WHEN ATTITUDES TOWARD INTERPERSONAL AGGRESSION AND INJUSTICE FAIL TO MODIFY HUMOUR JUDGEMENTS OF HUMOROUS FANTASY DEPICTING HUMAN VIOLENCE AND INJUSTICE.

ROGER CHARLES. MANNELL

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WHEN ATTITUDES TOWARD INTERPERSONAL
AGGRESSION AND INJUSTICE FAIL TO MODIFY HUMOUR
JUDGEMENTS OF HUMOROUS FANTASY DEPICTING HUMAN
VIOLENCE AND INJUSTICE

by

Roger Charles Mannell

A Dissertation
submitted to the Faculty of Graduate Studies
through the Department of
Psychology in Partial Fulfillment
of the requirements for the Degree
of Doctor of Philosophy at
The University of Windsor

Windsor, Ontario, Canada
1976
DEDICATION

to my wife, Margaret
ABSTRACT

WHEN ATTITUDES TOWARD INTERPERSONAL AGGRESSION AND INJUSTICE FAIL TO MODIFY HUMOUR JUDGEMENTS OF HUMOROUS FANTASY DEPICTING HUMAN VIOLENCE AND INJUSTICE

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Members of most Western cultures acquire, through the socialization process, inhibitions and negative attitudes toward both the expression and enjoyment of unjustified interpersonal aggression. When interpersonal aggression is depicted in a humorous communication, recent models assume that notions of social justice, inhibitions regarding aggression, and identification classes will influence humour appreciation as if the situation depicted in the fantasy or make-belief of the humour is an actual event and taken seriously. The unique qualities of humour and other forms of fantasy though, would be missed if such an interpretation is assumed always to be the case. Situations are found highly amusing in humour which would normally sadden, outrage or disgust. Researchers have forced their subjects to take humour seriously.
Cartoons and 'jokes' constitute mini-dramas in which several protagonists, often members of ethnic groups, act out and exchange verbal and physical aggression. A two-dimensional model is suggested by the author which recognizes that, while an observer may interpret the events depicted in these humour dramas as fantasy (make-belief), he also may adopt either a playful or serious judgemental set toward the communication. If the former, the aggression and injustices depicted may not decrease enjoyment of the fantasy; in fact may increase appreciation. If the latter, moral evaluations based on attitudes toward aggression and injustice may function to decrease humour appreciation.

To test the hypotheses cartoons were created in which the dialogue and punch line between two characters were held constant. Three levels of aggressive retaliation (under, fair, over) were depicted by varying pictorially the physical retaliation and damage inflicted by one character on the second. Serious and playful judgemental sets were manipulated in two ways. Low and high fidelity versions (a manipulation of the "cartoon technique") of each of the retaliation versions were created with high fidelity versions depicting more human-like characters and realistic damage than low fidelity versions. The second technique required subjects to evaluate one of
two sets of art and literature items depicting either human violence or benign social events before judging the cartoons. Carried out in the guise of an experiment in aesthetics, the present study supported the playful-serious distinction. No significant difference between retaliation versions was observed in the playful condition (benign art and literature items-low cartoon fidelity). For the two serious treatment conditions over was judged significantly less amusing than fair retaliation. No significant difference was found between fair and under retaliation for the serious condition created by the high fidelity manipulation. For the serious condition created by exposing subjects to hostile art and literature items prior to judging low fidelity cartoons, under was marginally significantly different than fair retaliation (p < .06). Therefore, support was provided for the criticism that psychological research has led subjects to focus on aggression in humour, resulting in findings which may not characterize humour appreciation outside the psychological laboratory.

Zillmann and Bryant (1974) predict a curvilinear relationship between depicted injustice and humour appreciation with under and over less amusing than fair retaliation (retaliatory equity model), while arguing that Gutman and Priest (1969) predict a linear decrease in amusement from
under and over retaliation (balance model). Based on the
amusement ratings and additional ratings of the social
acceptability of the cartoon characters' actions it appears
that the linear prediction of Gutman and Priest (1969) is
supported and the equity curvilinear prediction is not.

Comparisons of pre- and post-test retaliation
measures indicated that under retaliation may be difficult
to achieve and may lose its meaning when applied to humour.
The similarity between under retaliation and the estab-
lished humour techniques of "understatement" and "Gallows"
humour was suggested.
ACKNOWLEDGEMENTS

A word must be said in acknowledgement of a number of persons who have helped in my doctoral studies and research and on the preparation of this manuscript. With great appreciation I acknowledge Dr. Lawrence La Fave who as a teacher and theorist first introduced me to the fascinating possibilities of psychological research into humour phenomena. Our frequent discussions and Dr. La Fave's substantial research have influenced my theoretical thinking greatly in the psychology of humour—in fact, have shown me that many of the major issues and problems in psychological theory building and testing are reflected in the attempt to develop a psychological theory of humour. I warmly thank Dr. La Fave for his constant support as my major doctoral program advisor and Dissertation Committee Chairperson.

I would like to thank the other members of my Dissertation Committee from the University of Windsor's Department of Psychology, Dr. John La Gaipa and Dr. David Reynolds, for their involvement and helpful suggestions at the various stages of my doctoral research. Also to Dr. James Duthie, Faculty of Human Kinetics, the fourth member of the committee from the University of Windsor, goes my sincere appreciation for his contributions and his past encouragement and support in my graduate studies.
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Chapter 1

THE PROBLEM

Introduction

Complex social conventions have evolved in many cultures to regulate the actual expression and enjoyment of various forms of violence and interpersonal aggression. Since it appears necessary to the stability and well-being of a social system to regulate the violent and aggressive actions of its members, these phenomena have received considerable attention from social scientists (see Scherer, Abeles, and Fisher, 1975). It is generally assumed that the members of most Western cultures acquire, through the socialization process, inhibitions and negative attitudes toward both the expression and enjoyment of interpersonal aggression, though, interpersonal aggression may be viewed as socially acceptable under conditions of suitable justification.

How is the enjoyment of aggression and injustice as frequently depicted symbolically in art, literature, and of particular interest here, in humour, affected by these attitudes? Research which has begun to examine the question has typically used "squelch" humour in which the humour communication can be viewed as a "mini-drama"
in which several characters, often members of ethnic groups, act out and exchange verbal and physical aggression. Several recent models (Gutman and Priest, 1969; Zillman and Bryant, 1974), concerned with an observer's attitudes toward social injustice and aggression as they affect humour appreciation, assume that an observer's notions of social justice and inhibitions regarding aggression will mediate his humour appreciation as if the aggression and injustice depicted in the fantasy of the humour was perceived as an actual event and taken seriously.

Despite experimental support for these models, certain unique qualities of humour and other forms of fantasy would be missed if the above was assumed always to be the case. Cartoons and 'jokes' are found highly amusing and enjoyable by many persons, even when depicting situations or events which would normally disgust, sadden, or outrage. While writers (see Flugel, 1954; Keith-Spiegal, 1972) have viewed the humour experience as dependent on the observer adopting a "frame of mind" such that the humorous communication is interpreted as fantasy, unreal, non-serious, or playful, no systematic attempt has been made to define these "mental sets," their role in the humour experience and the conditions in which they operate.

**Interpersonal Aggression and Social Injustice in Humour.** The role of the depiction of interpersonal aggression in a humorous communication has been of concern
in the arousal and vicarious superiority humour approaches. The arousal research paradigm typically involves angering or frustrating subjects and examining their subsequent ratings of humorous communications depicting various themes. The prediction that thematic aggressive items will be rated more amusing by anger aroused than non-aroused subjects has not been supported consistently.

Vicarious superiority research has been successful in predicting humour appreciation when "interpersonal aggression" is depicted in these miniature humour "dramas" in cases where the observer positively or negatively identifies with the protagonists (La Fave, 1972; La Fave, Haddad, and Maessen, 1976). Emphasis has been on "who aggresses toward whom," with the view that the aggression depicted is symbolic of the victory or superiority attained by one protagonist over another. Evolving from the vicarious superiority approach has been a concern with the details of the events and characters depicted in the humour materials rather than a global labelling of the humour communication as aggressive, sexual or whatever in theme.

The behavioral exchange between characters depicted in the humour communication drama has also received attention. Gutman (1968) was the first to argue that humour judgements of communications depicting the interaction of
two protagonists in interpersonally hostile ways will be a function of the reader's intuitive notions of justice and evaluation of the protagonists' behavior as socially acceptable-unacceptable.

If the joke victim stimulates anger by bad behavior, then the readers should feel that he got what he deserved in the punch line, and should rate the joke as more humorous. The outcome of such a joke is consistent with intuitive notions of justice (Heider, 1958), justice is, of course, an important rationalization for the enjoyment of aggression. On the other hand, if the joke victim had, prior to his victimization, behaved well, his fate is perceived by the reader as unjust, and should not be rated as humorous (Gutman and Priest, 1969).

Zillmann and Bryant (1974) also deal with the squelch format in which the communication depicts a protagonist who is provoked and who then retaliates against his provoker.

It was proposed that retaliatory equity, i.e., a situation in which the negative consequences inflicted upon the provoker by the retaliator are of similar magnitude as the negative consequences initially inflicted upon the retaliator; constitutes an optimal condition for mirth, and that both types of retaliatory inequity, under and overretaliation, impair humor appreciation in proportion to the magnitude of the resultant inequity (Zillmann and Bryant, 1974).

Reality-Fantasy and Serious-Playful Constructs in Humour. While Gutman and Priest (1969) and Zillmann and Bryant (1974) would seem to argue that an observer's values, attitudes and moral judgements, as a general rule, intrude upon and modify humour appreciation, many humour
commentators have expressed the opposite view that the humour experience requires that the observer view the humour communication with an appropriate "frame of mind"--a "frame of mind" where the concerns and problems of the real world have no part. Terms such as playful, non-serious, unreality, fantasy, play frame, etc. have been used interchangeably to designate this "mental set" (see Flugel, 1954; Keith-Spiegal, 1972; Chapter 2 of this dissertation).

In an attempt to develop a more systematic position with respect to the role that an observer's attitudes and values play in the appreciation of humour which depicts interpersonal aggression and injustice, the present author has suggested that at least two dimensions (sets of beliefs about the humour communication being perceived) be distinguished when analyzing the "cognitive set" adopted by the observer when presented with humour materials. The two dimensions will be labelled "fantasy-reality" and "playful-serious" and it is assumed that an observer can interpret a communication or event as playful or serious independent of whether he/she defines it as fantasy or reality.

A humour communication can be defined as fantasy or reality in several ways. First, the observer may believe the communication itself has an objective external existence and that his senses accurately inform him of
this existence. On the other hand, the observer may believe that his perception of the communication is a product of his imagination or an hallucination and has no external existence. For example, if presented with a cartoon the observer believes either the cartoon actually exists or that it does not. Similarly, if the observer is watching a theatre production he believes either the characters and set exist or that they do not. This first possible meaning of the terms fantasy and reality is not the use intended.

The following second meaning of the terms fantasy and reality is the intended use of these terms in the present study. Given that the observer believes in the external existence of a humour communication, drama, etc., he may believe that the events depicted or enacted are actually occurring or have occurred (reality) or that these events are make-belief, improbable, or unable to occur as depicted. A member of a theatre audience while recognizing that the actors are real (first level meaning) also recognizes that the murder dramatized on stage is make-belief or fantasy (second level meaning used in the present study). Similarly, while a cartoon may be believed to exist, the events depicted may be judged fantasy. McGhee (1971, 1972) has been developing a cognitive model which specifies the role that an observer's interpretation (reality assimilation or fantasy assimilation) of a stimulus discrepant from his expectations
will have on his humour judgements. McGhee suggests that stimulus discrepancy or incongruity is found amusing when the discrepancy is interpreted as fantasy.¹

McGhee (1974c) has speculated that the fantasy-reality assimilation notion can be used to explain the role of varying levels of aggression and damage on the humour experience. He argues that a general trend does not hold for increased funniness with progressively higher levels of damage since a subject may "reality assimilate" the damage and subsequently perceive it as not being humorous. "On the other hand, if the nature or level of damaging outcomes are so exaggerated as to be unbelievable, subjects may again fantasy assimilate the event and find humour in it" (McGhee, 1974c). Therefore, he postulated a U-shaped relationship between damage depicted and the humour experienced. This argument may be valid if the subject is initially uncertain whether the event or situation depicted is reality. But in most of the humour research the stimulus is already labelled for the subject as fantasy, i.e., 'joke', cartoon, etc. Further

¹McGhee and Johnson (1975) performed a fascinating experiment to determine the importance that the fantasy versus reality interpretation of an observed event would have on the humour experience. It was found that when violations of conservation of weight (Piaget, 1952) were presented to conserving children under reality conditions (in which a violation of weight conservation was demonstrated using a balance) versus fantasy conditions (in which the violation occurred in the form of a story), surprise at the violation was most amusing in the fantasy condition.
qualifications are needed to explain the role played by the depiction of interpersonal aggression and injustice in humour.

The present author has argued (Mannell and La Fave, 1976) that the interpretation of a communication as fantasy is not a sufficient condition to guarantee that an observer's internalized attitudes and inhibitions toward interpersonal aggression will fail to reduce his humour appreciation. The observer may approach something he defines as fantasy with one of two mental sets. The term serious 'judgemental set' will be used to refer to those instances when an observer's attitudes toward interpersonal aggression and its justification are 'salient', 'operative', or perceived 'relevant' and used as a "standard of comparison" for evaluating acceptable behavior. Playful 'judgemental set' will refer to a temporary 'suspension' of the observer's attitudes, concerning depicted behaviours normally defined as socially

2 While the meaning of terms such as salient, operative and relevant and the cognitive operations to which they refer can be rather vague, it is suggested that attitudes, beliefs and knowledge can be "out of awareness" in a non-conscious memory system and that certain cues may cause these cognitions to be switched out of this storage system into awareness. La Fave's (La Fave, Haddad, and Marshall, 1974) attitude switching notion is based on such a premise and explains why an individual may appear to hold more than one attitude toward an attitudinal object. Goldstein, Suls, and Anthony's (1972) notion of salience also appears to be based on a similar assumption and has been used to explain why certain humour themes are appreciated more than others under various conditions of arousal.
 unacceptable or unjust, as a "standard of comparison."

We interpret a theatre play as fantasy yet we may react to the injustice, violence and interpersonal aggression exhibited by the characters either as extremely amusing or extremely saddening. A typical reaction to a Picasso painting depicting mutilation of quasi-human figures, while defined as fantasy, is not one of amusement but horror or sadness. Why, then, do we find amusing certain cartoons showing equally exaggerated depictions of human figures undergoing disfigurement (e.g., the disembodiment of characters in children's animated cartoons)? This question can be answered by asking what conditions determine whether a serious versus playful judgemental set is adopted.

Through experience with our culture, the educational system, popular literature, etc., we learn that certain symbolic, fantasy forms (performing and plastic arts) are to be taken 'seriously' and are intended to engage notions of justice and morality in an attempt to explore the "human condition," "man's relationships with other men," and other aspects of human existence. Certain forms of humour also may require for their full appreciation the activation of one's attitudes and toward social injustice (e.g., satire). But a great deal of humour clearly requires that we suspend these attitudes. Through social
learning individuals may come almost automatically to adopt a playful 'judgemental set' when they encounter a communication which is defined as a 'joke' or cartoon.

The psychological research which has examined the role of an observer's attitudes toward justice and aggression in the humour experience has typically either inadvertently or purposely ensured that the subjects focus on the aggression in the humour communication and therefore approach the humour judgement task with a serious 'judgemental set'.

Factors which Determine 'Judgemental Set'. A playful 'judgemental set' may be caused by certain familiar, learned cueing characteristics of the humour communication, e.g.: 1) stylistic features such as the stereotyped structure of verbal riddles, the similar unfolding development of various types of verbal 'jokes' (Newfie 'jokes', salesman 'jokes') or the cartoon and caption format; 2) low fidelity depiction of characters, their bodily reactions to damage, and/or their behavior; and 3) instructions that what the observer is seeing or hearing is a joke.

As regards Disney, we find laughter evoked by a series of intensely cruel and sadistic happenings that in ordinary circumstances evoke horror and sympathy, but which become tolerable by the cartoon technique adopted... (Flugel, 1954, p. 716).

Factors external to the humour communication (experimental setting, location, preceding or coincidental
experiences) which may determine the 'judgemental set' adopted include: 1) instructions to react to the communication as if it were an actual situation or to specifically evaluate the socially unacceptable behavior depicted; 2) having viewed, read about, or participated in a situation prior to the humour judgment task which evoked a serious 'judgemental set' as a result of an actual or described injustice, etc.; and 3) the presence of or knowledge that one's humour judgment is being monitored by a relevant reference group or person (e.g., fear of experimenter evaluation) and may be taken as indirect assessment of the endorsement of socially unacceptable behavior.

**Purpose of the Study**

Humorous communications (cartoons) were developed and always defined for the subjects as fantasy and the subjects' perceptions of these materials as serious or playful were manipulated. It was predicted that a playful judgemental set would negate the tendency for unjustified aggression to reduce amusement ratings, while a serious set would tend to produce amusement ratings consistent with the predictions made by the Gutman and Priest (1969) or Zillmann and Bryant (1974) models. Not only could the conflicting predictions of these models be tested but their lack of predictability in cases where subjects were not encouraged to respond to the humour seriously could be demonstrated.
To test the central hypothesis that the observer's 'judgemental set' will influence his judgements of a humour communication, two sets of factors, one internal and one external to the humour communication were examined (cartoon fidelity, art and literature evaluation task).

Definitions

Humour Communications. Cartoons were developed which depicted two characters, a victor (delivers a punch line plus performs one of three levels of physical aggression toward a second character) and a victim (the butt of the punch line and recipient of one of the levels of aggression). Since it has been suggested that the perceived "intention" (purposive or accidental) of the protagonist's behavior may effect an observer's evaluation of the interpersonal aggression and subsequent humour judgement (McGhee, 1974c) the protagonists were depicted as purposely aggressing.

Cartoon Fidelity. Fidelity (low, high) refers to the degree of discrepancy of the characters and events depicted in the content from what is in reality possible (e.g., accurate representations of human beings versus talking anthropomorphized animals, accurate depiction of physical damage to the human body versus exaggerated, stylized damage). The term 'fidelity' has been chosen since its use in describing artistic works is similar to
the cartoon manipulation in the present experiment. In literature and art the treatment of a subject is said to have fidelity to reality, real life, nature, etc., i.e., the artistic rendering of a subject may vary from naturalism, realism to the imaginary, idealistic or romantic.³

**Art and Literature Evaluation Task.** Two sets of literature and art items (items depicting hostile versus benign themes) were developed such that a variation in interpersonal hostility and the types of judgements was

³Fidelity in the present study is considered an objective characteristic of the stimulus material. In a sense it could be considered a third meaning of the terms fantasy and reality, in that, the accuracy with which actual events are depicted in a communication can vary along a continuum from low realism (fantasy) to high realism (reality). While the reality-fantasy dimension (in the second sense where fantasy is make-belief), the fidelity dimension, and the playful-serious dimension are all conceptually distinct, in actual practice they may be correlated. For example, while the judgement of a communication as serious or playful can be made independently of the judgement that it is reality or fantasy, there may be a tendency for a communication or event judged fantasy also to be judged playful—particularly in humour. This may not be the case in other areas of aesthetics where the judgement of an item as fantasy may invariably be accompanied by the adoption of a serious judgemental set, e.g., when viewing a Picasso painting, reading a Lawrence novel, etc. The individual to some extent learns which judgemental set (playful, serious) characteristically goes with which aesthetic-fantasy-form.

