1970

The Influence of Hostility on Humor Ratings of Cartoons

James P. Choca
Loyola University Chicago

Recommended Citation
https://ecommons.luc.edu/luc_theses/2454

This Thesis is brought to you for free and open access by the Theses and Dissertations at Loyola eCommons. It has been accepted for inclusion in Master's Theses by an authorized administrator of Loyola eCommons. For more information, please contact ecommons@luc.edu.
Creative Commons License
This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License.
Copyright © James P. Choca
The Influence of Hostility on Humor Ratings of Cartoons

by
James P. Choca

A Thesis submitted to the Faculty of the Graduate School of Loyola University in Partial Fulfillment of the Requirements for the Degree of Master of Arts

February, 1970
LIFE

James Choca was born October 30, 1945, in Havana, Cuba. He came to the United States for political reasons in November of 1960. Continuing his studies in Chicago, he graduated from Loyola Academy in 1963.

After doing three years of undergraduate work at St. Benedict's College in Atchinson, Kansas, the author transferred to Loyola University where he received a Bachelor of Science in February of 1968. Currently the author is an intern of Clinical Psychology at the Veterans Administration Hospital in Downey, Illinois.
ACKNOWLEDGEMENTS

The author is primarily indebted and especially grateful to Dr. Robert Nicolay for his interest, support and encouragement. Gratitude is expressed to Dr. Leroy Wauck, Dr. Alan DeWolfe and Dr. Edward Meyer, whose help was greatly appreciated. The author is also thankful to Monica Becker whose scientific curiosity triggered the author's interest in humor.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Introduction and Survey of Literature</td>
<td>1</td>
</tr>
<tr>
<td>II. Method</td>
<td>20</td>
</tr>
<tr>
<td>III. Results</td>
<td>23</td>
</tr>
<tr>
<td>IV. Discussion</td>
<td>29</td>
</tr>
<tr>
<td>V. Summary</td>
<td>31</td>
</tr>
</tbody>
</table>
Chapter I
Introduction and Survey of the Literature

Humor, here defined as that which is subjectively funny, has been shown to be one of the means through which aggressive feelings which are socially unacceptable are vented. It would appear that humor fulfills this function efficiently as long as the aggression present remains of a mild character. When the aggression becomes more tangible, it would become socially unacceptable and produce some anxiety as a result. Using a similar reasoning, Levine and Redlich (1960) theorized that as aggression increases, the humor would increase up to the point at which the aggression arouses anxiety. After that point, humor would tend to decrease with further increases in the level of anxiety. The purpose of this study is to show that this is in fact the relationship that exists between the humor and the aggression ratings of popular cartoons.

Humor has been the subject of a number of theories. Theories of a philosophical nature take us back to Aristotelian times if not earlier. There were probably no real attempts, however, to set up a theory of humor in psychological terms until the Freudian theory was formulated.

The subsequent literature can be divided into two parts. The first part includes a number of studies in which a theoretical framework is proposed and expounded. Year-wise it
roughly comprises the period prior to the end of the Second World War. The support for the particular theories at this time was often anecdotal and usually extracted from interpretations of individual cases.

After the Second World War the literature includes a number of attempts of an experimental nature to support a previously formulated theory. Most of these attempts, however, have been confined to the more emotional aspects of the Freudian theory of wit. Some attempts, nevertheless, were made to integrate the existing theories as well as to create experimental support for further theoretical framework.

The value of some of the theories that have been formulated is still in dispute. The attempts that have been made to enlighten the field in this regard have been generally unable to contrast opposing theories. The main reason for this failure is that—as is often the case in Psychology—different theories probably apply to different levels of phenomena. The literature is oriented to create support for a theoretical framework at a particular level of humor.

Our approach in this survey will be to review an attempt by Flugel to integrate the theoretical propositions. We will expound and elaborate on the particular theories included in the integration and we will present experimental evidence.
Cognitive aspects of humor -- Noting that laughter is associated with a variety of situations, Flugel (1954) concluded that no single explanation of humor was adequate. He considered humor as comprising three different aspects: the cognitive, the constative and the affective.

