive "humorous" stimulus will evoke much appreciation. So, the tension or arousal level should be assessed simultaneously with humor scales.

One might wonder what other factors would influence an individual's humor appreciation beside self-esteem and/ or creativity. Could there be substantial cultural differences in humor? Eysenck (1942) would say no. Is humor a fragile commodity, and is it cyclical like fashions?

That the self-criticism scale and the remaining 90 items on the TSCS correlated -.28 raises a mild interference, for it suggests that to some extent the "P" score

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was inflated by the individual's inability to see even his most human flaws. However, since only 7% of the variance of the P score can be accounted for by the SC, this remains a relatively minor matter. On the whole, the TSCS was appropriate for the task.

In retrospect, the BW Art Scale may have been a poor choice to assess creativity. If anything, it may have told about those who are creative with regard to visual selection or figures, but may have not been extensive enough to measure "creativity" as a broader concept. Too, one basic criticism of the test is that the subject is a passive responder.

In my attempt to measure the relationship between creativity and humor appreciation in relation to selfesteem, I perhaps chose instruments that were not sensitive enough to monitor the relationships that I still believe exist. Based on this belief that the relationships among humor, creativity, and self-esteem exist, I wish to mention several important implications.

One particular use of the humor-self-esteem relationship can be with mental patients. Hall and Allin (1897) state that "insanity always readjusts the balance between pleasure and pain, and thus either increases or decreases laughter." This in many ways parallels my own view - that laughter disturbances primarily manifest themselves by hysterical inappropriate laughter, or by the absence of laughter, and both seem to be pathological. As Grotjahn

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(1957) suggests, a temporary and well-regulated regression on which laughter depends is impossible for the schizophrenic who holds onto whatever reality he can. Furthermore, he states that uncontrollable laughter can signify hysteria, encephallitis or a brain tumor, and that inappropriate laughter is a sign of deterioration. Davison and Kelman (1939) give evidence for this relationship in that they found that brain lesions may be associated with emotional instability and spontaneous laughing. Laughter disturbances therefore can be a sign of possible oncoming or present mental illness.

Developmentally speaking, attention to laughter and smiles can be useful. Wolfenstein (1954) gives an interesting account of changing humor preferences of children (for example, latency period children prefer riddles and moron jokes). Certain themes persisting beyond their appropriate period may indicate fixation in terms of problem areas. The key to a child's joke preferences revolves around his mastery in dealing with his environment; a child can only laugh at a clown's antics and slips if he himself has mastered how to walk and other coordinated movements (it follows then that people who do not laugh have not really mastered or <u>feel</u> as if they have not mastered the behavior or skill mimiced in the joke or antic).

Very early in life, "the inability to smile characterizes emotional starvation and loss of human contact."

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Grotjahn (1957) too believes that the earlier children begin to smile, the more advanced they are in their development. Furthermore, he believes that mastery of toilet training is the beginning of appreciation of the comic, and that enjoyment of wit is a sign of intellectual growth and mastery of language. Utilizing these developmental signals one could design a children's humor scale as part of child assessment. The test would be able to contribute to evaluation of a child's verbal mastery, mental health, intellectual development, social awareness, and would have the advantage of being fun to take (thereby keeping the child's interest). The essential basis for such assessment is expressed nicely by Grotjahn:

> The sense of humor develops in stages and gradually during a lifetime. Every step is connected with mastery of a new anxiety, and each conflict mastered at the different developmental stages is marked by a growth of the sense of humor.

One thing seems apparent: as the relationship between humor and self-esteem becomes clarified, one may gain an added tool in assessing mental health in children and adults. To the extent that humor is closely tied to creativity, researchers may study humor as a useful approach in the further study of creativity.

A particular lesson has been reaffirmed again - that there is really no such thing as a "good joke." A humorous stimulus does not exist in an absolute state, and though there is some consensus, preferences vary widely. Though in this study, self-esteem, humor appreciation, and

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creativity, as measured on this sample of college upperclassmen, were not related, it seems to be important to re-examine these variables and discover more about their relationships that have previously demonstrated evidence.

SUMMARY

One hundred and two college upperclassmen were administered the Tennessee Self-Concept Scale (TSCS), Barron-Welsh Art Scale (BW), and a humor appreciation test adapted from the Institute for Personality and Ability Testing Humor Test. The adaptation was that Ss were asked to rate the 130 jokes and cartoons on funniness on a scale from 1-5 such that a total humor appreciation score could be derived.