Similarly the "cartoon technique" which is a fidelity manipulation may act as a cue in the interpretation of an event or communication as fantasy (McGhee (1972) has suggested that techniques analogous to the "cartoon technique" serve to cue the individual as to whether to fantasy or reality assimilate), but it may also serve as a
achieved. The subjects judged one of these two sets of items before rating the cartoons. 4

Independent Variables. One of three levels of victor interpersonal aggression was depicted in each of the versions of each cartoon used in the experiment, and when considered in conjunction with the level of aggression (held constant in all cartoon versions) first exhibited by the victim, the result is three levels of retaliation: 1) under (victor does not go far enough to get even), 2) fair (victor returned the same aggressive behavior and did an equivalent amount of damage), and 3) over (victor goes too far and is more aggressive than the victim and creates serious damage).

The second independent variable involves three combinations of art and literature items and cartoon cue for the adoption of a playful judgemental set as previously suggested. However use of the "cartoon technique" or other humour techniques does not guarantee that a playful judgemental set will be adopted as the present study will attempt to demonstrate.

4 Use was made of visual-pictorial art items by Singer, Gollob, and Levine (1967) to "mobilize inhibitions" against "aggressive" humor in a test of a psychoanalytic theory of humor. This technique was expanded in the present study to manipulate the "judgemental set" adopted. Subjects were asked to participate in a study of aesthetics and to judge literary prose items, visual-pictorial art items and cartoon-humor items which would both disguise the experimenter's interest in the specially constructed cartoons (manipulating levels of aggressive retaliation) and provide one of two means for manipulating judgemental set.
fidelity used to create playful (benign art and literature—low fidelity cartoons) and serious (hostile art and literature—low fidelity cartoons; benign art and literature—high fidelity cartoons) 'judgemental sets'. The three values of this variable are actually three of four possible combinations of two two-valued variables (art and literature evaluation task, cartoon fidelity). The three combinations used are shown in Figure 1 and allowed the role of both the art and literature evaluation task and cartoon fidelity in creating a serious 'judgemental set' to be examined.

Figure 1

Three of four combinations of cartoon fidelity and art and literature evaluation task used in the present study.

<table>
<thead>
<tr>
<th>CARTOON FIDELITY</th>
<th>low</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>LITERARY &amp; ART</td>
<td>benign</td>
<td>USED</td>
</tr>
<tr>
<td>ITEM THEME</td>
<td>hostile</td>
<td>USED</td>
</tr>
</tbody>
</table>

The nine experimental treatments in the present experiment are shown in Figure 2.
**Figure 2**

Experimental treatment conditions.

<table>
<thead>
<tr>
<th>Conditions Establishing Judgemental Set</th>
<th>Literature and Art</th>
<th>Cartoons</th>
<th>Degree of Retaliation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>benign</td>
<td>low fidelity (playful)</td>
<td>60 subjects</td>
</tr>
<tr>
<td></td>
<td>benign</td>
<td>high fidelity (serious)</td>
<td>60 subjects (Independent Groups)</td>
</tr>
<tr>
<td></td>
<td>hostile</td>
<td>low fidelity (serious)</td>
<td>60 subjects (repeated measures)</td>
</tr>
</tbody>
</table>
Dependent Variables. Each cartoon was judged for amusement. After all cartoons were rated for amusement, the subjects rated the degree of cartoon hostility, the social acceptability-unacceptability of the victim's and victor's overall behavior in the cartoon, and the victor's level of retaliation.

Predictions from Various Humour Models

Serious 'Judgemental Set' Predictions. Since it is expected that subjects rating hostile art and literature items-low fidelity cartoons and benign art and literature items-high fidelity cartoons adopt a serious 'judgemental set' in which notions of justice and inhibitions toward interpersonal aggression modify humour judgements, predictions from the Gutman and Priest (1969) social justice model can be pitted against the Zillmann and Bryant (1974) equity model.

Gutman and Priest (1969) argue that hostile behavior may be judged more amusing if it is justified and found socially acceptable. Based on the Gutman model, it can be predicted that the fair retaliation versions will be more amusing than the over retaliation versions. The under retaliation version has no parallel in Gutman's study and his model does not directly predict for conditions of under retaliation. Vicarious superiority theory (La Fave, 1961, 1972) would appear to make similar predictions as Gutman and Priest.
Zillmann and Bryant (1974) develop a "retaliatory equity" model which also specifies that "justification for aggression" modifies the effect that this aggression has on humour judgements. Based on the equity model, it is predicted that fair retaliation would be most amusing and under and over retaliation less amusing (and not significantly different from each other).

There is agreement, then, that over retaliation will be found less amusing than fair retaliation. It is also generally agreed that over retaliation is judged less socially acceptable and more hostile than fair retaliation. Zillmann and Bryant argue that their model makes different predictions for under retaliation than that of Gutman and Priest's. They suggest that Gutman's model would predict greatest amusement for under retaliation and that their equity model predicts amusement not significantly different from over and less than fair retaliation.

To summarize, Zillmann and Bryant (1974) appear to feel that the Gutman model would define under retaliatory behavior as the most socially acceptable since the victor performs the least aggression in this version. Therefore, while they predict that under retaliatory behavior will be judged less amusing than fair, they argue that Gutman's model predicts more amusement for under than fair retaliation. The present author has argued that under
retaliation may be judged socially acceptable or unacceptable depending on the norms of a particular population. Therefore to clarify this issue, the subjects were required to evaluate the social acceptability of the victor's under retaliatory behavior and amusement was predicted to correspond to the level of social acceptability of the retaliatory behavior. Therefore if under retaliation is judged socially unacceptable and less amusing than fair retaliation no essential difference in predictions exists between the two models.

**Playful 'Judgemental Set' Predictions.** Since it is expected that subjects judging benign art and literature items-low fidelity cartoons adopt a playful 'set' in which attitudes toward injustice and interpersonal aggression do not influence humour appreciation in the direction of socially desirable responses, what role, if any, do greater levels of aggression and damage play in modifying the humour judgement? The models discussed above do not make the serious-playful distinction and would appear to make similar predictions for both conditions.

Two different sets of predictions are possible:
1) since the punch line is held constant for each version (under, fair, over) of a cartoon and the subjects are not inhibited by notions of social acceptability against enjoying the aggression, therefore higher depicted levels of aggression and damage will not induce differences in
amusement generated by the three versions; 2) a second alternative prediction can be made on the basis of perceived incongruity or stimulus discrepancy theories. Since the subject does not evaluate the aggression seriously, he is free to respond or enjoy the exaggeration or discrepancy from his expectancies of what is actually physically possible (e.g., seeing a character's leg fall off when punctured with an arrow as if it were made of glass). Therefore, it could be predicted that as the level of aggression and damage increase and the discrepancy from the expected or probable also increases, subjects will be more amused. Predictions derived from psychoanalytic theory have also suggested an increase in amusement with an increase in depicted damage and aggression (Cantor and Zillmann, 1973). Similarly McGhee (1974c) argues that an increase in aggression and damaging consequences will be accompanied by an increase in amusement as long as the observer perceives the humour communication as fantasy.

Statement of the Hypotheses

Hypothesis 1. In conditions which lead the subject to adopt a playful 'judgmental set', the greater intentional interpersonal aggression and resulting damage done to a victim by a victor in a cartoon will have no effect on the judged amusement of that cartoon version. Under, fair, and over retaliation will be judged equally amusing.
\[ H_{1a} : M_{-S_\Lambda P} = M_{-S_\Lambda P} \]
\[ H_{1b} : M_{-S_\Lambda F} = M_{-S_\Lambda U} \]

Let \( S \equiv R \)

Let \( P \equiv A \_D \equiv O \equiv (-U_\Lambda -F) \)

Where \( H \) = hostile art and literature items

- \( R \) = high cartoon fidelity
- \( A \) = highest level of interpersonal aggression toward victim
- \( D \) = highest level of physical damage to victim
- \( U \) = under retaliation
- \( F \) = fair retaliation
- \( O \) = over retaliation
- \( M \) = amusement.

**Hypothesis 2a.** In the conditions which lead the subject to adopt a serious 'judgemental set', cartoon versions which depict fair retaliation by the victor will be judged more amusing than cartoon versions depicting over retaliation by the victor.

\[ H_{2a} : M_{S_\Lambda F} > M_{S_\Lambda O} \]

**Hypothesis 2b.** If the victor's retaliation in the under retaliation version is judged more socially acceptable than his retaliation in the fair and over retaliation versions, then the under retaliation version will be judged the most amusing cartoon version.
Hypothesis 2b. If the victor's retaliation in the under retaliation version is judged less socially acceptable than his retaliation in the fair retaliation version and equally socially acceptable to the over retaliation version, then the under retaliation version will be judged less amusing than fair retaliation and judged equally amusing to over retaliation.

\[ H_{2b_{2a}} : U_A(G<F) + (M<F) \]

\[ H_{2b_{2b}} : U_A(G=0) + (M=0) \]

Where \( G = \) social acceptability.
Chapter 2

REVIEW OF LITERATURE

Psychological inquiry into the phenomenon of humour, perhaps, largely unawares, has taken an interactionist position in that most research has viewed variation in several dependent variables to be a function of some objective stimulus/variously called a 'joke', cartoon, humour stimulus or humour communication and some psychological state of the organism variously labelled beliefs, attitudes, cognitive sets, identification classes or arousal.

Humour has been examined by many writers though it appears once differences in terminology are clarified that a limited variety of themes or concepts thread their way through much of the literature. Focusing, first of all, on the stimuli which have been used, most theoretical approaches can be characterized as emphasizing the role of one of two aspects of these 'humour stimuli'. One aspect is the content or "theme" of the 'humour' material, for example the plot, location, scenario and characteristics of the actors in the 'humour' material. The second aspect of the humour stimuli can be labelled the "structural" component. It is typically argued that all humour stimuli have certain elements in common (such as incongruities, resolutions, etc.) which must be present before the
stimulus can provide an amusing experience and that these components are not dependent upon a specific theme or content.

Structural Notions

Theories which would seem to fall into the structural category have been variously called incongruity, cognitive, epistemic, or thinking-based. Incongruity is, perhaps, the more appropriate label for this set of structural notions since cognition and cognitive processes are hypothesized also to play a role in the humour experience as affected by content or theme. The idea that incongruity is central to the humour experience has been around for some time (e.g. Spencer, 1860 suggested that not all incongruities cause laughter, only those that involve descending incongruity). The Gestalt psychologists stressed that certain structures or relations between elements of a perceived or conceived pattern can be disharmonious and disturbing, therefore arousing. Maier (1932) suggested that in a 'joke' a change in the anticipated meaning of particular elements brought about by the punch line leads to a sudden re-structuring and change of interpretation of the whole. Bateson (1953) suggested that humour occurs when the punch line brings what was background material for a 'joke' suddenly and unexpectedly to the centre of attention, as in the reversal of figure and ground. Koestler (1964) maintains that humour involves "bisociation," where there
is an abrupt transfer of the train of thought from one matrix to another governed by a different logic or rule. The incongruity tradition of thought has resulted in the current development of several one- and two-stage models of humour which focus almost exclusively on the so-called structural component involved in the humour experience (Maier, 1932; Willman, 1940; Berlyne, 1969, 1971, 1972; Jones, 1970; Schultz, 1970, 1972, 1974; Kreitler and Kreitler, 1970; McGhee, 1971, 1972, 1974a; Goldstein, Suls and Anthony, 1972; Goldstein, Harman, McGhee, Karasik, 1975; Suls, 1972, Rothbart, 1973; Nezhardt, 1970, 1976; Deckers and Rizer, 1974). The first stage, while it goes under several labels, is most commonly called incongruity. Typically, this stage involves a violation of expectation and, for some, a concomitant increase in arousal, where expectation involves the beliefs an individual holds about his physical, social and cultural environments which have been acquired through his experience with and learning about these.

A second stage has been viewed as either unnecessary, as involving relief from fear of threat or uncertainty, or as involving resolution of the incongruity through problem-solving activity. Mental activity during this stage is hypothesized to lead to the violation of an expectancy or belief being interpreted as fantasy or reality (e.g., Kreitler and Kreitler, 1970; McGhee, 1972), safe or
inconsequential (e.g., Rothbart, 1973), or explained, understood and resolved (e.g., Schultz, 1972; Jones, 1970; Suls, 1972).

It should be stressed that rather than incongruity, perceived "incongruity" is a more appropriate term. This latter term suggests that an amusement generating incongruity is a function of some form of interaction between the beliefs the individual holds and the events depicted symbolically in the humour stimulus. Also, since humans may have mistaken beliefs or misperceive events or their depiction, there is not always a one-to-one relationship between what an experimenter and his subject would define as incongruous (i.e., even if we know that an event depicted in a humour stimulus violates what we know to be the beliefs of the given person it cannot be predicted with 100 per cent accuracy that this person will be amused since he may misperceive the stimulus and not perceive the belief violation. Similarly, he may perceive the situation as violating his beliefs when in fact it does not).

Most theories which focus on this structural component of humour, as it has been called here, have not viewed the content or thematic component of humour to be a necessary condition for the humour experience and hence the incongruity and its resolution are seen as necessary and, in most cases, sufficient conditions for amusement. Incongruity theory tends to assume that humour is
maximally appreciated when it is completely surprising. Recent research by Suls (1975) seems to suggest though, that humour is also maximally appreciated when it is completely familiar which has led him to develop a competence theory. He suggests that when humour material is neither familiar nor surprising it decreases in perceived funniness. Goldstein, Harman, McGhee and Karasik (1975) also have questioned the scope of two-staged incongruity models based on their physiological data, while Fien and Rothbart (1976) indicate that the existence of "possible" and "improbable" incongruities and "complete" and "incomplete" resolutions further complicate incongruity explanations. It would appear that incongruity based theories have a considerable amount of development to undergo to adequately explain the necessary and sufficient conditions for the humour experience.

Content or Thematically Based Notions

Content or thematic oriented approaches include notions which have been variously labelled tendentious, affective and conative, ecological, vicarious superiority, enhanced self-esteem or social-motivational. The theme which has been examined most frequently and widely has been human violence and aggression. The several approaches in this particular area go beyond making predictions based strictly on the general theme of the humourous communication
and make interaction predictions based on differences in psychological states within the individual. These psychological states may be classified into two basic types. One approach has been influenced by the psychoanalytic tradition while the other research tradition has been strongly influenced by social philosopher Hobbes. The former is based on states involving transient or temporary dispositions, such as drive states, emotions, and arousal. This approach has been labelled by some "the motive arousal approach" (though this may be a misnomer). The experimenter, by manipulating the social stimulus situation, allegedly arouses or non-arouses subjects in different ways (e.g. sexual, anger, threat, etc.). Subjects are presented with humorous communications differing in theme or content, then differential predictions are made for these differently aroused subjects. Goldstein (1976) has indicated that while this psychoanalytically oriented research was dominant during the 1950's and 1960's, it currently has lost credibility among psychologists and has been ellipsed by research on cognitive based approaches.

The second type of state studied involves more permanent dispositions such as attitudes, beliefs, identification classes and personality traits. The experimenter typically selects subjects before the presentation of the humorous communications on the basis of the above
permanent states and again differential responses are predicted for various combinations of these and the content or themes. This approach is more cognitive—dealing with attitudes, cognitions and beliefs.

Content is typically viewed as an "objective" aspect of the humorous stimulus, and has involved various themes (sex, hostility-aggression, inadequacy, threat) which are depicted by various symbolic means. Other types of content may involve the depiction or description of interacting protagonists who are distinguishable with respect to race, social role, religious or political persuasion, or dominant personality traits. Finally, research has used humorous communications in which characters are depicted interacting interpersonally (verbal and nonverbal), such that, conformity and nonconformity to various norms of social justice are portrayed. In a sense, these humour communications may be considered as mini-dramas.

The view that the content of a humorous communication is "objective" should not be interpreted to suggest, as too many have, that the humorous stimulus has "absolute stimulating quality" and produces the same mental experience or "elicits" the same behavior in all observers. In fact, the theoretical orientations applied to the humour area, whether psychoanalytic, behavioralistic, or cognitive, have either directly or indirectly argued for the contribution
of various organismic states. Arousal of various drives and emotions have been predicted to affect humour experience and behavior.

Arousal

The experimental paradigm for much of the humour and arousal research involves an attempt to selectively manipulate or arouse specific drives or emotions. The experimental treatments also involve Ss observing, listening to, or reading and subsequently rating humorous communications whose content vary with respect to different themes (e.g., sexual, hostile, no motive thematically expressed). The dependent variables traditionally have been some measure of drive reduction or catharsis (mood-adjective rating lists), and humour appreciation. Several recent studies have also examined the resulting tendency to overtly "aggress" following the above manipulations.

Typically, the hypotheses tested have been derived from either psychoanalytic or behavioristic-learning theories. Behavior theory in emphasizing the reduction of basic biological drives to stimulus-response learning, assumes that the enjoyment of humour takes on the function of a secondary reinforcer in learning theory terms because humour reduces the aggressive or sexual drives—through the cathartic process (Levine, 1969). Berkowitz (1970)
holds that the re-experience of an inhibited emotion produces a purge of affect and a precise definition of catharsis requires that affect must be clearly and consciously experienced, and that this feeling then is followed by a consequent reduction in this same emotion.

Freud's theory of humour involves the idea that humour gives pleasure because it gratifies prohibited sexual or aggressive wishes which operate as unconscious psychological forces constantly seeking discharge. Increased pleasure (arousal reduction) is usually predicted to occur only when the theme (aggression) of the humour matches the emotion aroused (anger). Levine (1969) argues that the drive reduction theory of the behavioristic approach is a simplification of the psychoanalytic theory, for it leaves out the mediating processes between stimulus and response which, according to psychoanalytic notions, are fundamental to humour. In psychoanalytic theory, these intervening processes are conceptualized as mental representations of drive states and intrapsychic conflicts, which are seen as largely unconscious.

Whether or not Levine's argument is valid, the two approaches appear to make the same predictions (though it is becoming clear that neither approach specifies a sufficient number of variables to predict various outcomes).
A number of studies have examined the relationship between aggression and humour. (As a supplement to the following discussion see Table 1). The studies outlined include experiments which have examined arousal with respect to at least one of three dependent variables (catharsis-mood change, humour appreciation, 'overt' behavior). Also included are the small number of studies involving arousal of motives other than anger and hostility.

Of interest has been the proposed "cathartic" effect of humour upon the strength of the aggressive drive.

The humour-catharsis hypothesis (though there appear to be varying versions) follows from the second of the two following catharsis premises that aggressive feelings or drives are decreased:

1. through an overt act of aggression directed against a frustrator or a substitute person or object, or
2. through vicarious experience or observation of aggression in the real world or in the make-believe world of the movies, literature, or fantasy (Scherer et al., 1975, p. 94).