The cognitive aspect of humor includes a number of mechanisms of a verbal, logical or superficial-psychological nature. Flugel cites six such mechanisms: condensation, incongruity, automatism and habit, allusion, surprise and repetition.

Discussing the "technique of wit" Freud (1938) treats some of the cognitive aspects. Freud believed that condensation was the basic technique. Repetition ("application of the same material"), allusion ("double meaning") and automatism are for him special cases of condensation. The reason why these mechanisms contribute to the pleasure of humor is that they constitute an economy of expression.

Flugel criticizes Freud's "economy of thought" on the grounds that not all economies of thought are humorous, giving the example of an algebraic formula. Freud himself admitted that this was the case and concluded that

"it must be a peculiar form of brevity and economy upon which the character of the wit depends, and just as long as we are ignorant of this peculiarity, the discovery of the common elements in the technique of wit will bring us nearer a solution" (1938, pp. 655).

Freud solved the mystery for himself by taking into account
the conative aspects of humor.

The Gestalt theory of humor also considered the aspect of condensation. In their opinion, condensation produces pleasure because it harmonizes the elements of a particular situation, thus increasing our pleasure in its perception (Maier, 1932).

Incongruity is probably the cognitive aspect that has received most attention. When Freud (1938) discussed the place that a disregard for logic has as a factor of humor, he did not consider it to be a cognitive but a conative aspect. Incongruity—according to him—is pleasurable due to a release of the inhibitions that force us to be logical. Further discussion of Freud’s views will be more appropriate with the conative aspects.

The Gestalt theory of humor also has a place for incongruity. They postulated that a situation is humorous when it suddenly and unexpectedly harmonizes its elements through a change in their meaning by using logic that applies only to its elements (Maier, 1932).

Arieti (1950) bases the humor experience on the existence of paleologic thinking. Enjoyable paleologic thinking might exist where common predicates lead to the establishment of identity (the Virgin Mary was a virgin, I am a virgin and my name is Mary, therefore I am the Virgin Mary) or where there is a lack of ability to connote.
The thinking of several men revolve around incongruity in the form of a double aspect as being the basis of humor. Schiller (1936, 1938) states that humor involves the logical enjoyment of an involuntary change in an unstable conceptual structure. The humor is produced by a moment of duality when an easy change of the unstable configuration of the thought pattern takes place. Kosztolany supported a similar theory. He held that humor is produced when the double role of one factor is discovered and separated under two different aspects (1939).

Barry (1928) in a humor case study of two subjects found constellations of repressed tendencies. This led him to conclude that humor was due to a change from an unpleasant to a neutral or pleasant toned perception and that "incongruity is only an incidental factor".

If the hypothesis of incongruity has a place in the study of humor, there should also be a place for intelligence. It is argued that if incongruity produces humor, the thinking ability needed to recognize incongruity should be related to humor (Mones, 1939). Experimental studies on this topic have been inconclusive. Overlade (1954) working with college students obtained a significant correlation between humor and I.Q. However, work done with high-school students by both Omwake (1939) and Cunningham (1962) have obtained insignificant results.
When discussing his results, Cunningham pointed out that the test used in measuring intelligence relied heavily in academic abilities. He felt that an intelligence test that would measure an "insight into meaningful wholes" would produce a significant correlation. This is supported by Overlade (1954) who gave a proverbs test to his subjects and obtained significant results but since he also obtained significant results using the intelligence quotient, the present author does not know how this could be evaluated.

Some studies have attempted to verify the hypothesis that since schizophrenics are affected by a thought disorder, they would be less able to recognize incongruity and would be, therefore, less appreciative of humor. O'Connell (1968) in a study comparing schizophrenics to organics, was unable to completely substantiate the hypothesis. He did find that organics were more appreciative of aggressive humor than schizophrenics but this did not hold for other types of jokes.