It was hypothesized that self-esteem (as measured by the TSCS), creativity (as measured by the Barron-Welsh Art Scale), and humor appreciation would all be positively related. Some authorities maintain that humor and creativity are adaptive mechanisms for dealing with tension. Hence, individuals who utilize these mechanisms would deal with stress on a high adjustment level, and would presumably score higher on a measure of self-esteem. In addition, individuals who utilize humor and creativity would likely be similar, especially in their flexibility.

The analysis of the data did not yield statistically significant results. Several further analyses were performed to determine whether a subject's group status on one measure was predictive of group status on the remaining two measures. These too did not indicate statistically significant relationships.

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Among the reasons for lack of significant findings were that the humor items were not current, and therefore not perceived as humorous, thus producing a skewed distribution on the humor appreciation test. It was also suggested that the Barron-Welsh Art Scale may not be a satisfactory measure of creativity. On the other hand, the relationships may be more subtle. APPENDIX

APPENDIX

SUBJECT DATA

		HUMOR APPRECIATION		SELF-	
SUBJECT	SEX	SCORE	TSCS	CRITICISM	BW
1	F	267	368	24	20
2	M	276	333	50	17
3	F	196	351	31	42
4	M	263	320	35	17
5	M	305	306	35	7
6	F	154	300	38	9
7	F	241	410	36	9
8	M	233	369	29	28
9	F	380	349	29	14
10	M	242	393	36	8
11	M	325	393	38	41
12	M	293	407	38	22
13	F	274	369	26	13
14	F	191	388	42	46
15	F	438	312	50	38
16	F	190	366	44	48
17	M	342	365	42	12
18	F	226	337	33	28
19	F	320	339	39	13
20	M	214	336	35	31
21	М	253	372	32	19
22	F	372	377	34	28
23	F	224	355	33	12
24	F	224	252	25	34
25	М	224	284	37	39
26	Μ	237	330	36	4
27	F	209	324	37	47
28	F	239	341	37	41
29	М	278	336	38	43
30	F	346	361	40	23
31	F	326	312	45	40
32	F	196	307	41	4
33	F	262	364	40	42
34	F	149	336	41	32
35	М	406	283	39	29
36	F	282	326	39	18
37	F	411	307	40	15

		HUMOR APPRECIATION		SELF-	
SUBJECT	SEX	SCORE	TSCS	CRITICISM	BW
38	М	213	397	38	46
39	F	305	367	41	48
40	F	344	339	35	7
41	F	170	360	41	37
42	Μ	192	344	37	26
43	М	315	352	30	16
44	F	237	367	40	20
45	F	193	327	34	51
46	М	244	326	34	16
47	F	428	375	33	27
48	М	312	342	37	33
49	F	224	331	32	26
50	F	277	295	38	38
51	F	205	421	23	31
52	F	245	310	33	10
53	F	287	325	37	30
54	F	308	362	30	50
55	F	299	317	39	26
56	F	289	345	37	48
57	М	258	368	38	33
58	М	211	293	33	33
59	F	197	315	38	32
60	М	166	383	39	24
61	F	294	341	35	19
62	F	413	366	32	39
63	F	244	356	37	38
64	F	361	337	39	42
65	F	287	354	35	26
66	F	280	351	38	27
67	F	289	310	41	27
68	F	306	297	44	10
69	М	169	367	45	47
70	М	221	370	46	44
71	М	265	318	38	20
72	F	238	322	41	43
73	F	145	375	25	33
74	F	201	398	34	17
75	F	287	351	45	44
76	F	196	341	37	30
77	F	195	285	38	53
78	F	337	351	36	18
79	М	160	335	38	46
80	F	295	360	39	18
81	F	308	405	37	14
82	F	402	330	41	37
83	F	170	347	46	39
84	F	153	269	26	6
85	F	295	354	37	31
86	F	281	350	32	21

-6	9-
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		HUMOR APPRECIATION	SELF-		
SUBJECT	SEX	SCORE	TSCS	CRITICISM	BW
87	м	181	380	40	42
88	М	214	348	43	22
89	F	282	337	44	22
90	F	303	340	35	46
91	F	195	373	46	13
92	М	147	311	37	44
93	F	421	395	41	26
94	F	314	368	30	45
95	F	234	324	35	16
96	F	211	370	28	47
97	F	309	358	28	31
98	М	149	367	30	44
99	F	293	370	29	48
100	F	274	333	35	11
101	F	231	299	35	29
102	M	181	382	44	15

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