The findings in the humour research have demonstrated every possible relationship: a reduction in arousal; no change, and an increase in arousal. For example, Dworkin and Efran (1967) report that exposure to both hostile and nonhostile humour is effective in reducing felt anger or hostility among Ss, while Berkowitz (1970) found
<table>
<thead>
<tr>
<th>Author</th>
<th>Nature of Arousal Manipulation</th>
<th>Type of Humor Communication or Theme</th>
<th>Mood or Tension Change</th>
<th>Humor Appreciation</th>
<th>Overt 'Aggressive' Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baron &amp; Ball (1974)</td>
<td>angered vs. non-angered: by shocking and criticism of Ss</td>
<td>nonhostile cartoons vs. neutral photos</td>
<td></td>
<td></td>
<td>angered S exposed to cartoons gave less shock to anger instigator</td>
</tr>
<tr>
<td>Berkowitz (1970)</td>
<td>angered vs. non-angered: derogatory remarks about university women</td>
<td>taped versions of Rickles vs. Carlin</td>
<td>hostile tape: tension for angered Ss</td>
<td>hostile tape less amusing for all Ss</td>
<td>hostile tape lead to more negative evaluations of anger instigator</td>
</tr>
<tr>
<td>Byrne (1958)</td>
<td>neutral: classroom; low: rate cartoons after exam; high (pleasant): before party; high (unpleasant): before exam</td>
<td>not specified</td>
<td></td>
<td></td>
<td>no effect</td>
</tr>
<tr>
<td>Byrne (1961)</td>
<td>hostility: obnoxious experimenter; sexual: erotic literary passages</td>
<td>cartoons: hostile, sex, ridicule, nonsense</td>
<td></td>
<td></td>
<td>no effect</td>
</tr>
<tr>
<td>Cantor, Bryant, and Zillmann (1974)</td>
<td>high and low arousal; positive &amp; negative hedonic tone (literary passages)</td>
<td>cartoons: nonsexual and nonhostile</td>
<td></td>
<td></td>
<td>both positive &amp; negative arousal found more amusing</td>
</tr>
<tr>
<td>Author</td>
<td>Nature of Arousal Manipulation</td>
<td>Type of Humor Communication or Theme</td>
<td>Mood or Tension Change</td>
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<tr>
<td>Coulter et al. (1973)</td>
<td>four hours food deprivation and rate after eating</td>
<td>cartoons: food theme neutral hostile</td>
<td>no effect</td>
<td></td>
<td></td>
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<tr>
<td>Dworkin &amp; Efran (1967)</td>
<td>anger arousal: insulting E vs. no insult</td>
<td>taped: hostile, nonhostile, music</td>
<td>both hostile &amp; nonhostile humor decreased hostility mood</td>
<td>angered; Ss more by hostile cartoons</td>
<td></td>
</tr>
<tr>
<td>Goldstein (1970b)</td>
<td>sexual: photos of nude females vs. landscapes</td>
<td>cartoons: sexual vs. nonsexual</td>
<td>no support</td>
<td>no support</td>
<td></td>
</tr>
<tr>
<td>Goldstein et al. (1972)</td>
<td>photos: aggression vs. automobiles</td>
<td>cartoons: aggressive, automobile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nom (1966)</td>
<td>threat vs. no threat of shock</td>
<td>college life theme</td>
<td>threat grp. apprec. less than no threat grp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>La Gaipa (1968)</td>
<td>stress, anger: stress vs. stress witness vs. no stress</td>
<td>aggress. with authority figures as: objects, agents, peers aggress., nonsense</td>
<td></td>
<td>aggress. theme amusing as function of arousal, authoritarianism, and butt of 'joke'</td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td>Nature of Arousal Manipulation</td>
<td>Type of Humour Communication or Theme</td>
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<tr>
<td>Lamb (1968)</td>
<td>sexual arousal: nude female photos landscape photos</td>
<td>cartoons: sex vs. other</td>
<td>aroused Ss enjoyed all cartoons more than nonaroused</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landy &amp; Mettee (1969)</td>
<td>anger: insulting E vs. not insulting</td>
<td>hostile plus non-hostile vs. photos</td>
<td>no effect</td>
<td>cartoon exposure decreased -ive ratings of E by aroused Ss</td>
<td></td>
</tr>
<tr>
<td>Leak (1974)</td>
<td>hostility: insulting H vs. not insulting</td>
<td>hostile vs. non-hostile</td>
<td>no effect</td>
<td>'joke' exposure decreased -ive ratings of E by aroused Ss</td>
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<tr>
<td>O'Connell (1960)</td>
<td>stress: failure experience plus insult vs. no insult or failure</td>
<td>nonhostile vs. hostile themes</td>
<td>no effect</td>
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<tr>
<td>Prerost &amp; Brewer (1973)</td>
<td>anger arousal: insulting E plus passage insulting women vs. neutral</td>
<td>aggr.-threat, aggr.-nonthreat, nonaggression</td>
<td>only aggr.-non-threat reduced hostile mood of Ss</td>
<td>aroused Ss prefer aggr.-non-threat humour</td>
<td></td>
</tr>
<tr>
<td>Schachter &amp; Wheeler (1962)</td>
<td>injections: epinephrine, placebo, chlorpromazine</td>
<td>comedy film</td>
<td>epinephrine &amp; placebo Ss found more amusing than chlorpromazine Ss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schwartz (1972)</td>
<td>sexual arousal: nude photos vs. landscapes</td>
<td>cartoons: degrees of sexiness</td>
<td>increase in arousal—decrease in appreciation</td>
<td></td>
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<tr>
<td>Author</td>
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</tr>
<tr>
<td>Sears, Hovland &amp; Miller (1940)</td>
<td>anger arousal: 24 hrs. sleep deprivation &amp; frustrating E. Rate cartoons immediately and one day later</td>
<td>jokes: aggress. vs. non-aggress.</td>
<td>no effect between 'jokes', all items enjoyed less in more arousing condition</td>
<td></td>
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<tr>
<td>Singer (1968)</td>
<td>anger arousal: segregational speech by white bigot vs. neutral speech</td>
<td>taped: anti-segreg., neutral; benign speech</td>
<td>moderate arousal both types of humour reduce tension, high arousal only hostile humour reduces tension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strickland (1959)</td>
<td>hostile: insulting E, sex: nude photos; control</td>
<td>cartoons; hostile, sex, neutral</td>
<td>motive aroused determined type of cartoon liked best</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Williams &amp; Cole (1964)</td>
<td>inadequacy: failure vs. no failure</td>
<td>'jokes': hero shown in deflating situation</td>
<td>aroused apprec. cartoons more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Young &amp; Fry (1966)</td>
<td>anger arousal: insulting E</td>
<td>cartoons: neutral, hostile, sex</td>
<td>all jokes enjoyed no effect on less in arousal evaluation of condition</td>
<td></td>
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</tr>
</tbody>
</table>
only a significant reduction in anger arousal following hostile humour. Singer's (1968) results suggest that hostile and nonhostile humour may reduce aroused hostile feelings when Ss are only moderately aroused and that hostile humour is more effective at reduction when Ss are highly aroused. Prerost and Brewer (1973) found a reduction of aggression as measured on an aggression scale of a mood checklist following exposure to aggressive "non-threatening" humour. The authors fail to define "non-threatening" humour.

The impact of humour on overt aggression was examined by Landy and Mettee (1969). They found exposure to a combination of hostile and nonhostile cartoons diminished the strength of Ss' later verbal attack against an individual who had either angered them directly or insulted another person while in their presence. Berkowitz (1970) examined the willingness of Ss in rating job applicants to give comments which would affect an applicant's chances of getting a job after anger arousal and found subsequent listening to hostile humour may actually serve to facilitate, rather than inhibit subsequent aggression. Leak (1974) observed that when an E angered Ss and they subsequently read and rated "hostile wit" items, they rated E significantly less negatively than aroused Ss not given the aggressive humour. Baron and Ball (1974) found that nonhostile humour effectively
reduces the level of aggression (electric shock of a confederate) induced by inconsiderate confederate behavior (reduction of aggression for only one of two measures, that is, duration of shock but not its intensity).

These seemingly contradictory results have led to a variety of explanations of the way humour functions in respect to managing aggression. It is interesting that similar contradictory findings have been obtained in studies of fictional or symbolic expressions of aggression and cathartic reduction of aggressive feelings. For example, the ability of TV fictions to reduce aggressive feelings has been severely questioned (Liebert, 1974; Bandura, 1973). Scherer et al. (1975) argue,

On the whole, the case for catharsis as a means of controlling or alleviating aggression is rather weak. Catharsis through overtly aggressive behavior seems to occur only if aggressive motivation is already aroused, if the aggressive act is or has been instrumental in removing a frustrator or coping with a threat, and/or if the frustrator gets hurt (p. 100).

The question of whether fictional or symbolic expression can have cathartic effects has been one of the most hotly debated issues of recent years. Scherer et al. (1975) are very skeptical about the possibility of the cathartic effects of vicariously experienced violence.

Feshbach and Singer (1971, pp. 158-159) argue that children are able to differentiate between fictional violence, as in plays or cartoons, and real violence, as in the news, and that the latter is much more likely to
reinforce, stimulate or elicit aggressive responses. Bandura (1973) disagrees and argues this distinction may be one of degree and not kind (i.e., not reduce aggression, just facilitate it less than real aggression). The question of whether the overt or symbolic expression of aggression is cathartic remains controversial.

Catharsis or arousal reduction is often assumed to occur if the S rates himself/herself as having decreased hostile and anxiety feelings. The fact that as many studies have found arousal reduction from nonhostile humour as well as hostile humour suggests that arousal reduction may play no role in S's ratings. Following the work of Schachter and Singer (1962), and Schachter and Wheeler (1962), one might speculate that the humour leads S to redefine or change the cognitive label he attaches to his physiological arousal and exchange his "hostile" feelings for "pleasant," "nonhostile" feelings, while arousal remains at the same level or even increases. A similar explanation is given by Baron and Bell (1974) to explain their results when they suggested that the opportunity to examine humorous cartoons served to induce in Ss emotional states incompatible with anger toward the frustrator.

Essentially, two research designs have been used to examine the relationship between humour appreciation and emotional arousal (which are viewed either as reflecting
enduring personality dispositions or a momentary state of arousal). The first design compares humour preferences of individuals found to have a high degree of some personality trait, like aggression, with those having a small amount of the characteristic (Doris and Fierman, 1956; Levine and Abelson, 1959; Grziwok and Scodel, 1956; Heatherington and Wray, 1964; Epstein and Smith, 1956).

The second approach involves the experimental arousal of subjects. The findings of these studies also have been quite inconsistent. In line with Schachter and Wheeler's (1962) findings that chemical arousal was accompanied by increased overt manifestations of amusement, Strickland (1959) and Lamb (1968) found a general enhancement of humour appreciation following sexual arousal. Anger arousal (Dworkin and Efran, 1967; Strickland, 1959) and sexual arousal (Davis and Farina, 1970) were accompanied by an increase in the appreciation of humorous communications that were related to the subjects' emotional arousal, but not of unrelated humorous stimuli. Another group of studies has failed to yield any significant differences in humour appreciation due to arousal; anger arousal (Bryne, 1961; Singer, 1968; Landy and Mettee, 1969), anxiety arousal (O'Connell, 1960; Bryne, 1958), sexual arousal (Bryne, 1961; Goldstein, 1970), and the anticipation of a class party (Bryne, 1958). A decrease in overall humour appreciation due to arousing manipulations has been shown
with anger arousal (Sears, Hovland, and Miller, 1940; Schwartz, 1972). Cantor, Bryant and Zillman (1974) aroused Ss through communications which described sexual or brutal events. They found that appreciation of humorous communications (nonsexual and nonhostile in theme) were rated funnier by Ss who were given prior exposure to the more arousing materials regardless of whether the arousal was achieved by negative or positive thematic materials.

Goldstein, Suls, and Anthony (1972), on the other hand, have found support for an alternative interpretation to the arousal theories of humour. Exposure to a specific theme, whether in the form of photographs, prose material, or even 'jokes', is thought to establish a "cognitive set," which, in turn, facilitates the processing of related types of information—thus heightened salience may enable Ss to process humour stimuli more easily and "get" related types of humour more readily, therefore, facilitating appreciation.

The lack of success in the arousal and humour research area may be due to the failure to look beyond the classification of the humour materials into categories based solely on general themes such as sex, aggression, and threat. A closer and more detailed analysis of the humour content (i.e. humour mini-drama), may uncover factors which tend to modify an observer's reactions to a humour
communication in ways which obscure the predictions made by the arousal and catharsis hypotheses.

Vicarious superiority and related approaches as well as approaches which stress the significance of social justice and morality as symbolized in humour will be considered in the following discussion.

Vicarious Superiority Theory and Related Approaches

The theory and research to be reviewed below focuses on social psychological influences in humour, resulting from somewhat more permanent cognitive dispositions, such as attitudes and identification classes. While this emphasis includes a concern with the theme "interpersonal aggression and hostility" in the content of the humour communication, it stresses the importance in the humour content of accounting for "who aggresses toward who" and the observer's attitude toward the communication protagonists or the identification classes they represent.

The status of the notion of a 'feeling' of superiority, which La Fave et al. (1976) have also labelled "enhanced self-esteem," is not completely clear. Does the superiority notion have the force of a motive, such that persons are viewed as having a 'need' to 'feel superior'? There has been a de-emphasis on manipulating superiority or examining individual differences, instead, a more cognitive approach has been developed in which the "vicarious" processes are of central concern.
Superiority theory (Hobbes, 1651) and "vicarious" superiority theory (La Fave, 1961, 1972) have focused on the effects, not of arousal on amusement, but rather of seeing a "good guy" (positive identification class) win over a "bad guy" (a negative identification class) versus the obverse. If one examines various collections of 'jokes' or analyzes those encountered in the course of one's daily activity, rarely are the protagonists neutral with respect to our attitudes toward them. In fact much humour attacks various social groups and it is reasonable to assume that the observer distinguishes races, social roles, etc. La Fave (1961) related the social-psychological constructs of reference group and identification class to superiority humour theory, resulting in a vicarious superiority model which has been subsequently tested (La Fave, 1961, 1972; Haddad and La Fave, in preparation; La Fave, Haddad and Marshall, 1974; La Fave, Billinghurst, and Haddad, in preparation). La Fave et al. (1976) have described the vicarious superiority theoretical and research tradition as stemming from Hobbes (1651) who was, though, essentially concerned with the protagonists involved in the interaction, that is, whether those amused were themselves victors or butts. The main thrust of the Hobbesian notion of glory or superiority appears highly individualistic, competitive and egocentric. By this interpretation of superiority humour theory, the individual typically is amused when he
feels triumphant and/or another person looks bad in comparison to himself/herself. It appears that La Fave's (1961, 1972) religious experiment provided the first successful substantiation of any version of superiority theory. Wolff, Smith, and Murray (1934) by inadvertently rendering superiority theory more vicarious, improved Hobbesian theory. Amusement results from "an affiliated object in a disparaging situation" (p. 344), where the "affiliated object" need not have to be limited, as with Hobbes, to oneself and friends. The La Fave group attempted to improve the theory further by adding an "affiliated object in an 'esteemed'situation"; and have demonstrated (La Fave et al., 1976) that the "affiliated object" does not need be oneself, friends or even a membership group. The five experiments reported by the La Fave group have all supported the general hypothesis:

S will judge funnier that 'joke' stimulus which esteems his positive identification class (IC) and/or disparages his negative identification class than a 'joke' stimulus which disparages a positive IC and/or esteems a negative IC (La Fave, et al., 1974).

La Fave et al. (1976) report 16 humour experiments which are indebted to the superiority humour tradition. They suggest that none of these experiments actually tested superiority theory per se, since none involved the experimental Ss personally (either by name or their action) in either triumph or defeat vis à vis another person. See Table 2 for a summary of these studies.
Table 2
Vicarious Superiority Theory and Related Studies

<table>
<thead>
<tr>
<th>Author</th>
<th>Stimulus Materials</th>
<th>Subjects</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cantor &amp; Zillmann (1973)</td>
<td>police, postman, i.e., occupations neutral: animals, children. Not assess Ss attitudes toward these</td>
<td>from same population and randomly assigned to treatments</td>
<td>v.s.t.* supported for lower degree of misfortune to butt, not supported for high degree of misfortune</td>
</tr>
<tr>
<td>Clement (1974)</td>
<td>English-, French-Canadian, American, Turk Professor (1): not assess Ss attitudes. French-Canadian (2).</td>
<td>English-Canadian, randomly assigned to treatment</td>
<td>no significant effects on amusement for experiment (1) questionable support for experiment (2)</td>
</tr>
<tr>
<td>Gutman (1969)</td>
<td>behaves in socially acceptable manner vs. socially unacceptable</td>
<td>behaves in socially acceptable manner vs. socially unacceptable</td>
<td>from same population randomly assigned to treatments results consistent with v.s.t.</td>
</tr>
<tr>
<td>Gutman &amp; Priest (1969)</td>
<td>professors students</td>
<td>students professors</td>
<td>Different population: pro-prof. profs. pro-stud. profs. pro-prof. stud. pro-stud. stud.</td>
</tr>
<tr>
<td>La Fave et al. (1976)</td>
<td>Baptists J.W.s Catholic Christians</td>
<td>Baptists J.W.s Catholic Christians</td>
<td>different population</td>
</tr>
<tr>
<td>La Fave (1961)</td>
<td>Canadians, Americans Americans, Canadians</td>
<td>different population</td>
<td>support v.s.t.</td>
</tr>
<tr>
<td>Author</td>
<td>Stimulus Materials</td>
<td>Subjects</td>
<td>Results</td>
</tr>
<tr>
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</tr>
<tr>
<td>LaFave, McCarthy &amp; Haddad (1973)</td>
<td>pro-occupiers, anti-occupiers</td>
<td>different populations</td>
<td>support v.s.t.</td>
</tr>
<tr>
<td>LaFave, Billinghamurst &amp; Haddad (1975)</td>
<td>pro-female females, pro-male males</td>
<td>different populations</td>
<td>support v.s.t.</td>
</tr>
<tr>
<td>Losco &amp; Epstein (1975)</td>
<td>males, females</td>
<td>different populations</td>
<td>support v.s.t.</td>
</tr>
<tr>
<td>Middleton (1959)</td>
<td>white college &amp; black college Ss</td>
<td>different populations</td>
<td>results inconsistent with superiority theory, but post hoc analysis consistent with vicarious superiority theory</td>
</tr>
<tr>
<td>Priest (1966)</td>
<td>Goldwater, Johnston</td>
<td>different populations</td>
<td>support v.s.t.</td>
</tr>
<tr>
<td>Priest &amp; Abrahams (1970)</td>
<td>Nixon, Humphrey, Disaffected Liberals</td>
<td>different populations</td>
<td>support v.s.t.</td>
</tr>
<tr>
<td>Priest &amp; Wilhelm (1974)</td>
<td>females, males</td>
<td>different populations</td>
<td>support v.s.t.</td>
</tr>
<tr>
<td>Smith &amp; Levenson (1976)</td>
<td>Aggie &quot;a guy&quot;</td>
<td>selected from different populations, i.e., low versus high identification with Aggie</td>
<td>no support for v.s.t., questionable experimental design and subject selection procedure</td>
</tr>
<tr>
<td>Author</td>
<td>Stimulus Materials</td>
<td>Subjects</td>
<td>Results</td>
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<tr>
<td>------------------------</td>
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<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Wolff, Smith &amp; Murray (1934)</td>
<td>Jews, Gentiles</td>
<td>no specific victor</td>
<td>different populations</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>inconsistent with superiority theory, but post hoc analysis consistent with vicarious superiority theory</td>
</tr>
<tr>
<td>Zillmann and Bryant (1974)</td>
<td>behaves in more or less hostile manner</td>
<td>behavior held constant</td>
<td>from same populations randomly assigned to treatments</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>due to technical and theoretical issues unclear if supportive</td>
</tr>
<tr>
<td>Zillmann and Cantor (1972)</td>
<td>superordinates</td>
<td>superordinates</td>
<td>different populations</td>
</tr>
<tr>
<td></td>
<td>subordinates</td>
<td></td>
<td>support v.s.t.</td>
</tr>
<tr>
<td>Zillmann, Bryant and Cantor (1974)</td>
<td>Nixon, McGovern</td>
<td>no specified victor</td>
<td>different populations</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>support v.s.t. at low degree of brutality but not at high degree</td>
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*Vicarious superiority theory.*
La Fave's (La Fave et al., 1976) concept of IC plays an important role in understanding the above formulation. Typically in the La Fave et al. research S's set of ICs represent a proper subset of his set of attitudes, and specifically that proper subset of S's ICs in which the elements refer to persons.