Automatism and habit was the basis of Bergson's theory of laughter. The function of laughter is seen as purely social: the forceful adaptation to the customs of a specific group or society. It is somewhat connected with aggression since "laughter is a kind of 'ragging' on the part of society: the object of laughter is humiliated by it". According to Bergson, anything in human actions that is reminiscent of a machine provokes laughter (from Bergler, 1956).
According to Bergler (1956), Freud found a way to combine Bergson's idea to his theory. Freud argues that no human can be understood without spending a certain amount of energy. However, when humans are mechanized, the expenditure of energy is not required and this saving produces the pleasurable laughter.

Bergler explained the hypothesis of automatism on the basis of ego development: at first the child is frightened by machines since they emphasize his inability to exercise control thus pointing out the fact that he is not the center of the universe. The comic aspect of the machine-like actions and gestures is, according to Bergler, derived from a masochistic revival of the old fears of boyhood.

Allusion is defined by Flugel as a reference to something, person, or event which is not directly mentioned. Freud (1938) considered allusion to be a special case of condensation and therefore a "technique of wit".

Working on the theory that humor is a perception or discovery of an allusion, Overlade (1954) hypothesized that humor is related to the ability of abstract thinking. He administered a proverb test, a humor test and a figure abstraction test and found a positive correlation between them.

Sterzinger (1932) advanced the theory that the comical is the result of a certain attitude or expectation being suddenly turned, changed or broken by the introduction of some-
thing incompatible with it. As noted before, the element of surprise also constitutes one of the basic factors for humor in the Gestalt theory (Maier, 1932).

Berlyne (1960) supported the idea of surprise. He stated that the value of a joke "depends on its formal structure, with the author alternately keeping in line with our learned anticipations and sharply diverging from them" (p. 253). Berlyne explained humor in terms of arousal. Arousal is increased in an effort to understand and sinks back to its former level when we are able to identify the meaning of the particular element. If arousal is increased in the expectation of understanding one element and more than one element is understood, each recognition will produce a reduction in the arousal with highly rewarding momentary drops below the tonus level.

Lee and Griffith (1962) tried to produce experimental evidence supporting Berlyne's arousal hypothesis. They postulated that arousal increases as more cartoons are presented so that, according to the hypothesis, they would be judged to be progressively funnier until the subjects reached the peak of arousal. In a study where two cartoons were presented to 29 subjects, 23 of the subjects judged the second cartoon to be funnier as predicted. Byrne (1958) in a study of 150 college students also found that the rating of 22 cartoons presented got progressively higher.

Kenny (1955) obtained some experimental evidence that is
contradictory to the hypothesis of surprise. He divided jokes into three categories according to the degree of expectancy and found that the humor appreciation increased with the degree to which the joke ending expectancy was confirmed.

The last of the cognitive aspects that Flugel considered was repetition. Flugel himself pointed out that this mechanism can be considered under the mechanisms of allusion and automatism. The present author has discussed the theories and evidences that could pertain to repetition under allusion and automatism.

**Conative aspects of humor.** Flugel stated that the conative aspects of humor refer to a more or less specific release of energy that was mobilized to meet a serious contingency when the seriousness or the contingency disappear. He considered six aspects: superiority and aggression, sympathy and sorrow, fear, anxiety and distress, intra- and extra-punitiveness and sex.

Under sympathy and sorrow Flugel considers McDougall's hypothesis that humor is a biological device to protect us from excessive pity. This is not properly based on a conative and is beyond the scope of the present paper.

There is no theory or research to the author's knowledge that deals with fear as a conative aspect of humor. As a result, it will be disregarded in the present paper.

The major theory dealing with conative aspects is the
Freudian theory. Since this theory considers aggression and sex to follow the same lines, the present author will treat them together.

Although Freud believed, in some cases, the pleasure of humor to come from the technique, he held the more pleasurable forms have at their disposal sources of pleasure which are beyond the technique used. The pleasure in these forms of humor result from the fact that a "tendency, whose gratification would otherwise remain unfulfilled, is actually gratified" (Freud, 1938).