An identification class is a special type of attitude-belief system. . . . if a given IC exists for S: 1) the S either believes himself at a given moment a member of that class, else he believes he is a nonmember, or his belief with respect to that particular IC lies dormant at that moment in his non-conscious storage system; and 2) either feels positively, neutral, or negative about that class, else it lies dormant at that moment in his non-conscious (La Fave, et al., 1976).

The IC construct adds great flexibility to the superiority formulation. S's +IC may be his membership group and -IC a nonmembership group. La Fave's (1961) religious group study, La Fave's et al. (1975) Women's Liberation study, La Fave's et al. (1974) sit-in study, and La Fave's et al. (1973) Canadian vs. American study all involved S's +IC as a membership group and -IC as a nonmembership group and consistently found support for the vicarious superiority humour hypothesis.

La Fave et al. (1976) have shown that the superiority hypothesis also predicts humour preference when +IC is a nonmembership group and -IC is a membership group.

La Fave et al. (1974) has introduced an attitude switching construct which he differentiates from attitude
change. Coupled with the IC construct a further interesting vicarious superiority prediction was made:

A joke which prompts enemy groups to identify positively with a more inclusive IC which combines these enemy groups against a common enemy will prompt members of these enemy groups to judge similarly in loyalty to that more inclusive 'super-group' against the common enemy (La Fave et al., 1976).

La Fave's (1961, 1972) religious study offers confirmatory support for this hypothesis. In one set of circumstances certain rival religious groups were -ICs, that is, the 'joke' involved a conflict between the rival group and the S's own group which for him was a +IC. When the S's own membership group as well as the previous rival group were confronted with a common enemy then S's attitude switched and the previous -IC became included in a broader +IC, that is, the S did not change his attitude toward this rival group in any permanent manner but rather under the appropriate circumstances redefined the situation and called forth from his storage system a previously non-active attitude. Persons and groups can be assigned to any number of ICs, some negative, some neutral, and some positive, such that when the attitude is brought into awareness from the non-conscious storage system it may then play a role in ongoing cognition and behavior.

Clement (1974) in a recent master's thesis attempted to examine the IC and attitude switching constructs with respect to humour. Clement leaves
unclear whether he is dealing with actual incidences of attitude switching where the attitudes remain intact and unchanged or whether his manipulations actually effect an attitude change—a more permanent effect. His study is interesting, though, since he suggests a contextual variable that may produce attitude switching (formality of the situation depicted in the humorous communication).

The IC and attitude switching constructs, then, have been used to predict the observer's attitudes toward the protagonists in the 'joke'. The vicarious superiority hypothesis itself predicts humour judgement based on the attitudes held by the observer toward the protagonists. The basic vicarious superiority hypothesis itself has undergone one particularly important modification:

Let S believe J is a joke in which identification class A is victorious over identification class B. The more positive S's attitude toward A and the more negative S's attitude toward B, the greater the magnitude of amusement S experiences with respect to J (La Fave et al., 1976).

This hypothesis allows the prediction, that not only will situations or communications involving the victory of +ICs over -ICs prove more amusing, but also the greater the "relative" positivity-negativity of the attitudes held toward the 'joke' protagonists the more or less amusing it will be found. This further quantitative prediction has not been specifically tested (indirect
evidence has been provided La Fave, 1961; Gutman and Priest, 1969; La Fave et al., 1976).

The La Fave group has typically selected Ss on the basis of their known pre-experimental attitudes toward the 'joke' protagonists who represent recognizable social groups in conflict, such that, some items involve an observer's +IC as victor, -IC as loser and vice versa. The format of these humour communications usually involves two characters or protagonists engaged in dialogue in which the butt does or says something to the eventual victor. The victor then responds either physically or verbally in some clever manner—usually with a retort which involves word play or some incongruous statement which requires resolution.

A number of other studies have been reported which relate to the vicarious superiority notion (see Table 2). Wolff, Smith, and Murray (1934) found that anti-Jewish 'jokes' proved funnier to gentiles than Jews, but that anti-Scottish 'joke-controls' were also found funnier by gentiles. Instead of interpreting this as evidence of a lack of a sense of humour in Jews, Wolff et al. argued post hoc that since anti-Scottish 'jokes' emphasized Scotch stinginess, a negative stereotype from which the Jews themselves suffered, Jews identified with the Scots and found these 'jokes' unfunny. Middleton (1959) used the reference group construct, again as a
post hoc explanation of why anti-Negro 'jokes' were found as funny by Negro Ss as white Ss; also he did not foresee that university Ss of lower class parentage might identify positively with the middle class. Priest (1966) and Priest and Abrahams (1970) report studies based on U.S. Presidential elections (1964 and 1968, respectively) and it was shown that Ss rated jokes hostile to their preferred candidate as less funny than 'jokes' hostile to the opposing candidate. Gutman (1968) and Gutman and Priest (1969) appear also to offer supporting evidence for the superiority notion (these are discussed later). Priest and Wilhelm (1974) while examining Priest's intergroup conflict theory and the role of the self-actualizing personality in humour appreciation appear to have shown support for a vicarious superiority theory, in that, females appreciated anti-male humour more than anti-female humour; the opposite was true for males.

Zillmann and Cantor (1972) observed that cartoons and 'jokes', depicting exchanges between a superior and a subordinate in which it was manipulated as to which protagonist "had the final word," were found more humorous by individuals with primarily subordinate experiences when a subordinate protagonist won and vice versa. Cantor and Zillmann (1973) and Zillmann, Bryant and Cantor (1974) provide partial support for vicarious superiority at lower degrees of "severity of misfortunes" and "brutality of
assault." When a preferred IC (political, occupational role) was the butt it was less amusing than when a non-preferred IC was the butt.

While the vicarious superiority research usually involves interpersonal aggression among the characters of the 'joke', lacking has been explicit consideration of the role of the harm done or amount of justification for the interpersonal aggression in the content.

**Justice, Morality and Interpersonal Aggression as Constructs in Humour**

The following section outlines several studies and theoretical notions, which postulate relationships between various attitudes held by the observer, the content of the humorous communication, and amusement. Various degrees of social justice and interpersonal aggression have been depicted in the content of humorous communications, and these variations predicted to influence the humour judgement.

Gutman (1968) and Gutman and Priest (1969) provide the first attempt to elaborate the relationship between interpersonal aggression symbolically depicted in humour and attitudes of social justice. Gutman reasoned that, . . . the perception of the story characters should lead to more complex perceptions, such as justice, hostility and balance, that are crucial in explaining the resulting humour ratings (p. 52).
He manipulated the perceived social acceptability of the protagonists' behaviors in verbal stories by having them perform various behaviors which according to American middle class standards would be defined as socially acceptable or unacceptable. In this study the stories are in squelch format which involved: an aggressor's actions toward a victim; the victim's actions toward the aggressor; and the aggressor's expressed 'verbal' hostility toward the victim in the form of a "punchline." Pre-testing determined that these manipulations created variations in the perceived justifiability of the aggressor's "hostile" punchline.

Predictions were based on balance theory and justice concepts (Heider, 1958). Gutman (1968) saw the four resulting versions varying on both the perceived justification for the hostile remark made by the aggressor and the balance between cognitive elements. The following paradigm represents the cognitive elements which determine balance for an observer: 1) observer's evaluation of aggressor (can be + or -), 2) observer's evaluation of victim (can be + or -), 3) the hostile comment in the "punch line" (is always negative as defined by Gutman, i.e., selected to be 'hostile'). The resulting versions and rank order in terms of predicted amusement were:
1) Good aggressor-Bad victim (balanced, the punch line justified and predicted most amusing);

2) Bad aggressor-Bad victim (not balanced, the punch line justified and second most amusing);

3) Good aggressor-Good victim (neither balanced, justified and third most amusing);

4) Bad aggressor-Good victim (balanced, not justified and predicted least amusing).

The vicarious superiority theory would seem to make similar predictions as those suggested by Gutman, with the exception that the rank order of the good aggressor-good victim and bad aggressor-bad victim versions is unclear since the observer in neither version is led to prefer or identify with either protagonist more than the other. Research in the vicarious superiority tradition has dealt with attitudes or evaluations of the protagonists also, but instead of initially neutral characters which are "affectively coloured" by describing their interaction toward each other, they have selected Ss who already hold stable well-established attitudes toward the 'joke' characters. For example, evaluation of the characters, for La Fave, is a function of identification classes and attitude switching; for Gutman, a function of person perception resulting from the evaluation of the characters' behavior as mediated by
its justification and social acceptability.

The two approaches differ with respect to concern with the concept of 'justice' or 'deservedness'. Vicarious superiority theory has neither dealt with whether or not the squelch is perceived as justified, nor considered the effect on amusement of the size or amount of verbal or physical harm done to the butt by the aggressor.

La Fave et al. has elaborated the vicarious superiority hypothesis to allow that the behavior of the protagonists in the 'joke' may also contribute to the observer's attitude toward the protagonist:

Let S believe J is a joke in which A seems to S victorious and/or B appears the butt. Then the more positive S's attitude toward A and/or toward the 'behavior' of A, and/or the more negative S's attitude toward B and/or toward the 'behavior' of B, the greater the magnitude of amusement S experiences with respect to J (La Fave et al., 1976).

What must be further specified is how these two components interact and combine to determine the observer's overall attitudes toward the protagonists.

For good aggressor-bad victim, bad aggressor-bad victim and bad aggressor-good victim versions a clear relationship between justification of the punch line, social acceptability of the aggressor's behavior, hostility, and amusement appears; the more socially acceptable the aggressor and the more socially unacceptable the victim the greater the amusement, the greater the perceived justifiability of the punch line and the lower the rated
hostility of that remark. Therefore Gutman concluded that the greater the perceived hostility and the less the justification for aggression the greater the inhibition of amusement.

Examination of the good-good paradigm has been left until now because it appears to offer contradictory evidence. Gutman (1968, pp. 9-10) suggests that this version is the most unstable (where A = aggressor, R = victim, and O = observer).

Not only is it unbalanced but a logical inconsistency has been created. We have tried to describe A as positive. But A then attacks R who has not given him any justifiable reason to do so. O could induce balance in the system by changing his evaluation of R's behavior (O-R) or by changing his opinion about (O-A). This latter is more likely, for it is A's description and his behavior that creates inconsistency. The subject might also misinterpret A's remark to R, in which case all relations would be positive. However, it is felt that the S's tendency will be toward changing his opinion of A to conform with A's actual behavior.

Gutman's data for the perceived social acceptability of the characters in this paradigm appears to bear out his prediction. Where in the pre-test both aggressor and victim were viewed as socially acceptable when the punch line is omitted, in the experiment, itself, the inclusion of the 'hostile' punch line reduces the social acceptability of the aggressor. This result has interesting implications because the good-good paradigm now appears to approach the bad-good paradigm in terms of social acceptability (i.e.,
the aggressor becomes defined as less socially acceptable). This version was also intended to be perceived as unjust (victim not deserving the hostility). The mean justice rating suggests that Ss did perceive the punch line as unjust, though not as unjust as in the bad-good paradigm. Based on the social acceptability and justification data and consistent with Gutman's formulation, the rated hostility of the punch line and the amusement generated should fall between paradigms bad aggressor-bad victim and bad aggressor-good victim. These results were not found. This good-good paradigm is rated as least hostile, that is, significantly less hostile than even good-bad. The amusement ratings showed good-good to be judged not significantly different from good-bad (i.e., most amusing).

Gutman (1968) explains these irregularities in amusement ratings in terms of low hostility ratings, which in turn are a function of a balance prediction which Gutman originally felt would be least likely to occur. The Gutman and Priest (1969) article is the published form of the dissertation discussed above. Where Gutman (1968) expressed some surprise and did not predict the findings with respect to the good aggressor-good victim version, the Gutman and Priest (1969) article would seem post hoc to have interpreted the data in a new light. Here they stress the importance of the intention of the aggressor's remark.
"In everyday life, the perception of intentionality influence whether a particular behavior will be judged as humorous or as hostile. Ritual insults between old friends are not taken as insult; the social context enables the participants to interpret the 'aggression' as intended, that is, as humour (Goffman, 1967) (Gutman and Priest, 1969).

Communication factors which signal the intention of the agent of a humourous comment or insult have been considered by La Fave (1969) and also La Fave, Mannell and Guilemette (in press). La Fave's (1969) hypothesis is based on the Sherif-Hovland psychosocial judgement tradition.

... in a psychophysical judgemental task the subject may assimilate an attitudinal item ... or contrast the item ... or, instead, judge the item a joke.

Consider ironic humor, ... the successful use of humor seems to need for the 'butt' of the 'joke' one so chosen that the following properties are satisfied: (a) the dimension selected is not so high in the 'victim's' ego-involvement hierarchy as to be 'no laughing matter', (b) the recipient of the left-handed insult must believe that the communicator really thinks well of him, (c) (and this is the irony of irony), the pseudo-insult must not be mildly insulting but so way out (i.e., extremely insulting) on the dimension of the communication, that the receiver cannot possibly take the remark seriously, rather contrasting it, judges the communicator to be 'joking' (La Fave, 1969, pp. 4-5).

This formulation predicts resulting amusement in situations in which two individuals are interacting and the person amused is the "butt." It suggests an exception to the Hobbes' superiority prediction in the case where the butt interpretes the aggressor's communication as intended play or kidding and not serious.
Anthropologist Radcliffe-Brown (1940, 1949) observed and described an institutionalized role relationship (which he labelled the "joking relationship") in certain African cultures, where one member of the relationship is given the license to make the other the butt and play practical jokes without fear of retaliation.

McGhee (1974c) reports three experiments which examine the role of an observer's concept of justice and morality on the humour experience of children and college students. Three major variables were manipulated in the humour material: 1) aggressor's intention (purposeful versus accidental); 2) amount of damage or harm done by the aggressor (low versus high); 3) the level of moral functioning (heteronomous versus autonomous) of the child. The relationship between level of moral development as conceptualized by Piaget (1932) and children's appreciation of humour based on varying levels of quantity and intentionality of damaging outcomes was examined in this series of studies.

The egocentric heteronomous child is not aware of the intentions of a potential aggressor. McGhee argues that intentionality of aggression or damage should play no role in this child's appreciation of humour. However, once the child enters into the autonomous level of moral functioning and becomes aware of intentions, he should perform like Gutman and Priest's (1969) adult subjects,
so that the perception of intentional aggression interferes with humour appreciation.

McGhee (1974c) predicted that for heteronomous children stories with greater amounts of damage would be perceived funnier without regard to the accidental or purposeful nature of the damage. For autonomous children and adults, unintentionality was predicted a more important variable in the humour judgement. More damaging outcomes would be viewed funnier only if judged "morally acceptable," that is, accidental or lacking serious intent. The basis for McGhee's prediction that heteronomous children will find situations more amusing involving greater damage is unclear. It does not follow from Piaget (1932), since Piaget predicted, and has been repeatedly supported, that greater damage is judged bad and morally wrong by heteronomous children (Armsby, 1971; Buchanan, James and Thompson, 1973; Gutkin, 1972; Lickona, 1969).

McGhee developed humorous communications in a manner somewhat analogous to Gutman such that a description of the story characters' behavior preceded a punch line and the researcher manipulated the damage (low, high) and the intention (accidental, purposeful) of the aggressor. Unintentional high levels of damaging outcomes were pitted against intentional low levels of damaging outcomes (study one). After determining the child's moral level, the 

read to the subject stories containing either unintentional-
high-damage or intentional-low-damage events. These stories were similar to those used to determine the child's moral level except for the presence of the punch line at the end. The basic content of the two story versions was the same, and the punch line was identical for both versions. Thus, McGhee argues that any preference for one story over the other, was of necessity, due to differences in intentionality or quantity of damage and not determined by the punch lines.

After reading either the complete set of unintentional-high-damage versions or intentional-low-damage versions of the stories, E then read the remaining set of stories to S and asked which version was funnier and why.

Studies two and three paired both levels of damage (low, high) with both levels of intentionality (purposeful, accidental). Ss were fourth graders, eighth graders, and college freshmen. It was predicted that the shift from heteronomous to autonomous modes of judging should lead to intentionality becoming a more important factor in the ability of the humorous story to amuse with increasing age.

While McGhee states that the data obtained in these studies provide strong support for the view that level of moral judgement achieved by an individual child significantly influences his appreciation of certain types of humour, the results of the first two studies showed that initially when
one story version was rated independently of the other version "no significant difference" in amusement was found. Only when the story versions were paired and S asked to choose which of the two versions was funnier and why, did the effects of the different versions modify the amusement generated by the punch line. Under what conditions, then, do these manipulations actually become operative in affecting amusement ratings. It would appear in McGhee's studies that Ss were cued to utilize the additional information in the version. Secondly, the fact that McGhee constructed his humour stories on the same basis as the moral judgement materials used to designate S as heteronomous or autonomous allows one to speculate that Ss were cued as to what variables to respond to and were led to believe that E was evaluating them indirectly through their amusement judgements. In the same session Ss were pre-tested with moral judgement stories and asked questions concerning the described damage and its naughtiness. In studies one and two even this cueing appeared insufficient to affect Ss ratings of the versions. In study three the story version effect was significant. All three grade levels in study three showed a tendency to choose stories involving unintentional damage as funnier only when these were compared with stories involving intentional damage and to choose high-damage stories as
funnier than low-damage stories when level of intentionality was held constant.

Cantor and Zillmann (1973) have made a number of predictions based on a variety of theories concerning the effect of varying amounts of depicted damage or aggression in humor. They suggest that Hobbes' (1651) superiority theory would predict that as the brutality of the assault on a cartoon's butt increases, the resulting amusement will increase. McDougall's (1903, 1922) theory, that mirth results from a warding off of the automatically experienced sympathetic distress that is caused by witnessing others suffer, also was extended to predict that the amount of distress relieved, and therefore the intensity of the mirth experienced, should be the greater, the more extreme the depicted brutality. Freud (1960) was interpreted as also predicting an increase in amusement with an increase in damage/aggression. It was argued that since enjoyment of tendentious wit is a function of the release of repressions, therefore since higher levels of brutality are usually associated with stronger repressions and greater punishments, the depiction of highly violent activities should lead to a greater release of inhibitions and to more intense amusement than the depiction of less extreme levels of brutality. Interestingly, Gollob and Levine (1967) predicted the opposite
based on Freudian theory. Heightened levels of brutality produce an impairment of amusement because they make the aggressive basis of humour more obvious and are perceived to be in poor taste.

Consistent with the vicarious superiority hypothesis, Cantor and Zillmann (1973) found that when the victimized protagonist is disliked rather than liked humour appreciation was enhanced. High severity of misfortune reduced humour appreciation only when the victim was disliked—though not below levels found for liked victims. Zillmann, Bryant and Cantor (1974) found no main effect of attitude toward political candidates (Nixon, McGovern) but the trend favoured superiority theory, Ss were more amused when they negatively identified with a political candidate undergoing assault than when they positively identified. A significant interaction between degree of brutality and attitude toward the depicted candidate indicated greater appreciation of the disparagement of a disliked protagonist under minimal brutality conditions only. Under intermediate and extreme levels the difference disappeared.

Cantor and Zillmann (1973) were surprised by the decrease of appreciation as the misfortune suffered by disliked protagonists changed from moderate to more severe and speculated that "Ss, who saw a series of cartoons depicting fashionably resented agents in highly disparaging situations," were the most likely to recognize
the experimental manipulation and to conclude that their hostile feelings toward these groups were under study.

Zillmann et al. (1974) argue that the observers apparently interpreted the cartoons depicting high levels of brutality as criticism of the unfair tactics of the aggressor (a liked protagonist). Under low levels of brutality the aggressive attacks would seem to have been perceived as disparagement of the victim.

These researchers' failure to clearly specify who is victor and who is butt render highly likely the possibility that Ss would interpret the cartoons in a way which showed their candidate in the best light.

A further problem with simply increasing the level of damage is that an observer may interpret two "equivalent" levels of damage as differently deserved. Gutman (1968) has shown that the same punch line may be judged hostile or not hostile, depending on its perceived justification. It is these confounding factors which may have led Zillmann and Bryant (1974) to forward their model which introduces social justice as a factor affecting humour appreciation. The 'squelch' format was used; a provoked protagonist is depicted who retaliates against his provoker. The focus is on the "behavioral exchange" between protagonists, and an analogy is drawn to "equity theory" notions (cf. Adams, 1963; Walster, Bercode, and Walster, 1973). Compensatory
acts in some cases fail to restore equity—underretaliation results in less severe consequences than those inflicted in the attack, whereas with overretaliation they exceed the consequences produced by the attack. The resultant inequity can thus be negative or positive and of any magnitude. It was proposed that retaliatory equity (fair retaliation) constitutes an optimal condition for mirth, and that both types of retaliatory inequity, under- and overretaliation, symmetrically impair humour appreciation relative to the magnitude of the resultant inequity. Findings reported appear to support the model.

It is useful to ask how this equity model relates to the vicarious superiority model and Gutman and Priest's concept of justice in humour. Zillmann and Bryant (1974) argue that their approach is different from both the superiority approach and the justice approach of Gutman and Priest—also predicting results where the former does not and predicting different results from the latter. We have seen how the La Fave and Gutman models provide very similar predictions with respect to communications in which the observer interprets the aggressor's behavior as intended hostility.

Zillmann and Bryant (1974) believe their equity model accounts for communications not covered by the superiority model, which has assumed the observer distinguishes races, social roles, and religious persuasions;
that is, that the observer assigns communication protagonists to positive through negative identification classes. They argue that the vicarious superiority model does not apply when affectively neutral agents exchange hostilities.

Zillmann and Bryant compare their manipulation of extreme overretaliation through extreme underretaliation to Gutman and Priest's (1969) variations in degree of social acceptability-unacceptability of the protagonists, with the aggressor displaying the least unacceptable behavior in the extreme underretaliation condition and the most acceptable in the extreme overretaliation condition. Zillmann and Bryant maintain that the Gutman and Priest (1969) model, by predicting increasing humour appreciation as the social acceptability of the recipient of the final attack decreases, assumes that humour appreciation is lowest under conditions of extreme overretaliation and increases linearly as the relative degree of retaliation decreases, becoming maximal under conditions of extreme underretaliation. This leads to a curvilinear versus linear prediction.

Counter to Zillmann and Bryant (1974), it can be argued that the vicarious superiority theory does predict for situations where the pre-existing attitudes toward the protagonists in a communication are neutral or non-existent, because as with Gutman and Priest's (1969) items, the
behavior exhibited by the protagonists may lead to defining them as socially acceptable-unacceptable. Therefore, an observer may come to identify the protagonists as representatives of +ICs or -ICs.

Zillmann and Bryant define fair retaliatory and underretaliatory behavior as socially acceptable—-with underretaliatory behavior more socially acceptable than fair. This leads them to predict from the Gutman and Priest (1969) model that underretaliation will produce the most amusement, whereas their model predicts decreased amusement (relative to equity) for underretaliation. This prediction holds, though, only if one assumes, as Zillmann and Bryant do, that underretaliation is perceived as more socially acceptable by the observer than is equity.

It would seem that a +IC (La Fave), socially acceptable behavior (Gutman and Priest) and fair retaliation (Zillmann and Bryant) versus a -IC, socially unacceptable behavior, and underretaliation (viewed as ineffective coping by Zillmann and Bryant) and overretaliation (viewed as bullying) may, at least in some cultures or social groups, be equivalent.

The authors also appear to assume that equity is a constant, that is, that some consensus exists among all observers as to what constitutes equitable retaliation. Perhaps, there is such consensus with respect to physical damage, but it would seem more difficult to determine with
respect to an exchange of verbal behaviors. Shaw and Constanzo (1970) offer a similar criticism of social exchange theories; the 'values' of the units of exchange are not easily determined nor are they always agreed upon by the interactants. Clearly, equity is perceived in the mind of the observer, so different persons could view the same retaliation as achieving different degrees of equity. Zillmann and Bryant (1974) would appear to overlook this point and, therefore, overgeneralize their model.

Apart from the above theoretical questions, certain technical difficulties appear present. Zillmann and Bryant manipulated six squelches to affect the five-level variation of degree of retaliation. Lack of control of pre-experimental attitudes an observer might hold toward the communication protagonists is evident. Whereas, their theorizing stressed that their model was to apply to situations in which no prior attitudes were held toward protagonists, in their published items the protagonists are: 1) three Hell's Angels Motorcyclists and a truck driver, and 2) a rich society matron and a maid.

La Fave et al. (1976) has also suggested that the technique used in manipulating the items may have produced spurious differences in amusement ratings—arguing that their forced style (as a result of the manipulation) violated certain widely accepted humour writing principles
(e.g., "brevity is the soul of wit"). The number of words in the manipulated sections of the six squelches (particularly for underretaliation) used by Zillmann and Bryant negatively correlates with the amusement ratings found. The number of words for the various retaliation versions are: extreme underretaliation (57); underretaliation (39); fair retaliation (26); overretaliation (24); extreme overretaliation (30). Therefore, theoretical ambiguities with the retaliatory equity model and the above technical problems render unclear the validity of this model in the humour area.

Vicarious Superiority, Justice, and Morality as Clarifying Concepts for the Relationship Between Emotional Arousal and Humour

Researchers obviously have found the depiction of human conflict and aggression in the fantasy form of humour a fascinating subject. While the assumption that attitudes toward specific social groups, social behaviors and levels of social justice are always influential in mediating humour appreciation is questionable, it is interesting to speculate what role these factors play in modifying the effects of "arousal on humour" and conversely "humour on arousal." Most of the research on humour and aggression has been performed in the psychoanalytic tradition and has failed typically to raise such questions as: hostility by whom, hostility toward whom (La Fave, 1972); and hostility justified or not (Gutman and Priest, 1969). In the arousal
literature humour materials are typically classified into various categories chosen on the basis of the themes being expressed in the mini-drama depicted in the 'joke' or cartoon—usually based on Freudian distinctions, such as sex, hostility, and nonsense. It has not been generally considered important that specific details of the "content" of the humourous material (the attributes of the characters, their behavior, justification for their behavior, etc.) is important in accounting for the resulting amusement and tension reduction or increase.

Singer (1968) who found evidence for catharsis comes the closest to employing a situation in which those aggrieved against in the humour are perceived as the frustrating agents by the observer and the deliverer of the humour a +IC; though he does not see its possible theoretical significance with respect to vicarious superiority and related theory. La Gaipa (1968) aroused various groups of Ss who differed in authoritarianism and who subsequently rated communications in which protagonists were varied as to their superordinate-subordinate roles. He suggests that failure to consider 'joke' content, other than themes, has led to inconsistent findings in the literature. Zillmann and Cantor (1972) also expressed concern that the observer's sympathy and empathy with the communication characters (superordinate-subordinate roles)
would be an important variable in the effect of arousal on humour appreciation.

Research suggests that the ability of overt aggressive acts to provide cathartic arousal-reducing functions may only be realized if they actually remove a frustration, or have been instrumental in the past, or if they satisfy the motive of "getting back" at the frustrator by seeing him harmed (Scherer et al., 1975). If humour is to reduce aggressive feelings, it could be argued that the frustrator or his membership group or a class of persons with which he is associated must be depicted in the humour as the victim and perhaps the observer or a member of his positive identification class the aggressor. Similarly themes of justice also may be relevant to the ability of humour to reduce aggressive tension. For example, if a humour communication depicted an aroused individual's IC being unjustly squelched by a IC rather than providing catharsis the communication might further provoke or arouse the observer. Berkowitz (1970) speculated that angry people may lower the intensity of their attacks upon a tormentor after encountering hostile humour content only if this humour is regarded as belittling the anger instigator (he does not consider this result catharsis).

The vicarious superiority humour tradition, particularly La Fave et al., has tended to focus primarily on
the squelch 'joke' format in which two identifiable ICs interact. Other researchers often have paid attention to only the identification with the butt, ignoring the victor.

**Humour: Fantasy and Playful**

Concepts of social justice and acquired inhibitions and attitudes toward interpersonal aggression appear to play a role in determining humour judgements. Yet, how do we explain those humorous materials found highly amusing and enjoyable by many persons which depict situations or events which would normally disgust, sadden or outrage?

It has been stated frequently that for the humour experience an individual must view the stimulus in an appropriate "frame-of-mind." Terms such as playful, play frame, nonserious, unreality, fantasy, etc. have been employed to designate this state, and serious, reality, etc. its opposite.

Scheerer (1966) regarded humour as the "playful realization" of a multiplicity of coincidences in meaning. Sully (1902) believed that all varieties of amusement grew out of the social act he called "play challenge." Berlyne (1969), in trying to relate humour and play, argues that, like humour, opportunities for play are sought after, seem to be lacking in "seriousness," are engaged in with much gusto, and afford satisfaction or pleasure.
Several theorists have argued that humour is somehow a result of making light of some event or situation, which if perceived as real would cause 'pain', discomfort or sympathetic distress. Freud (1928) considered a denial of the claim of reality as characteristic of humour. In bringing about a "humour attitude," the superego repudiates reality. Maier (1932) suggests we do not take the ridiculous situation seriously because it is not meant to be part of reality. Everett (1888) viewed the comic as purely subjective, whereas tragedy is objective.

Max Eastman (1936) stressed the importance of a "playful-serious" distinction. He argued that any attempt to approach a 'joke' in a serious manner negates its ability to amuse (since he viewed humour the result of holding a "playful attitude" toward a situation which would normally cause pain). Piddington (1933) speculates that situations that arouse laughter "do not call urgently for any specific bodily response. The lack of biological urgency or seriousness is found in every kind of humor." Levine (1967) maintains that both the "game illusion" and the "comic illusion" are expressions of voluntary withdrawal from the real world into a world where the rules are of one's own choosing and making. Both play and humour supposedly express freedom from realistic cares and problems of reality.
Flugel (1954) equates "unrealism" and "playful." This playfulness or unreality serves, according to Flugel "as a constant background upon which the special characteristics of different forms of humour . . . are, as it were, superimposed" (p. 723). Playfulness for Flugel also refers to an "absence of immediate biological urgency" (p. 709) and functions to relieve us from the burden of reality, and its pleasure depends, at least to a considerable extent, upon the satisfaction thus derived.

A number of contemporary theorists assume that the recognition of a stimulus as a 'joke', cartoon, etc. is an initial necessary condition for amusement. "Humor is accompanied by discriminative cues, which indicate that what is happening, or is going to happen, should be taken as a joke" (Berlyne, 1972, p. 56). Suls (1972) argues that before incongruous situations can be amusing, it is necessary to know that a stimulus is a 'joke', something intended to be funny. Langevin and Day (1972) suggest that a "set" may be established (by social definition) and necessary for amusement (e.g., "I am about to tell you a joke.").

While speculation exists that the "mental set," "mood," or "frame of mind" adopted by an individual plays a role in the humour experience there is a great deal of vagueness as to the meaning of terms such as, playful, fantasy, serious and reality. There is a general lack of
testable propositions and accompanying research which would allow the role of an individual's "frame of mind" to be determined. McGhee (1971, 1972, 1974a,b,c) has attempted to develop a more systematic position.

McGhee (1971) maintains that, in young children, all that is necessary for identification of humour is a recognition of the incongruity plus some kind of cue which leads the child to think that the events could not really occur as depicted. McGhee (1972) stresses the need for the child to "fantasy assimilate" rather than "reality assimilate," if the individual is to be amused by a violation of expectancy. The concept of "assimilation" has been drawn from Piaget's (1952) formulations concerning the way a child or adult behaves upon encountering a stimulus which is discrepant from previously formed cognitive schemata (expectancies). If a novel event or object cannot be assimilated into the appropriate schema, the child attempts to accommodate or change the structure. The child may make repeated attempts to assimilate the novelty until the appropriate structures change sufficiently to allow assimilation. McGhee prefers to call this type of assimilation "reality assimilation." He argues that this process does not always occur upon encountering stimulus situations that are inconsistent with already established knowledge, for example, when the inconsistency does not in fact occur in the "real world." If a child were to see a cartoon
showing a mother elephant sitting on a nest of eggs in
a tree, the child would probably not "reality assimilate"
or accommodate his concept of elephants to this depiction.
The child, McGhee suggests, will "fantasy assimilate"
this information by "assimilating the source of incon-
sistency or expectancy disconfirmation into existing
relevant cognitive structures without attempting to
accommodate those structures to fit the discrepant
stimulus input" (1972, p. 65).

McGhee's fantasy-reality assimilation formulation
provides a useful approach to predicting humour apprecia-
tion of situations or communications involving discrepancy.
As discussed in Chapter 1 though, McGhee's formulation is
unable to adequately account for the effect on humour
appreciation of varying levels of aggression and injustice
in humorous fantasy. The present author has developed a
two-dimensional approach involving playful-serious and
fantasy-reality distinctions.
Chapter 3

METHOD

Manipulated Cartoons

Three cartoons were used in this study to manipulate the degree of perceived interpersonal aggression and retaliation, and to provide one of two techniques for manipulating playful and serious 'judgemental sets'. Each cartoon consisted of: 1) verbal component (dialogue plus a punch line between two protagonists), and 2) visual component (two protagonists drawn interacting in a particular setting). Six different versions of each cartoon were drawn (three levels of retaliation—under, fair, over x two levels of cartoon fidelity—low, high).

Each cartoon depicted two characters, a victor (delivers the punch line plus performing one of three levels of physical aggression toward a second character) and a victim (the butt of the punch line and recipient of one of the levels of physical aggression). The perception of the characters, their behavior and its consequences are predicted by several researchers to lead to more complex conceptions such as justice, hostility, social acceptability—unacceptability, equity, and identification that are felt to be crucial to explaining humour judgements. Because of the demands on the materials, great care was taken in
developing and presenting them, as indicated below.

Criteria for the development of the manipulated cartoons were: 1) two characters verbally and physically interacting, 2) both characters appear to be of the same sex, 3) the humour not be based on sexual themes, 4) the cartoons, their characters and the punch lines be relatively novel to control for the heard and seen before variable and also to eliminate the possibility of the subjects holding pre-experimental attitudes toward the cartoon protagonists, 5) the physical damage and aggression be varied without affecting the punch line, 6) the interpersonal aggression and its consequences, the damage, appear to follow from the available resources depicted in the cartoon, 7) the depicted actions of the protagonists parallel the dialogue (achieved by showing the verbal and physical interaction between protagonists in a series of panels--cartoons were developed with 2, 3, and 4 panels), and 8) the cartoons provide the opportunity for the manipulation of certain visual communication features to allow for more or less fidelity with respect to the characters and the damage done them.

Three studies are known to the author which attempted to manipulate the justification or deservedness of the interpersonal aggression performed by the victor (Gutman, 1967; Clement, 1974; and Zillmann and Bryant,
1974). All three studies utilized verbal 'jokes'. In two of these the punch line was held constant and the behavior of the communication protagonists, before the punch line delivery, is manipulated to vary the perceived justification for the "put-down" achieved by the punch line (Gutman and Clement). The third study held the punch line and the behavior of the victor constant while manipulating only the behavior of the victim to vary deservedness of the squelch he received (Zillmann and Bryant). Therefore, the retaliation and aggression exhibited by the victor has never been directly manipulated. One problem is the difficulty of manipulating the punch line without destroying its 'humour', and any attempt to manipulate the verbal hostility expressed through a punch line without changing other important dimensions appears doomed. One way of circumventing this problem is to hold the punch line constant as well as the behavior of the victim (the victim would appear equally obnoxious in all versions and equally deserving of retaliation) and to vary the severity of the retaliatory physical aggression done to the victim by the victor (victor delivers the punch line squelch and simultaneously performs one of three levels of physical aggression). Therefore, cartoons had to be constructed which would allow the above manipulations.
With respect to criterion 8), it has been argued previously that one set of factors which may determine the seriousness or playfulness of the observer's 'judgmental set' when reacting to humorous communications involves the degree of fidelity. Cartoons were developed in which the protagonists were depicted as either human (high fidelity) or as animals acting like humans (low fidelity). Also the damage done to the victim was as severe in both high and low fidelity versions but in one case it was portrayed more "realistically" (blood where appropriate, actual bodily reactions to aggression), whereas with the low fidelity versions the damage was portrayed in a bloodless manner and in ways in which human or animal body tissue could not react (body parts shattering like glass).