Freud distinguished between the "comical", "humor" and "wit". The comical involves some kind of contrast between something befitting a rational adult and something only worthy of a child. The hypothesis involved is not a conative one since Freud postulated a "saving in representation". The energy that an adult would have spent in understanding something befitting him is freed, according to Freud, when he recognizes the childish nature of the material (Freud, 1938; Berlyne, 1960; Kris, 1952).

"Humor" as understood by Freud, takes place when a person is able to see a "funny side in his own misfortunes". This humor is produced by a "saving in affect" taking place when the state of affairs that would produce a strong unpleasant emotion is taken lightly (Freud, 1928, 1938; Berlyne, 1960; O'Connell, 1968).
Jokes that involve the gratification of a tendency were described by Freud under the term "wit". The pleasure of wit is due to a "saving in inhibition". This may come from absurdity and disregard from logic which is usually inhibited by man's rational training. In this case it is called "harmless wit". It may also come from a temporary release of sexual, aggressive or superiority urges which are normally kept inhibited. In this case it is called tendentious wit. (Freud, 1928, 1938; O'Connell, 1968; Berlyne, 1960; Lenzberg, 1930; Kris, 1952).

The simplest case of tendentious wit is the one in which the gratification of the tendency is opposed by an external hindrance which is eluded by the wit. As an example Freud cited the story of Augustus when he met a stranger who looked very much like himself. Augustus asked the stranger if his mother had ever been in Augustus' home. The stranger answered that his mother had not but his father had. Through the technique involved in the wit the stranger was able to gratify his aggressive impulse circumventing Augustus (Freud, 1938; Servadio, 1933).

Experimental evidence tends to support the hypothesis. Honingham (1944) found in a review of exhibitionism, pornography and verbal obscenity, that sexual and genital humor represents the "mastery of sexual taboos". Ghosh (1939) using four methods of observation (experimental, incidental, clinical and questionnaire) concluded that humor affords a cover for the expressions of socially tabooed wishes.
Assuming that females are more restricted by society in the amount of hostility that they can show, O'Connell (1958, 1960) predicted their ratings to be higher than male ratings in non-sense wit. O'Connell predicted that the opposite would be true as far as hostile wit. He obtained significance in both hypotheses using 332 subjects.

Rosenwald (1964) using twenty-nine male high school students assessed drive discharge through TAT stories. He found that those subjects who expressed their impulses in a manner that is approved by society ("direct socialized drive") were the most appreciative of hostile humor. In the same manner, subjects who tended to express their impulses in a disguised way or not at all were least appreciative of hostile humor.

Abelson and Levine (1958) conducted a factorial study of 106 psychiatric patients. They found four factors contributing to the dislike of cartoons: uncivilized hostile behavior, victimization, overt display of feminine sexuality and impudent disrespect for cherished institutions.

Cattell and Luborsky (1946, 1947; Luborsky and Cattell, 1947) factor analyzed one hundred jokes and found that good natured self assertion and rebellious dominance were two of the five main factors of humor.

Wit can also be used—according to Freud—to circumvent an internal hindrance or inner feeling that opposes a tendency. This mechanism can be analyzed in terms of energy. Freud postu-
lated that psychic energy is necessary for the formation and retention of psychic inhibition. When we are able to circumvent the inhibition and vent the tendency with the feeling that we could control the tendency if we wished, the inhibition is no longer necessary and the resultant drop of psychic expenditure produces pleasure (Freud, 1938; Kris, 1952; Servadio, 1933).

Going a step beyond Freud's theory of wit, Berlyne (1960) explained the mechanism through which the savings of inhibitions produces pleasure. His theory states that the inhibitions produce a state of arousal in the organism. When these inhibitions are saved, the arousal drops below the tonus level which produces pleasure.

The experimental evidence supporting the hypothesis that humor is used to vent inhibited tendencies and that this use increases the pleasure that we derive from humor is rather massive. Gosh (1939) using four methods of observation concluded that humor serves as an escape from reality and that its failure has unpleasant consequences like the arousal of pity and anger.