The difficulty in finding cartoons which would fit these criteria led the present author to create his own. A number of punch lines were selected that could be written into a squelch format. Dialogue was written such that the eventual victim initially said something mildly insulting to the eventual victor and the victor ended the dialogue with a punch line which squelched the victim. A setting and characters were then drawn in which this dialogue would take place. The number of panels needed to depict the action and dialogue was
determined. In all three cartoons eventually selected for the experiment the last panel included the victor delivering the punch line plus performing some aggressive action toward the victim. For each fidelity version of each cartoon three last panels were drawn such that the punch line was always the same but the degree of aggression and the consequences of the aggression (physical damage) were varied. For each version of a particular cartoon all panels leading up to the last panel were the same. In these panels not only did the victim mildly insult the victor but the victim was depicted as purposely physically aggressing against the victor.

The three levels of aggression depicted for each cartoon when considered in conjunction with the level of aggression first exhibited by the victim results in three levels of retaliation: 1) under (victor does not go far enough to get even), 2) fair (victor returned the same aggressive behavior and did an equivalent amount of damage), and 3) over (victor goes too far and is more aggressive than the victim and creates more physical damage). The three degrees of aggression and damage were manipulated in each cartoon in the same manner. In the high and low fidelity items under retaliation depicts the victor verbally aggressing and retaliating only. For the fair retaliation condition the victor was depicted both verbally retaliating plus returning precisely the same type of physical aggression.
and creating the same amount of physical damage as done the victor. The over retaliation condition depicted the victor as physically aggressing and creating more damage (seriously wounding) to the victim than done the victor. The manipulated cartoons are presented in Appendix A.

Pre-testing of the Manipulated Cartoons

While retaliation in the present study was defined in terms of the actual amount of physical damage exchanged, pre-testing was performed to determine if the population from which the subjects would be drawn perceived the levels of retaliation as did the experimenter and those persons who had informally judged the materials during their development. Twenty judges (10 male and 10 female Acadia University undergraduates) were presented with either all high or all low cartoon fidelity versions of the three cartoons. Each judge was presented the three cartoons and their three versions in a random order after the general squelch format was described to them. The judges were asked to rate each version for degree of retaliation and degree of interpersonal hostility. For the rating of level of retaliation a scale ranging from -5 (retaliation falls much too short), through 0 (retaliation is just right), to +5 (retaliation goes much too far) was devised. The rating of intended interpersonal hostility was indicated on a nine point scale ranging
from 0 (not at all hostile) to 8 (very hostile). These scales are presented in Appendix B.

A 2 x 2 x 3 analysis of variance with repeated measures on the last factor was performed on each of the three cartoons for retaliation and hostility ratings. Analysis of the retaliation data indicated that the differences between the means of the three versions of each cartoon (Table 3) are highly significant (p < .01). Examination of the data shows why this level of significance was found; rarely did a subject judge the order of under, fair and over versions in an order other than intended.

Table 3
Mean Retaliation Ratings for Cartoons and Versions

<table>
<thead>
<tr>
<th></th>
<th>Under</th>
<th>Fair</th>
<th>Over</th>
</tr>
</thead>
<tbody>
<tr>
<td>soup</td>
<td>-2.19</td>
<td>+1.06</td>
<td>+3.73</td>
</tr>
<tr>
<td>umbrella</td>
<td>-1.96</td>
<td>+0.70</td>
<td>+4.36</td>
</tr>
<tr>
<td>arrow</td>
<td>-1.72</td>
<td>+0.71</td>
<td>+4.57</td>
</tr>
</tbody>
</table>

Examination of mean "scale value" accorded the versions by the pre-test subjects indicate that assuming equal interval scaling the under versions were judged under retaliatory, but not as under retaliatory as the
over retaliation versions were judged over retaliatory. The fair versions all tended to be judged as slightly over retaliatory. The pre-test results appeared to support the adequacy of the manipulation of retaliation level, in that the subjects were able to discriminate between the versions and tended to give them roughly appropriate scale values.

Analysis of the hostility data also clearly indicated that the subjects judged under, fair and over versions more hostile respectively \((p < .01)\) for each cartoon (Table 4).

Table 4
Mean Hostility Rating for Cartoons and Versions

<table>
<thead>
<tr>
<th>Cartoons</th>
<th>Under</th>
<th>Fair</th>
<th>Over</th>
</tr>
</thead>
<tbody>
<tr>
<td>soup</td>
<td>.90</td>
<td>4.00</td>
<td>7.1</td>
</tr>
<tr>
<td>umbrella</td>
<td>.90</td>
<td>4.45</td>
<td>7.2</td>
</tr>
<tr>
<td>arrow</td>
<td>.85</td>
<td>3.05</td>
<td>7.8</td>
</tr>
</tbody>
</table>

The judges showed high agreement that under versions were "not at all hostile," fair versions were "somewhat hostile," and over versions "very hostile."

Ratings of retaliation and hostility did not differ for male and female judges. Similarly, no significant differences \((p > .05)\) due to fidelity were found for either set of ratings.
Distractor Cartoons

Five unmanipulated cartoons were selected to act as distractor items. These items were selected and in some cases modified to be low in thematic aggression, to depict several characters interacting in some way, several involved dialogue between characters, some items had no caption or verbal component, and the number of panels depicting the content varied from one to four. The primary purpose of these distractor cartoons was to aid in disguising the purpose of the experiment and the nature of the manipulation from subjects by making it difficult and unlikely that certain characteristics common to the manipulated cartoons would be identified and the manipulation discovered. For this reason the distractors were selected to hold certain characteristics in common with the manipulated items. These unmanipulated cartoons were presented in the identical item position and order for all subjects in all experimental conditions (positions 1, 2, _, 4, 5, _, 7, _). The manipulated cartoons were presented in positions (_, _, 3, _, _, 6, _, 8). The distractor cartoons are presented in Appendix C.

Art and Literature Evaluation Task

To test the central hypothesis that the observer's 'judgemental set' will influence his judgements of a humour communication, two sets of factors which might affect
'judgemental set' were examined.

One set of factors has been labelled by the author cartoon fidelity and these factors are internal to the humour communication itself. In the present study this manipulation consists of devising two versions of each cartoon and its three endings, such that the characters are more or less human and the damage was depicted with high or low fidelity. This manipulation has been previously discussed.

A second technique used to affect 'judgemental set' was an art and literature evaluation task, and refers to factors external to the humour communication. The subjects were told that they were to participate in a study of aesthetics and that their judgements of various aesthetic items were required (literary passages, visual-pictorial items, and cartoon-humour items). Subjects in two of the treatment groups observed and rated the same cartoons (low fidelity) but first rated art and literature items either hostile or benign in theme. Not only did the art and literature items differ but the judgement scales for these differed.

The instructions to the subjects and the rating scales for the hostile art and literature items can be found in Appendix D. The thematically hostile literary passages described humans in conflict and causing each
other damage. The first described the needless murder of a child slave by mounted riders; the second, the killing of two men in an eskimo camp and the third, a fight between two men resulting in physical damage to one. Five visual-pictorial items were selected from Goya's "Disaster's of War" series of etchings which also depict human cruelty and man's inhumanity to man. The first depicts two men fencing where one has just been stabbed; the second, a man about to hit a soldier with an axe; the third, two bleeding men about to be shot by several soldiers; the fourth, soldiers about to ravage several women; and the fifth, several soldiers in the process of hanging a man. These materials are presented in Appendix E.

The instructions to the subjects and the rating scales for the benign art and literature items are found in Appendix F. The benign literary passages and pictorial art items were selected to be devoid of human conflict and suffering. The first literary passage depicted two characters describing a wonderous mystical creature whom they had encountered; the second, the coming of spring to an eskimo community; and the third, a highly colourful and imaginative dream sequence. Five Goya etchings were selected where the first depicted two men singing together; the second, a clown losing his pants; the third, a young man and woman swinging together; the fourth, three acrobats;
and the fifth, an old woman dancing. These materials are presented in Appendix G.

Subjects judging hostile art and literature items rated the literary passages for liking on a nine-point scale ranging from 0 to 8 and the five visual-pictorial items for appreciation on a similarly constructed scale. These subjects rated both the literary and visual-pictorial items for hostility (nine-point scale) and on a semantic differential-like set of scales consisting of six pairs of polar adjectives at opposite ends of seven-point scales. The pairs of adjectives were: cruel-kind, hard-soft, good-bad, heavy-light, weak-strong, and beautiful-ugly.

Subjects judging benign art and literature items also rated the three literary passages for liking and the five visual-pictorial items for appreciation on the same nine-point scales. These subjects rated both literary and visual-pictorial items only on the semantic differential-like scales. The seven pairs of adjectives used were: active-passive, hard-soft, wise-foolish, calm-excitable, slow-fast, heavy-light, and thick-thin.

Finally, subjects in both conditions were required to judge the cartoons on a nine-point amusement scale. Subjects judging the hostile art and literature items indicated further judgements on the same type hostility scales and semantic differential-like scales they utilized.
in judging both literary and visual-pictorial items. Subjects judging the benign art and literature items indicated further judgements of the cartoons on only the semantic differential-like scales as those used to judge the literary and visual-pictorial items. While only the amusement ratings were of interest in testing the hypotheses, the presentation of the other scales in the judgement of the cartoons served to further disguise the study's special interest in the cartoons.

Post-Amusement Data

For the purpose of examining other hypotheses and checking subjects' perception of the cartoons further data (judgements) were collected. For this purpose additional scales were devised. Both hostile and benign literary items were rated on nine-point vividness and sympathy scales. Visual-pictorial items were rated on nine-point scales for technical success and degree of terror. These items and scales were included to continue the experiments' disguise while collecting the post-amusement data. Cartoon-humour items were rated for the social acceptability-unacceptability of each protagonist's overall behavior (eleven-point scales) and for the justification of the victor's final retaliation on an eleven-point scale ranging from -5 (retaliation falls much too short) through 0 (retaliation is just right) to +5 (retaliation goes much too far).
Additionally, the cartoons following the benign art and literature items were rated on a nine-point hostility scale. The scales and instructions to subjects for the hostile and benign items appears in Appendices H and I respectively.

Subjects

One hundred and eighty Acadia University undergraduates served as subjects. These subjects were enrolled in various art and science faculties. The materials were administered to the subjects in groups ranging from 12 to 32 in number. The materials for all experimental treatments were administered in each session and the experimenter was unaware of which materials a subject received.

Procedure

Experimental Setting. Subjects were seated widely spaced in a quiet classroom. They were thanked for coming and then instructions were read prior to the handing out of the materials. Subjects were led to believe they were volunteering to participate in a study of aesthetics. They were told that they would be judging several types of art which included literary passages, visual-pictorial art, and cartoon-humour. The literary and visual-pictorial art items plus the judgements required of these served as one method of establishing the serious
versus playful 'judgemental sets'. Subjects were assured that no special training in art was required and that their judgments were anonymous.

**Booklets of Aesthetic Items and Rating Scales.** All items to be judged (three literary passages, five visual-pictorial items, eight cartoons) were placed in booklets (Aesthetic-Item Booklet #1). An accompanying booklet of scales and instructions on their use was also assembled (Instruction-Scale Booklet #1). These booklets were placed in an envelope marked A.

A second envelope marked B contained two additional booklets (Aesthetic-Item Booklet #2 and Instruction-Scale Booklet #2). The Aesthetic-Item Booklet contained one literary passage, two visual-pictorial items, and the three manipulated cartoons; selected from the items already judged. The Instruction-Scale Booklet contained the accompanying scales and instructions for their use. Envelopes A and B were placed inside a larger envelope.

**Presentation of Materials.** The administrator introduced the task to the subjects (Appendix J), then distributed the larger envelope which contained envelopes A and B. He then read with subjects the instructions on the large envelope (Appendix K) and briefly described the nature of the scales to be used and the procedure to be followed. Subjects then removed the booklets. Instructions were
included with the scales to aid subjects in correctly following the judgement procedure. After subjects completed Booklets #1, the last page instructed them to place these two Booklets in envelope A and envelope B in the large envelope, as well as removing envelope B (Appendix L). Subjects then read the instructions on envelope B (Appendix M) and followed these. When Booklets #2 were completed the subject was instructed to place these in envelope B and envelope B in the large envelope (Appendix N).

Subjects were asked not to give any form of personal identification, other than to indicate their sex on the final page of Booklet #2. Each subject was permitted to work at his own speed.

**Experimental Design**

**Independent Variables.** Degree of retaliation (under, fair, over) and 'judgemental set' (created by hostile or benign art and literary items and high or low fidelity cartoons) were independent variables (see Figure 2, p. 16). The within-subject variable was degree of retaliation. The between-subject variable was 'judgemental set' conditions. For convenience the combinations of art and literature items and cartoon fidelity versions will be called 'judgemental set' conditions while recognizing that 'judgemental set' is an internal state or organismic variable.
Dependent Variables. The main dependent variable was amusement judgements. Subjects rated each cartoon on a nine-point scale ranging from 0 (not at all amusing) to 8 (very amusing) with various labels at different points of the scale to aid subjects in choosing the point best representing his judgement. A second dependent variable was social acceptability-unacceptability of both the victim's and victor's overall behavior in the cartoon. An eleven-point scale ranging from -5 (very socially unacceptable behavior) through 0 (neither socially acceptable or unacceptable behavior) to +5 (very socially acceptable behavior). Each subject was also asked to judge the victor's behavior as to the degree of intended hostility on a nine-point scale. Finally, each subject judged the victor's level of retaliation on an eleven-point scale similar to that used for the pre-test subjects.

Counterbalancing. There were nine cartoon-retaliation version combinations (see Figure 3). Each subject saw only three cartoon-retaliation version combinations. However, certain constraints were followed in the selection of cartoon-retaliation version combinations for any one subject.

It was necessary that each subject be exposed to three different cartoons and three different versions—all either high or low fidelity. If a subject was shown a
cartoon from the first row (version 1), there is a choice of three cartoons. Moving to the second row (version 2), the choice is reduced to two cartoons—that is, excluding the cartoon chosen in the first row. Similarly, in the third row (version 2), there is a choice of one cartoon. In this manner, one can choose three cartoons and three versions (retaliation) with no duplications — $3 \times 2 \times 1 = 6$ combinations.

Figure 3
Matrix Cartoons and Retaliation Versions

<table>
<thead>
<tr>
<th>Retaliation Versions</th>
<th>Soup (S)</th>
<th>Umbrella (U)</th>
<th>Arrow (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under (1)</td>
<td>1S</td>
<td>1U</td>
<td>1A</td>
</tr>
<tr>
<td>Fair (2)</td>
<td>2S</td>
<td>2U</td>
<td>2A</td>
</tr>
<tr>
<td>Over (3)</td>
<td>3S</td>
<td>3U</td>
<td>3A</td>
</tr>
</tbody>
</table>

In other words, there are six ways available to choose three cartoons and versions to show each subject. Given the above constraints it was decided to use an experimental design which systematically varied the combinations of cartoon-retaliation versions, allowing the significance of the contribution of different combinations, if any, to be determined statistically. A model was selected (Winer, 1971, Plan 9) that would take into
account the three cartoons, three retaliation versions, three conditions used to manipulate 'judgemental set', and three of six possible cartoon-retaliation version combinations. To do this three of the six cartoon-retaliation version combinations were selected and a latin square composed of these. This latin square was used for all levels of the between-subject variable. Therefore, according to Winer the same components of the cartoon (factor A) x retaliation version (factor B) interaction are confounded within each of the squares and the same components the cartoon x retaliation version x 'judgemental set' (factor C) interaction are confounded in differences between squares. Full information was available on some components of both the A x B and A x B x C interactions. The number of levels of cartoons and retaliation versions must be equal; there is no restriction on the number of levels of 'judgemental set' conditions. Factors A, B, and C are considered fixed in this design and interactions with the cartoon-retaliation version combinations are assumed to be negligible. By proceeding in this manner nine groups of subjects were used: three groups of subjects were assigned to each level of the between-subject factor (groups 1, 2, 3 judged benign art and literature items - low fidelity cartoons; 4, 5, 6 judged benign art and literature items - high fidelity cartoons; and 7, 8, 9
judged hostile art and literature items – low fidelity cartoons).

As can be seen from Figure 4, subjects in groups 1, 4, 7; 2, 5, 8; and 3, 6, 9 respectively judge the same cartoon-retaliation version combinations. However, these combinations appear in a different 'judgemental set' condition for each of the three groups. Subjects were assigned at random to the groups; the order in which subjects judge a set of cartoon-retaliation version combinations within each group is randomized independently for each subject. Winer suggests that the number of subjects to be used in each of the groups depends upon the precision that is desired. A minimum of 10 to 20 subjects per group is recommended to obtain satisfactory power (depending upon the degree of variability of the judgements). One of the main effects in this plan ('judgemental set' conditions) is wholly a between-subject effect, but within-subject information is available with respect to the interactions with that factor. Predicting interactions with this factor, it was decided to let it correspond to the between-subject variable.

Each of the nine groups contained 20 subjects.
<table>
<thead>
<tr>
<th>Square I</th>
<th>Square II</th>
<th>Square III</th>
</tr>
</thead>
<tbody>
<tr>
<td>benign literature</td>
<td>G1 2 3 1</td>
<td>hostile literature</td>
</tr>
<tr>
<td>and art</td>
<td>G2 3 1 2</td>
<td>art and art</td>
</tr>
<tr>
<td>low fidelity</td>
<td>G3 1 2 3</td>
<td>low fidelity</td>
</tr>
<tr>
<td>cartoons</td>
<td>G4 2 3 1</td>
<td>cartoons</td>
</tr>
</tbody>
</table>

Cartoons - S = soup
A = arrow

Retaliation Versions - 1 = under
2 = fair
3 = over
Chapter 4

RESULTS

When interpersonal aggression is depicted in a humorous communication recent models suggest that an observer's notions of social justice, inhibitions regarding aggression, and identification classes influence his humour experience as if the situation depicted in the fantasy of the humour was perceived as an actual event and taken seriously. The present author has argued that the unique quality of humour and other forms of fantasy would be missed if this was assumed always the case and that research has forced subjected to take humour seriously.

An approach was suggested which recognizes that while an observer may interpret a communication as "intended" humorous fantasy, he also may adopt either a playful or serious 'judgemental set' toward the communication. If the latter, attitudes toward aggression and injustice may be used as a "standard of comparison" and lead to the modification of humour judgements, while if the former, these socially relevant attitudes may not affect the enjoyment of the fantasy.

The major purpose of the present study was to test the hypothesis that encouraging subjects to take seriously
the cartoons would result in a different pattern of amusement ratings for under, fair, and over retaliation versions with respect to one another than when subjects were encouraged to adopt a playful 'set'. An interaction between 'judgemental set' and retaliation versions was predicted for amusement judgements. For subjects in the playful 'judgemental set' condition (judging benign art and literature items—low fidelity cartoons) no significant difference was expected between under, fair and over retaliation versions of the cartoons. (If a difference was found it has been argued that it would reflect an increase in judged amusement from under to over retaliation possibly based on incongruity theory predictions.)

For subjects in the two serious 'judgemental set' conditions (judging either benign art and literature items—high fidelity cartoons OR hostile art and literature items—low fidelity cartoons) it was expected that either amusement ratings would decrease from under to over retaliation OR an inverted U-shaped relationship would be found such that both under and over retaliation are judged less amusing than fair retaliation.

A second purpose of the present study was to examine the apparent conflict in predictions between two current humour models (with respect to the role of justice in humour) represented by the above two different predictions (linear
versus U-shaped) for the serious 'judgemental set' conditions. The present author argued that these latter two predictions are only justified when subjects take the humour material "seriously," and differ only with respect to the under retaliation condition. Since these two approaches have used different terminology (social acceptability versus retaliatory equity) to describe and obtain assessments of the behavior of the humour characters in their experimental materials for establishing experimental treatments, subjects in the present study rated the cartoons using both sets of terms and the two models (Gutman and Priest, 1969, and Zillmann and Bryant, 1974) were pitted against one another. It was expected that in the over retaliation version the victor's behavior would be judged less socially acceptable than in the fair version. No prediction was made for the degree of judged social acceptability for the under retaliation version. This was determined empirically in an attempt to determine whether the two models actually led to different predictions.

Amusement Ratings

The method of analysis for the amusement ratings was a special case of a three factorial experiment arranged in three Latin squares of size three (Winer, 1971, Plan 9).
Conditions creating playful and serious 'judgemental sets' (benign art and literature items-low fidelity cartoons, hostile art and literature items-low fidelity cartoons, benign art and literature items-high fidelity cartoons) and cartoon-version combinations (three were selected, e.g. soup-under, umbrella-fair, arrow-over) were between-subject variables. Cartoons (soup, umbrella, arrow) and versions (under, fair, over) were within-subject variables.

The summary of the analysis in Table 5 shows the 'judgemental set'-retaliation version interaction to be highly significant ($F = 3.71, p < .01$). The results of an analysis of simple effects with Neuman-Keuls tests on all ordered pairs of means for each 'judgemental set' condition are summarized in Figure 5. Amusement increased slightly for subjects judging the benign art and literature items-low fidelity cartoons from under (4.25), to fair (4.3), to over retaliation (4.5) respectively, though this trend was not significant ($p > .05$). As predicted degree of injustice and aggression had no effect on amusement ratings when subjects adopted a playful 'judgemental set'.

Subjects judging benign art and literature items-high fidelity cartoons rated under (4.53), fair (4.52), and over (3.35) retaliation versions less amusing respectively. The difference between under and fair retaliation was not significant ($p > .05$) while the over
Table 5

Summary of Analysis of Variance Amusement Ratings

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'Judgemental set' conditions</td>
<td>35.23</td>
<td>2</td>
<td>17.62</td>
<td>2.24</td>
</tr>
<tr>
<td>Rows (cartoon-version combinations)</td>
<td>7.07</td>
<td>2</td>
<td>3.54</td>
<td></td>
</tr>
<tr>
<td>'Judgemental set' x row</td>
<td>31.30</td>
<td>4</td>
<td>7.83</td>
<td></td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>1343.91</td>
<td>171</td>
<td>7.86</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cartoons</td>
<td>215.81</td>
<td>2</td>
<td>107.91</td>
<td>26.71*</td>
</tr>
<tr>
<td>Versions</td>
<td>60.47</td>
<td>2</td>
<td>30.24</td>
<td>7.49*</td>
</tr>
<tr>
<td>Cartoons x 'judgemental set'</td>
<td>8.22</td>
<td>4</td>
<td>2.06</td>
<td></td>
</tr>
<tr>
<td>Versions x 'judgemental set'</td>
<td>59.96</td>
<td>4</td>
<td>14.99</td>
<td>3.71*</td>
</tr>
<tr>
<td>Cartoons x versions</td>
<td>2.81</td>
<td>2</td>
<td>1.14</td>
<td></td>
</tr>
<tr>
<td>Cartoons x versions x 'judgemental set'</td>
<td>33.46</td>
<td>4</td>
<td>8.37</td>
<td>2.07</td>
</tr>
<tr>
<td>Error (within)</td>
<td>1379.94</td>
<td>342</td>
<td>4.04</td>
<td></td>
</tr>
</tbody>
</table>

*p < .01
Figure 5

Mean Amusement Ratings for 'Judgemental Set'

Conditions and Retaliation Versions

Mean Amusement Ratings

benign-low

benign-high

hostile-low

Retaliation Versions
retaliation version was significantly different from both the under and fair versions (p < .01). High cartoon fidelity as predicted resulted in the over retaliation version being judged significantly less amusing than the fair version.

Further, Figure 5 shows that subjects judging hostile art and literature items—low fidelity cartoons rated under (4.45), fair (3.75), and over (3.0) retaliation less amusing respectively. The fair-retaliation version was rated marginally significantly less amusing (p < .06) than the under retaliation version, and over retaliation significantly less amusing than fair retaliation (p < .05). These results appear not to support the retaliatory equity model (Zillmann and Bryant, 1974). Examination of the social acceptability ratings will allow some determination of the data's support for the social justice model (Gutman and Priest, 1969).

Significant F ratios also were found for cartoons (F = 26.71, p < .01) and retaliation versions (F = 7.49, p < .01). The difference between cartoons was of no theoretical interest. The arrow cartoon (4.96) was found significantly more amusing (p < .01) than the soup (3.51) and umbrella (3.75) cartoons which were not significantly different (p > .05). The lack of a significant interaction between cartoons and retaliation versions indicates that each arrow cartoon version was found consistently more
amusing than the corresponding versions of the other cartoons. The difference between cartoons while showing the difficulty of developing cartoons which will be rated equally amusing is not crucial to the analysis since it is cancelled out by the counterbalancing design.

The significant F ratio for versions summed over all three 'judgemental set' conditions indicates that under (4.41) and fair (4.19) retaliation versions are not significantly different (p > .05) while over (3.62) is significantly different from both (p < .01). This main effect also is of no theoretical interest.

Finally, the lack of statistical significance for a main effect for rows indicates that the three different cartoon-retaliation version combinations used in the present study did not differentially affect amusement ratings of the cartoons.

Post-Amusement Social Acceptability-Unacceptability Ratings

Following completion of the amusement ratings subjects were required to rate in a separate booklet the Social acceptability-unacceptability of both the victim's and victor's behavior in the mini-drama of these same cartoons. Eleven-point scales ranging from -5 to +5 were used. The statistical model used to analyze amusement ratings was also used to analyze both sets of social acceptability ratings.
Victim. The summary of the analysis in Table 6 indicates significant F ratios for cartoons \((F = 13.8, p < .01)\) and 'judgemental set' conditions \((F = 5.75, p < .01)\). Most importantly no significant difference between under (-3.1), fair (-2.9), and over (-3.2) retaliation versions or interaction of these versions with 'judgemental set' conditions was found, since the behavior (verbal and physical) was held constant for all retaliation versions. As shown in Table 7 the victim's behavior was rated consistently as socially unacceptable in each 'judgemental set' condition.

Again the difficulty of creating cartoons which are equivalent along various dimensions is shown by the fact that the arrow cartoon victim (-2.6) was found significantly \((p < .01)\) less socially unacceptable than the victim in the soup (-3.3) and umbrella (-3.3) cartoons, which were not significantly different \((p > .05)\). The lack of a cartoon-retaliation version interaction indicates that this difference was significant and consistent over all three versions and may be due to the fact that in the arrow versions the victim throws sand at the eventual victor whereas in the soup and umbrella cartoon versions the victim performs a more serious act (throwing soup over the victor and striking victor with an umbrella respectively). It is also possible that the verbal attack
Table 6
Summary of Analysis of Variance Victim Social Acceptability Ratings

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Subjects</td>
<td>1003.69</td>
<td>179</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'Judgemental set' conditions</td>
<td>61.71</td>
<td>2</td>
<td>30.86</td>
<td>5.75*</td>
</tr>
<tr>
<td>Rows (cartoon-version combinations)</td>
<td>2.20</td>
<td>2</td>
<td>1.10</td>
<td></td>
</tr>
<tr>
<td>'Judgemental set' x row</td>
<td>21.94</td>
<td>4</td>
<td>5.49</td>
<td>1.02</td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>917.84</td>
<td>171</td>
<td>5.37</td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td>742.69</td>
<td>360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cartoons</td>
<td>51.90</td>
<td>2</td>
<td>25.95</td>
<td>13.80*</td>
</tr>
<tr>
<td>Versions</td>
<td>7.16</td>
<td>2</td>
<td>3.58</td>
<td>1.90</td>
</tr>
<tr>
<td>Cartoons x 'judgemental set'</td>
<td>16.65</td>
<td>4</td>
<td>4.16</td>
<td>2.21</td>
</tr>
<tr>
<td>Versions x 'judgemental set'</td>
<td>11.33</td>
<td>4</td>
<td>2.83</td>
<td>1.51</td>
</tr>
<tr>
<td>Cartoons x versions</td>
<td>.05</td>
<td>2</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Cartoons x versions x 'judgemental set'</td>
<td>11.98</td>
<td>4</td>
<td>1.59</td>
<td></td>
</tr>
<tr>
<td>Error (within)</td>
<td>643.62</td>
<td>342</td>
<td>1.88</td>
<td></td>
</tr>
</tbody>
</table>

*p < .01
Table 7

Social Acceptability Ratings of Retaliation Versions for 'Judgemental Set' Conditions

<table>
<thead>
<tr>
<th>'Judgemental Set' Conditions</th>
<th>Victim</th>
<th>Victor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benign art and literature items-high cartoon fidelity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>under</td>
<td>-3.5</td>
<td>+1.8&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>fair</td>
<td>-3.1</td>
<td>.9&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>over</td>
<td>-3.8</td>
<td>-2.7&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Hostile art and literature items-low cartoon fidelity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>under</td>
<td>-2.7</td>
<td>+1.8&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>fair</td>
<td>-2.6</td>
<td>-.2&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>over</td>
<td>-2.6</td>
<td>-1.5&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Benign art and literature items-low fidelity</td>
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<td></td>
</tr>
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<td>under</td>
<td>-3.0</td>
<td>+1.8&lt;sup&gt;cd&lt;/sup&gt;</td>
</tr>
<tr>
<td>fair</td>
<td>-3.1</td>
<td>-.8&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>over</td>
<td>-3.3</td>
<td>-1.2&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>abcd</sup> Means displaying the same letter subscript within a column are significantly different (p < .01).
made by the victim upon the victor was judged less socially unacceptable for the arrow cartoon victim. This difference between cartoons is controlled for by the counterbalancing design utilized.

Subjects judging hostile art and literature items-low fidelity cartoons rated the cartoon victim (-2.6) less socially unacceptable (p < .01) than those subjects judging the benign art and literature items-low fidelity cartoon victim (-3.1) and benign art and literature items-high fidelity cartoon victim (-3.5). The latter two conditions were not significantly different (p > .05).

The greater judged social unacceptability of the cartoon victim judging the benign art and literature items-high fidelity cartoons (-3.5) may be due to the higher fidelity depiction with more human-like characters undergoing more "realistic" damage--the same manipulation was expected to create a serious 'judgemental set'. The judgement of significantly greater social unacceptability of the victim (-3.1) in low fidelity cartoons by subjects judging benign art and literature items versus hostile art and literature items (-2.6) is perhaps less clear, since it might have been expected that the hostile art and literature items intended to create a serious 'judgemental set' would have led subjects to rate the victim more socially unacceptable rather than less. Subjects may have judged the low fidelity cartoons
using the art and literature items as a standard or "comparison weight" in the language of psychophysics. For subjects judging hostile art and literature items the behavior depicted in the cartoons was perceived as less socially unacceptable, while subjects judging benign art and literature items would find the same cartoon victim's behavior less socially acceptable by comparison.

**Victor.** The summary of the analysis in Table 8 indicates significant F ratios for within-subject main effects for cartoons (F = 20.19, p < .01) and retaliation versions (F = 115.43, p < .01). Within-subject interaction effects were found for retaliation version-'judgemental set' conditions (F = 2.72, p < .05) and cartoon-retaliation version (F = 3.35, p < .05) interactions.

As predicted the victor in the over retaliation version (-1.8) was judged more socially unacceptable (p < .01) than in the fair retaliation version (-0.6). Also it was found that the victor in the under retaliation version (+1.8) was judged more socially acceptable (p < .01) than the fair retaliation victor in the present experiment. Fair retaliation was found to be slightly socially unacceptable and if equal interval scaleability is assumed over retaliation was judged as socially unacceptable as under retaliation was judged socially acceptable.
Table 8
Summary of Analysis of Variance Victor Social Acceptability Ratings

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Subjects</td>
<td>1665.04</td>
<td>179</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'Judgemental set' conditions</td>
<td>41.00</td>
<td>2</td>
<td>20.50</td>
<td>2.32</td>
</tr>
<tr>
<td>Rows (cartoon-version combinations)</td>
<td>44.64</td>
<td>2</td>
<td>22.32</td>
<td>2.53</td>
</tr>
<tr>
<td>'Judgemental set' x row</td>
<td>70.65</td>
<td>4</td>
<td>17.66</td>
<td>2.00</td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>1508.75</td>
<td>171</td>
<td>8.82</td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td>3423.77</td>
<td>360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cartoons</td>
<td>214.81</td>
<td>2</td>
<td>107.41</td>
<td>20.19*</td>
</tr>
<tr>
<td>Versions</td>
<td>1228.21</td>
<td>2</td>
<td>614.11</td>
<td>115.43*</td>
</tr>
<tr>
<td>Cartoons x 'judgemental set'</td>
<td>41.63</td>
<td>4</td>
<td>10.41</td>
<td>1.96</td>
</tr>
<tr>
<td>Versions x 'judgemental set'</td>
<td>57.87</td>
<td>4</td>
<td>14.47</td>
<td>2.72**</td>
</tr>
<tr>
<td>Cartoons x versions</td>
<td>35.61</td>
<td>2</td>
<td>17.81</td>
<td>3.35**</td>
</tr>
<tr>
<td>Cartoons x versions x 'judgemental set'</td>
<td>26.14</td>
<td>4</td>
<td>6.54</td>
<td>1.23</td>
</tr>
<tr>
<td>Error (within)</td>
<td>1819.50</td>
<td>342</td>
<td>5.32</td>
<td></td>
</tr>
</tbody>
</table>

* p < .01
** p < .05
While each 'judgemental set' condition showed the same trend as the overall trend just discussed (see Table 7), the significant retaliation version-'judgemental set' interaction indicates that subjects rating benign art and literature items-low fidelity cartoons did not judge over retaliation (-1.2) to be significantly \( p > .05 \) less socially acceptable than fair retaliation (-0.8). All other differences between social acceptability means for the three 'judgemental set' conditions were significant \( p < .01 \).

Cartoon differences were once again found. The victor's retaliation was judged significantly more socially acceptable in the arrow (+0.59), umbrella (-0.25), and soup (-0.95) cartoons respectively. The differences between the mean social acceptability for each of these cartoons was significant at the \( p < .01 \) level.

Finally, the information on the cartoon-retaliation version interaction indicates that by taking each cartoon separately the over retaliation version of the soup cartoon, while judged less socially acceptable than fair retaliation, failed to reach significance \( p > .05 \). All other differences were consistent with the trend for under, fair and over retaliation to be judged less socially acceptable respectively at the \( .01 \) level of significance.
Post-Amusement Retaliation and Hostility Ratings

While retaliation and hostility judgements of the cartoon versions were obtained in the pre-test and the ratings indicated that the experimental materials satisfied the requirements necessary to test the hypotheses, retaliation and hostility ratings were also collected after all amusement ratings were completed during the experiment. Would exposure to those conditions assumed to determine 'judgemental set' modify subjects' perception of justice and hostility as well as humour? No predictions were made. It was unclear whether the act of evaluating and rating the hostility of the cartoons and the social acceptability of the cartoon characters would negate the treatment effects, that is, lead subjects in the playful 'judgemental set' conditions to regard the cartoons seriously. The results of these judgements indicate support for the pre-test findings with greater hostility found from under to over retaliation versions. Also subjects judged the three retaliation versions appropriately. Perhaps, not unexpectedly, significant effects for different 'judgemental set' conditions, cartoons, and their interactions were found. The reason for these effects as will be seen are obviously in part due to differences in the cartoons and their versions (retaliation and fidelity) which were difficult
to control. These effects are counterbalanced by the design. A further source of variance may be due to certain influences contributed by the conditions used to create the 'judgemental sets' which were not present in the pre-test.

**Retaliation Ratings.** As shown in Table 9 the F ratio for retaliation versions was highly significant (F = 67.41, p < .01). The differences between the means for under (-0.37), fair (+0.67), and over (+2.15) retaliation were all significant (p < .01). The retaliation versions, particularly under, tended to be judged more in the over retaliatory direction than the pre-test results (Table 10). The pre-test findings are generally supported.

A between-subject main effect was also found for 'judgemental set' conditions (F = 4.6, p < .05). Subjects judging benign art and literature items-high fidelity cartoons tended to rate the three retaliation versions combined as significantly more retaliatory (+1.27) than subjects judging hostile art and literature items-low fidelity cartoons (+0.58, p < .01) and benign art and literature items-low fidelity cartoons (+0.6, p < .01). No such difference between high and low fidelity cartoons was found in the pre-test.
### Table 9

Summary of Analysis of Variance Retaliation Ratings

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td>1157.63</td>
<td>179</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'Judgemental set' conditions</td>
<td>56.63</td>
<td>2</td>
<td>28.34</td>
<td>4.6**</td>
</tr>
<tr>
<td>Rows (cartoon-version combinations)</td>
<td>19.21</td>
<td>2</td>
<td>9.61</td>
<td>1.56</td>
</tr>
<tr>
<td>'Judgemental set' x rows</td>
<td>28.34</td>
<td>4</td>
<td>7.09</td>
<td>1.15</td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>1053.16</td>
<td>171</td>
<td>6.16</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td>2266.67</td>
<td>360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cartoons</td>
<td>1.38</td>
<td>2</td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>Versions</td>
<td>575.63</td>
<td>2</td>
<td>287.82</td>
<td>67.41*</td>
</tr>
<tr>
<td>Cartoons x 'judgemental set'</td>
<td>59.27</td>
<td>4</td>
<td>14.82</td>
<td>3.47*</td>
</tr>
<tr>
<td>Versions x 'judgemental set'</td>
<td>21.56</td>
<td>4</td>
<td>5.39</td>
<td>1.26</td>
</tr>
<tr>
<td>Cartoons x versions</td>
<td>84.51</td>
<td>2</td>
<td>42.26</td>
<td>9.90*</td>
</tr>
<tr>
<td>Cartoons x versions x 'judgemental set'</td>
<td>63.94</td>
<td>4</td>
<td>15.99</td>
<td>3.74*</td>
</tr>
<tr>
<td>Error (within)</td>
<td>1460.38</td>
<td>342</td>
<td>4.27</td>
<td></td>
</tr>
</tbody>
</table>

* *p < .01

** p < .05
Table 10
Mean Retaliation Ratings of Retaliation Versions
for 'Judgemental Set' Conditions

<table>
<thead>
<tr>
<th>'Judgemental Set' Conditions</th>
<th>Retaliation Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under</td>
</tr>
<tr>
<td>Benign art and literature items-</td>
<td>- .31&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>low fidelity cartoons</td>
<td></td>
</tr>
<tr>
<td>Benign art and literature items-</td>
<td>- .04&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>high fidelity cartoons</td>
<td></td>
</tr>
<tr>
<td>Hostile art and literature items-</td>
<td>- .75&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>low fidelity cartoons</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Means displaying the same letter subscript within a row are significantly different (p < .01).
Three within-subject interaction effects were found for cartoon-'judgemental set' (F = 3.47, p < .01) cartoon-retaliation version (F = 9.9, p < .01), and cartoon-retaliation version-'judgemental set' (F = 3.74, p < .01) interactions. These interactions are summarized in Tables 11, 12, and 13 respectively.