A number of studies have compared the level and nature of the inner tendency to the appreciation of humor. Murray (1934) correlated the degree of laughter of college students to aggressive jokes with the Social-Asocial Sentiments Test and the Conservative Radical Sentiments Test. His findings
indicate that the appreciation of aggressive jokes is associated with egocentric, individualistic and derogatory sentiments. Similar results were obtained by Vogel (1959) who used the Edwards Personal Preference Schedule.

Hetherington (1964) in a study of 192 students also found that cartoon preference is related to the aggressive drive. Those students who were high in need aggression rated cartoons significantly higher than those that were low. The high aggression group preferred aggressive cartoons while the low aggression group preferred non-sense. The same author and Wray (1966) conducted an arousal study that duplicated these results. This study will be discussed later on.

Grzwiwok (1956) worked with 140 male college students. He administered the TAT, the Allport-Vernon-Lindzey Study of Values and a humor test. His results show that those subjects who were high in aggression (TAT) preferred aggressive cartoons. The same preference was shown by those subjects who scored high on the social scale of the Study of Values. This last finding is also supported by Stump (1939) in a similar study.

Frankel (1953) hypothesized that people with strong disturbance in the sexual sphere will either like or dislike jokes connected with sex significantly more than the normal subject. The Blacky Pictures were administered to college students to determine those that had a strong sexual disturbance. Frankel found that the disturbed students significantly disliked more
the sexual jokes. Nevertheless, in a similar study, Byrne (1961) found that 33 psychiatric patients tended to interpret jokes in such a manner as to avoid areas of marked disturbance. Perhaps the difference in population can explain the conflicting results.

O'Connell (1958) working with 332 undergraduates showed that people who gave evidence of large disturbances concerning their perceived self were significantly more appreciative of hostile humor. Since these people are supposed to be more frustrated, the findings support the Freudian hypothesis that the more aggressive will be more appreciative of hostile wit.

Some studies have attempted to arouse the aggressive or sexual impulses in the subjects hoping to observe a difference between their enjoyment of humor. Dworkin and Efran (1967) angered 30 subjects and compared their humor ratings with those of 20 un-angered subjects. They found that the angered subjects appreciated hostile humor significantly more. They also found that humor tended to reduce their reported feelings of anger and anxiety.

Hetherington and Wray (1966) worked with 80 female undergraduates. After administering the aggression scale of the Edwards Preference Schedule some subjects were subjected to experimental aggression. They found that the experimental aggression significantly increased the ratings of the high aggressive subjects and decreased the ratings of the low aggressive.
These results are very logical if we take into account that the high aggression score can be interpreted as a willingness to admit hostile feelings.

Lamb (1968) ran a similar study involving the sexual impulses. He divided 80 male undergraduates into control and experimental group. The control group rated neutral photographs while the experimental group rated pornographic pictures. Both groups then took the Mosher Incomplete Sentence Test and rated humorous cartoons. Aroused subjects expressed greater enjoyment of cartoon humor but did not respond differentially to cartoon types. Aroused subjects with male experimenters, however, did show a preference for sexual cartoons. The author also found that aroused subjects were high on sex guilt on the sentence completion test. He regarded the differential enjoyment of cartoons as resulting from the guilt rather than the approval motivation.

There are other studies which do not completely support the Freudian hypothesis. Davis (1967) studied 75 male undergraduates under conditions of arousal and non-arousal where expressions of anger were or were not possible. His results did not support the hypothesis that anger arousal leads to more appreciation of hostile humor. He did find, however, that subjects who engage in aggressive behavior appreciated hostile humor significantly more.

Byrne (1961) conducted a study with experimental arousal
but was unable to obtain significant difference in the ratings given to hostile, sexual and non-sense cartoons.

The Levine group (Singer et al., 1967 Gallop et al., 1967) attempted to inhibit the aggressive impulse and determine the effect of the inhibition in humor. In the inhibited condition some of the 216 male undergraduates that took part in the study were shown portrayals of brutal treatment of innocent people. They found that the more aggressive the joke, the larger was the difference between the inhibited and the uninhibited subjects. Inhibited subjects were significantly less appreciative of aggressive humor.

Fisher (1964) worked on the hypothesis that humor is a function of the degree of defensiveness with a group of 60 subjects that included depressives, sociopaths and normals. He found that the depressives were less appreciative of humor than either sociopaths or normals supposedly due to their higher defensiveness. He also found that high defensive depressives were less appreciative of veiled aggressive humor than the low defensives. When the ratings of the low defensive and high defensives and low defensive normals were compared, however, the results were not significant.

Another approach is to give the subject the opportunity of venting the drive in another manner. Then it is possible to measure the effect that this has on the humor ratings. Feshback (1955) investigated the hypothesis that the expression of
aggression in fantasy would serve to partially reduce the appreciation of aggressive humor. The aggression was experimentally induced, fantasy and non-fantasy followed for the two experimental groups. He found that the expression of aggression in fantasy lowered significantly the appreciation of aggressive humor.

There have also been a number of factor analytic studies of humor which support the Freudian hypothesis. Andrews (1943) conducted such a study with 300 subjects and was unable to obtain any general factor. From the common factors obtained, however, the author concluded that the humor measures "the unconscious determining tendencies in the individual personality".

Abelson and Levine (1958) in a study mentioned earlier with 106 psychiatric patients, found three factors that contributed to the liking of cartoons: interpersonal hostility, exhibitionism and self degradation.

Cattell and Luborsky (1946, 1947; Luborsky and Cattell, 1947) cluster-analyzed 100 popular jokes and reported that repressed tendencies were among the five main factors that they found in humor.

O'Connell (1962) conducted an item analysis and stated that there seem to be content categories with the males "favoring the more direct expressions of hostility". Finally Roberts (1959) found 25 neurotic patients to like humor dealing with self aggrandizement, hostility, forcing unpleasant situations
and heterosexuality. He also found the presence of higher tensions in these areas.

**Affective aspects of humor.** Flugel cited four affective aspects of humor: biological, dynamic, physiological, and aspects dealing with an "atmosphere of unreality". These aspects are more properly outside of psychology and will not be considered in the present paper.
CHAPTER II

Method

Subjects -- The subjects used in this study were college students taking the introductory course in Psychology at Loyola University in Chicago. Not all of the students taking the course were considered in the study. Of the 205 sets of data collected, 23 were discarded due to incompleteness.

The subjects were divided into two groups according to the order in which the cartoons were presented. Group A included 96 subjects, while group B included only 86. Subsequently, 10 subjects were taken out of group A at random in order to equalize the N of both groups. The final sample consisted of 172 students.

Instruments -- Seventy-seven aggressive and non-aggressive cartoons were taken out of a collection by Charles Schulz. These cartoons were divided into two groups at random.

Ten graduate students of the Loyola Psychology Department were asked to rate the aggressiveness present in the cartoons. The order of presentation was counterbalanced by presenting group I or group II first. The students were asked to rate the cartoons according to the following categories:

1. jokes in which no aggressiveness is present or implied
2. jokes where mildly disturbing aggression is present in a playful way
3. jokes in which mildly disturbing aggression is present in a non-playful way
4. jokes in which fairly disturbing aggression is present
5. jokes in which extremely disturbing aggression is present.

The ratings were considered consistent if seven out of the ten students agreed. According to this criterion, twenty-two out of the seventy-seven cartoons were consistently rated. Four consistent cartoons were then chosen from categories 1, 2, and 3. In the fourth and fifth categories, there were an insufficient number of cartoons consistently rated. These two categories were united, and four consistent cartoons were then chosen.

The cartoon collection used in the study consisted of sixteen cartoons rated consistently in one of four categories according to their aggressiveness.

Procedure — Fifteen minutes before the end of a class period the experimenter came in and distributed the cartoon collection and a rating form. The study was simply presented as an experiment in the subject of humor.

The instructions proceeded in the following manner: "In front of you there is a rating form. This form has two columns. In each column there are numbers one through sixteen, and next to the number there is a scale that goes from one to five. What we would like you to do is to read each cartoon in the collection that you have received, and rate it as to how funny it is. Rate each cartoon from one to five, one being not funny at all and five being
extremely funny. This rating should be registered on the scale next to the cartoon number on the column on the right side of the rating form."

When all students were finished with this task, they were asked in the same way to rate the cartoons in regard to aggressiveness. These ratings were to be registered on the left column of the rating form. As they finished this second task, the subjects were dismissed.
Chapter III

Results

Table 1 shows the average humor rating given by different sub-groups to jokes belonging to different categories of aggression. The pattern for the averages of the integral group is shown in figure 1.

As can be seen from the figure, the humor ratings tend to increase as the aggression increases from the first to the fourth category. As aggression increases beyond the fourth category, the average humor rating decreases.

In order to test the significance of this pattern, the average humor rating given to jokes on the first and fifth categories of aggression was computed for every individual subject. The average humor rating given to jokes on the second, third, and fourth categories of aggression was also computed for every subject. When the average humor rating for the first and fifth categories was less than the average humor rating for the second, third, and fourth categories, the subject's ratings were said to be positive since they supported the hypothesis. When this was not the case, the ratings were termed "negative". Table 2 shows the positive and negative ratings given to the different groups.

Statistical analysis (Z Test) shows that there are significantly more positive ratings than negative (p > 0.01). Concerning the sub-groups, significant results were also obtained for male and female groups (p > 0.05) and for group A (p > 0.01).
Table 1

AVERAGE HUMOR RATINGS GIVEN TO JOKES ON THE
FIVE CATEGORIES OF AGGRESSION

<table>
<thead>
<tr>
<th>Aggression categories</th>
<th>Group A Males</th>
<th>Group A Females</th>
<th>Group B Males</th>
<th>Group B Females</th>
<th>Group A &amp; B Males</th>
<th>Group A &amp; B Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.55</td>
<td>2.99</td>
<td>2.74</td>
<td>2.77</td>
<td>2.64</td>
<td>2.89</td>
</tr>
<tr>
<td>2</td>
<td>2.79</td>
<td>3.20</td>
<td>2.82</td>
<td>2.95</td>
<td>2.81</td>
<td>3.08</td>
</tr>
<tr>
<td>3</td>
<td>2.77</td>
<td>2.93</td>
<td>2.82</td>
<td>3.13</td>
<td>2.80</td>
<td>3.02</td>
</tr>
<tr>
<td>4</td>
<td>3.17</td>
<td>3.11</td>
<td>3.03</td>
<td>3.18</td>
<td>3.10</td>
<td>3.14</td>
</tr>
<tr>
<td>5</td>
<td>3.23</td>
<td>2.77</td>
<td>2.67</td>
<td>2.86</td>
<td>2.97</td>
<td>2.81</td>
</tr>
</tbody>
</table>
Figure 1

AVERAGE HUMOR RATINGS GIVEN TO THE FIVE CATEGORIES OF AGGRESSION
Table 2

POSITIVE AND NEGATIVE PATTERNS OF RATINGS GIVEN BY THE DIFFERENT SUBGROUPS

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Group A Males</th>
<th>Group A Females</th>
<th>Group B Males</th>
<th>Group B Females</th>
<th>Group A &amp; B Males</th>
<th>Group A &amp; B Females</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>24</td>
<td>30</td>
<td>22</td>
<td>27</td>
<td>46</td>
<td>57</td>
<td>54</td>
<td>49</td>
</tr>
<tr>
<td>Negative</td>
<td>13</td>
<td>19</td>
<td>17</td>
<td>20</td>
<td>30</td>
<td>39</td>
<td>32</td>
<td>37</td>
</tr>
</tbody>
</table>
Table 3
CONTINGENCY COEFFICIENTS FOR INDIVIDUAL JOKES

<table>
<thead>
<tr>
<th>Joke Number</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>.10</td>
</tr>
<tr>
<td>28</td>
<td>.10</td>
</tr>
<tr>
<td>30</td>
<td>.20</td>
</tr>
<tr>
<td>31</td>
<td>.30</td>
</tr>
<tr>
<td>32</td>
<td>.20</td>
</tr>
<tr>
<td>40</td>
<td>.26</td>
</tr>
<tr>
<td>42</td>
<td>.24</td>
</tr>
<tr>
<td>43</td>
<td>.10</td>
</tr>
<tr>
<td>46</td>
<td>.20</td>
</tr>
<tr>
<td>47</td>
<td>.20</td>
</tr>
<tr>
<td>49</td>
<td>.20</td>
</tr>
<tr>
<td>61</td>
<td>.10</td>
</tr>
<tr>
<td>69</td>
<td>.10</td>
</tr>
<tr>
<td>70</td>
<td>.20</td>
</tr>
<tr>
<td>72</td>
<td>.20</td>
</tr>
<tr>
<td>75</td>
<td>.10</td>
</tr>
</tbody>
</table>
Non-significant results were obtained for group B and no difference was found between the number of male and female positive ratings.

In order to get some indication of the amount of influence that aggression has on humor, the Contingency Coefficient was obtained for each individual joke. Table 3 shows these coefficients. The average of the coefficients is 0.17. If this is taken as a measure of the correlation between aggression and humor, the correlation is non-significant.
Chapter IV

Discussion

The predicted increase and later decrease of humor ratings concurrent with increases in the aggressive content of the jokes occurred in a significant number of subjects. The increase of the humor ratings reached a peak with jokes of the fourth category of aggression. This peaking effect supports the hypothesis because at this point the subjects were able to vent more aggressive feelings than in the preceding categories. The fifth category, containing jokes that the subjects found extremely aggressive, appeared to be distasteful.

Although outside of the realm of the prediction of the present study, some comment regarding the point at which the humor ratings peaked might be pertinent. It might be postulated that this point would depend in the individual's tolerance for the venting of aggressive feelings. If this is the case, it is conceivable that other groups of subjects might peak at a different point.

The changes of the humor ratings in the pattern described was not significant for subgroup B. Although this does not affect the significance of the over-all findings due to the counterbalance, it does suggest that the order of presentation might influence the humor ratings.

Byrne (1958) and Lee et al. (1962) found that when a
number of jokes were presented, the ratings tended to get progressively higher. In the present study this reported tendency might have helped group A to attain significance and produce the opposite effect in group B since the latter might have had more jokes belonging to the second, third and fourth categories toward the end.

Although the humor preference of a significant number of subjects is influenced by the aggressive content of the joke, the amount of this influence was not significant. This is evident from the low and non-significant Contingency Coefficients. This finding suggests that studies of this kind are more relevant to personality theory than to humor theory since the contributions that aggression makes to humor might be negligible.

As previous studies have reported, there is no agreement on the humor ratings of any particular joke (Eysenck, 1943; Heim, 1936; Kamboureopoulou, 1926, 1930; Onwake, 1937). This suggests a great diversity in the appreciation of humor. Although the range was less extensive in the case of aggression ratings, agreement was the exception rather than the rule. This, in turn, suggests individual differences in the appraisal of aggression.
Chapter V

Summary

One hundred and seventy-two undergraduates rated popular cartoons in regards to increasing humor and aggression. The ratings were recorded on a one to five scale. It was found, as predicted by Levine and Redlich, that the humor ratings increased up to the point where aggression reached the fourth category. A subsequent increase in the level of aggression produced a lowering of the humor ratings. This pattern took place in a significant number of subjects. Contingency coefficients computed for individual jokes did not reach significance.

It appears that the relationship between aggression and humor is a curvilinear one. It was also concluded that the contribution that aggressive feelings make to humor is probably negligible.


Byrne, D. Drive level, response to humor and the cartoon sequence effect. Psychological Report, 1958, 4, 439-442.


O’Connell, W. A study of the adaptive functions of wit and humor.


Omwake, L. A sense of humor: its relation to sex, age, and personality characteristics. *Journal of Applied Psychology*, 1937, 21, 688-704.


Winterstein, A. Contributions to the problem of humor. Psychoanalytic Quarterly, 3, 1934.

The thesis submitted by Mr. James P. Choca has been read and approved by members of the Department of Psychology.

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

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

19 January 1970

[Signature]