As shown in Table 11, the retaliation versions for each cartoon separately fell into the expected order, though the under retaliation version for umbrella cartoon was judged as slightly over retaliatory (+0.3) and under and fair retaliation versions for umbrella and arrow cartoons were not significantly different (p > .05).

Examination of Tables 12 and 13 indicate that as compared with the pre-test results, the conditions (art and literature items) included in the experiment to both disguise its purpose and manipulate 'judgemental set' may have differentially influenced both the overall level of retaliation perceived in the cartoons as well as within the individual versions themselves. As shown in Table 13 though, under each of the three 'judgemental set' conditions the retaliation judgements of the versions for each cartoon separately are in the expected order and through counterbalancing and averaging these results, the overall differences between under, fair, and over
### Table 11
Mean Retaliation Ratings of Retaliation Versions for Cartoons

<table>
<thead>
<tr>
<th>Retaliation Versions</th>
<th>Cartoons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Soup</td>
</tr>
<tr>
<td>Under</td>
<td>-1.20 (^a)</td>
</tr>
<tr>
<td>Fair</td>
<td>+.99 (^a)</td>
</tr>
<tr>
<td>Over</td>
<td>+2.45 (^a)</td>
</tr>
</tbody>
</table>

\(^{ab}\) Means displaying the same letter subscript within a column are significantly different (p < .01).

### Table 12
Mean Retaliation Ratings of Cartoons for 'Judgemental Set' Conditions

<table>
<thead>
<tr>
<th>'Judgemental Set' Conditions</th>
<th>Cartoons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Soup</td>
</tr>
<tr>
<td>Benign art and literature-low fidelity cartoons</td>
<td>+ .49 (^a)</td>
</tr>
<tr>
<td>Benign art and literature-high fidelity cartoons</td>
<td>+ .68</td>
</tr>
<tr>
<td>Hostile art and literature-low fidelity cartoons</td>
<td>+1.07 (^a)</td>
</tr>
</tbody>
</table>

\(^a\) Means displaying the same letter subscript within a column are significantly different (p < .01).
Table 13

Mean Retaliation Ratings for Cartoons, Retaliation Versions and 'Judgemental Set' Conditions

<table>
<thead>
<tr>
<th>Art and Literature Items - Cartoon Fidelity</th>
<th>Benign-low Cartoons</th>
<th>Benign-high Cartoons</th>
<th>Hostile-low Cartoons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Soup</td>
<td>Umbrella</td>
<td>Arrow</td>
</tr>
<tr>
<td>Under</td>
<td>-1.5^a</td>
<td>+.6</td>
<td>-.1^a</td>
</tr>
<tr>
<td>Fair</td>
<td>+.6^a</td>
<td>+.5</td>
<td>+.3^b</td>
</tr>
<tr>
<td>Over</td>
<td>+2.3^a</td>
<td>+.3</td>
<td>+2.2^ab</td>
</tr>
</tbody>
</table>

^a^b Means displaying the same letter subscript within a column are significantly different (p < .05).
retaliation versions were found as expected for each 'judgemental set' condition (see Table 10).

**Hostility Ratings.** The F ratio for retaliation versions (Table 14) was highly significant (F = 69.82, p < .01). The differences between the means for under (4.26), fair (4.71), and over (6.0) retaliation versions were all statistically significant (p < .01). While under, fair and over retaliation versions were found more hostile respectively summed over all three 'judgemental set' conditions (Table 15), the significant interaction between 'judgemental set' conditions and retaliation level (F = 2.97, p < .05) is accounted for by the fact that under and fair retaliation versions for subjects judging *benign* art and literature items—low fidelity cartoons and *hostile* art and literature items—low fidelity cartoons were not found significantly different (p > .05) and were found significantly different by subjects judging *benign* art and literature items—high fidelity cartoons. Subjects in all three 'judgemental set' conditions judged over retaliation versions significantly more hostile than fair versions (p < .01).

A main effect for cartoons was found (F = 22.03, p < .01) with soup (5.13) and umbrella (5.41) cartoons judged more hostile (p < .01) than the arrow cartoon (4.42). While arrow cartoons were judged less hostile in each
Table 14
Summary of Analysis of Variance Hostility Ratings

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Subjects</td>
<td>1564.95</td>
<td>179</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'Judgemental set' conditions</td>
<td>396.04</td>
<td>2</td>
<td>198.02</td>
<td>30.19*</td>
</tr>
<tr>
<td>Rows</td>
<td>247.91</td>
<td>2</td>
<td>12.46</td>
<td>1.90</td>
</tr>
<tr>
<td>'Judgemental set x rows'</td>
<td>21.82</td>
<td>4</td>
<td>5.46</td>
<td></td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>1122.18</td>
<td>171</td>
<td>6.57</td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td>1172.0</td>
<td>360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cartoons</td>
<td>92.51</td>
<td>2</td>
<td>46.26</td>
<td>22.03*</td>
</tr>
<tr>
<td>Versions</td>
<td>293.24</td>
<td>2</td>
<td>146.62</td>
<td>69.82*</td>
</tr>
<tr>
<td>Cartoons x 'judgemental set'</td>
<td>21.58</td>
<td>4</td>
<td>5.40</td>
<td>2.57**</td>
</tr>
<tr>
<td>Versions x 'judgemental set'</td>
<td>24.92</td>
<td>4</td>
<td>6.23</td>
<td>2.97**</td>
</tr>
<tr>
<td>Cartoons x versions</td>
<td>14.34</td>
<td>2</td>
<td>7.17</td>
<td>3.41**</td>
</tr>
<tr>
<td>Cartoons x versions x 'judgemental set'</td>
<td>8.64</td>
<td>4</td>
<td>2.16</td>
<td>1.03</td>
</tr>
<tr>
<td>Error (within)</td>
<td>716.77</td>
<td>342</td>
<td>2.10</td>
<td></td>
</tr>
</tbody>
</table>

*p < .01

**p < .05
Table 15
Mean Hostility Ratings for 'Judgemental Set' Conditions and Retaliation Versions

<table>
<thead>
<tr>
<th>'Judgemental Set' Conditions</th>
<th>Retaliation Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under</td>
</tr>
<tr>
<td>Benign art and literature items-</td>
<td>4.7^a</td>
</tr>
<tr>
<td>low fidelity cartoons</td>
<td></td>
</tr>
<tr>
<td>Benign art and literature items-</td>
<td>4.6^a</td>
</tr>
<tr>
<td>high fidelity cartoons</td>
<td></td>
</tr>
<tr>
<td>Hostile art and literature items-</td>
<td>3.4^a</td>
</tr>
<tr>
<td>low fidelity cartoons</td>
<td></td>
</tr>
</tbody>
</table>

^aMeans displaying the same letter subscript within a row are significantly different (p < .01).
'judgemental set' condition a significant interaction (p < .05) between 'judgemental set' and cartoon resulted from soup and umbrella cartoons being judged more or less hostile than the other in different 'judgemental set' conditions (see Table 16). These types of differences are counterbalanced by the experimental design.

As shown in Table 17, while under, fair and over retaliation are always judged more hostile respectively for each cartoon, the retaliation level-cartoon interaction (p < .05) is due to the lack of significance (p > .05) between under and fair retaliation versions for soup and umbrella cartoons and the significant difference (p < .01) between these versions found for the arrow cartoons. The difference between the fair and over versions was in all cases significant (p < .01).
Table 16
Mean Hostility Ratings for Cartoons and 'Judgemental Set' Conditions

<table>
<thead>
<tr>
<th>Cartoons</th>
<th>Art and Literature Items-Cartoon Fidelity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>benign-low</td>
</tr>
<tr>
<td>Soup</td>
<td>5.9&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Umbrella</td>
<td>5.7&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Arrow</td>
<td>4.6&lt;sup&gt;ab&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>ab</sup>Means displaying the same letter subscript within a column are significantly different (p < .01).

Table 17
Mean Hostility Ratings for Retaliation Versions and Cartoons

<table>
<thead>
<tr>
<th>Cartoons</th>
<th>Soup</th>
<th>Umbrella</th>
<th>Arrow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under</td>
<td>4.6&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4.9&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.3&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Fair</td>
<td>4.9&lt;sup&gt;b&lt;/sup&gt;</td>
<td>5.3&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4.0&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Over</td>
<td>5.9&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>6.1&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>6.0&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>ab</sup>Means displaying the same letter subscript within a column are significantly different (p < .01).
Chapter 5

DISCUSSION AND CONCLUSIONS

The present study carried out in the guise of an experiment in aesthetics had two distinct purposes. The first involved examining the validity of a two-dimensional approach which postulates that an observer may interpret a humour communication as playful or serious independently of whether he defines it as fantasy or reality. Specifically, in the present study the communications (cartoons) were always defined for the subject as humorous fantasy and the subjects' perceptions of these materials as serious or playful were manipulated. It was predicted that subject's 'judgemental set' would differentially affect the amusement ratings of cartoons in which the level of aggression enacted by the characters and the injustice of their behaviors toward one another were varied. The second purpose of this study was to establish conditions which would allow the conflicting predictions of several competing humour models to be compared. These models have attempted to predict the effects of the interaction between an observer's attitudes toward aggression and injustice and the level of aggression and injustice depicted in humorous fantasy.
Before interpreting the results of the present study a few comments should be made concerning the deception of leading subjects to believe they were judging literary, visual-pictorial art and cartoon-humour items in a study of aesthetics. The two sets of art and literature items (benign and hostile) were used to contribute to creating serious and playful judgemental sets. Particularly important in creating the playful set was to ensure that the subjects not suspect that the experimenter was only interested in the cartoons and the subjects' reactions to the violence and injustices depicted. Other studies have been criticized here either for purposely or inadvertently focusing the subjects' attention on these features and causing subjects, consciously or unconsciously, to modify their amusement judgements in socially desirable directions. Therefore, the present technique was utilized so that subjects viewed the cartoons as only one of three types of aesthetic items to be judged. For similar reasons all the benign art and literature items were selected to be free of reference to human aggression and injustice. On the other hand, art and literary items used to create a serious judgemental set were selected to make subjects conscious of the violence and injustice depicted in the cartoons. It has been argued that a fault of much of the
humour research is that it forces subjects to take humour seriously resulting in findings which may not characterize actual humour responsiveness outside the psychological laboratory.

An evaluation of the subjects' perceptions of the experiment and its purpose was made either immediately following the testing sessions or several days later. The subjects questioned, reported that they accepted the experiment as a study in aesthetics and perceived all three types of items of equal interest to the experimenter. Interestingly, though not unexpectedly, subjects viewing the hostile art and literary items frequently indicated their belief that the experimenter was interested in violence or human cruelty in art. Subjects who rated benign items rarely mentioned violence with respect to the cartoons. No subjects discriminated between the manipulated and unmanipulated cartoons—even when asked if some of the cartoons were different than the others. The unmanipulated cartoons appear to have been successful in further disguising the experimental manipulations.

**The Playful-Serious Manipulation**

The usefulness of the playful versus serious set distinction was strongly supported. The significant interaction between 'judgemental set' conditions and level of retaliation was accounted for by the significant
difference in patterns of responses to under, fair and over retaliation, particularly by subjects in the playful versus two serious conditions.

Two techniques were used to lead subjects to adopt a serious set--two groups of subjects were required to judge either hostile art and literature items or high fidelity cartoons but not both (see Figure 2, p. 16). When these two groups are compared with the group judging benign art and literature items and low fidelity cartoons the effects of the two different techniques on amusement ratings (and indirectly on the adoption of a serious judgemental set) could be assessed.

Requiring two groups of subjects to judge either benign or hostile art and literature items prior to rating the low fidelity cartoons provided the means for manipulating cues "external" to the humour communications. One group of serious subjects rating low fidelity cartoons and who were exposed to the hostile, art and literature items judged under and fair versions marginally significantly different (p < .06) and fair and over retaliation significantly different in amusement (p < .05). This trend for a decrease in amusement from under to over retaliation versions was not found for playful subjects who were exposed to benign art and literature items. The slight but insignificant (p > .10) increase for playful subjects from under to over retaliation supports the hypothesis that subjects adopting a playful judgemental set would not judge less amusing those cartoons depicting greater
injustice as would subjects adopting a serious set.

Until the Gutman (1968) dissertation, later reported by Gutman and Priest (1969), humor was said to be aggressive on the basis of some global judgement of the humor communication. If a study required humor items of varying levels of "aggression" these were selected by a panel of "expert" judges—usually clinical psychology students. Selections were made without attention to the nature of the characters or justification for the behaviors depicted in the humor drama. This approach was highly influenced by Freud who distinguished three basic "types" of humor (aggressive, sexual, and nonsense). Singer, Gollob and Levine (1967) pre-selected "nonsense" and "aggressive" cartoons in this manner. They found that the "mobilization of inhibitions" against aggression led subjects to judge the "aggressive" cartoons less amusing than the "nonsense" cartoons. Using a method similar to that utilized in the present study to manipulate cues "external" to the humor communication, subjects who first viewed art items containing no human violence judged the "aggressive" cartoons not significantly different in amusement from "nonsense" cartoons. The findings of the Singer et al. study while consistent with the playful-serious hypothesis failed to find a significant difference between two degrees of "aggressive" cartoons and suggests
little concerning the role of interpersonal aggression or justice as depicted in the mini-drama of a humour communication.

Freud (1960) argued, as have many others, that in order for so-called "aggressive" humour to be successful it must provide distraction so that the person does not immediately become fully aware of what he is laughing at. The present playful-serious distinction recognizes, as did Freud, that inhibitions derive from internalized carry overs (attitudes and beliefs) of "parental" and "social condemnation" of aggression, though without Freud's commitment to the position that the enjoyment of this humour is enhanced by innate aggressive impulses.

The second technique used to create a serious judgemental set was suggested by the frequent use of the "cartoon technique" by comic strip cartoonists and producers of animated children's cartoons. A quote from Walt Disney (Flugel, 1954) regarding the ability of "cruel and sadistic" happenings to evoke laughter when made "tolerable by the cartoon technique" summarizes the essential idea behind the manipulation.

Subjects in two of the three judgemental set conditions judged benign art and literature items prior to rating either low or high fidelity cartoons. Fidelity was a manipulation of cues "internal" to the humour
communication. The "serious" subjects, in this case created by exposure to high fidelity cartoons following the rating of benign art and literature items judged over retaliation significantly less amusing (p < .01) than fair, while under retaliation was judged not significantly different in amusement than fair (p > .05). It had been expected that increasing the "humaness" of the cartoon characters and the "realism" of the damage inflicted upon the victim would "activate" a serious judgemental set. The high fidelity over retaliation versions were found significantly less amusing than the high fidelity fair retaliation versions. Since no significant difference was found between low fidelity fair and over versions partial support is suggested for the playful-serious distinction—at least for the role played by cartoon fidelity. Failure to find a significant difference between high fidelity under and fair versions questions though, the complete adequacy of the fidelity manipulation. This failure is open to several alternative explanations.

The different aggressive actions and injustices enacted in the mini-dramas of the cartoons appear to have affected humour appreciation only when subjects were switched into a serious judgemental set. The highly significant decrease in amusement found for both groups of "serious" subjects with respect to over retaliation
clearly demonstrates this point. The generality of the Gutman and Priest (1969) and Zillmann and Bryant (1974) predictions is open to question. Both groups of researchers assume that attitudes toward social justice and aggression will modify humour appreciation of all humorous fantasy depicting social injustice. Therefore, there is support for the present thesis that humour researchers by structuring the experimental situation, forcing subjects to adopt a serious judgemental set, have purposely or inadvertently eliminated the playful element in the appreciation of humour. As previously discussed, certain experimental procedures utilized in the studies by Gutman and Priest, Zillmann and Bryant and also in McGhee's (1974c) study of the role of moral development in humour appreciation may have led subjects to adopt a serious judgemental set. Eastman's (1936) suggestion that a "playatory" rather than a laboratory is needed for the experimental study of humour would seem to be a valuable one.

Justice and Balance Versus Retaliatory Equity as a Factor in the "Serious" Appreciation of Humour

Several models offer predictions concerning the relationship between the degree of aggression and injustice depicted and humour appreciation. Zillmann and Bryant predict a curvilinear relationship with under and over less amusing than fair retaliation while arguing that
Gutman and Priest would predict a linear decrease in humour appreciation from under to over retaliation. The two approaches agree that fair retaliation will be judged more amusing than over retaliation. The present experiment provided support for this prediction in both serious conditions.

While the equity model and Gutman and Priest's social justice and balance model predict similarly for over retaliation relative to fair, Zillmann and Bryant argue that the two models make conflicting predictions for under retaliation. These latter researchers speculate that under, fair and over retaliatory behavior by a victor would be judged decreasingly socially acceptable respectively. Since Gutman and Priest predict greater social acceptability to be accompanied by greater amusement, Zillmann and Bryant argue that these former authors would predict under retaliation more amusing than fair or over retaliation. Zillmann and Bryant predict that under retaliation is less amusing than fair retaliation.

The present author speculated that under retaliation may be viewed socially acceptable in certain cultures and socially unacceptable in others (e.g., depending on whether an individual held a turn-the-other-cheek or an eye-for-an-eye social norm). Subjects in the present study were required to rate the social acceptability of the
retaliation versions to empirically determine these social norms for the population from which the subjects were drawn. The social acceptability of the victor's behavior was found to increase from over, to fair, to under retaliation (p < .01) in both serious treatment conditions.

The "serious" subjects created by judging hostile art and literature items prior to rating low fidelity cartoons judged under retaliation, with marginal significance (p < .06), more amusing than fair retaliation. If we accept the significance of the greater amusement found for under versus fair retaliation, a prediction based on the Gutman and Priest (1969) model is supported while the Zillmann and Bryant (1974) prediction is not.

Based on the pre-test measurement of retaliation over retaliation (+4.3) was found more over retaliatory than under retaliation (-2.0) was under retaliatory. Therefore, the marginal .06 significance found for the difference in amusement between under and fair retaliation might have been greater had the under retaliation versions been created more under retaliatory. Unfortunately, inconsistencies between pre- and post-test retaliation ratings suggest that caution should be taken in interpreting the present study's results concerning under retaliation, though it may be the existence of under retaliation in humour that is the issue. Since the pre-test used in the present study was similar to the Zillmann and Bryant
pre-test, the validity or at least generalizability of the equity model may be questioned legitimately.

The "serious" subjects created by judging high fidelity cartoons preceded by exposure to benign art and literature items judged under retaliation not significantly different in amusement from fair retaliation, though the victor's under retaliatory behavior was judged significantly more socially acceptable than fair retaliation. Why this failure to find a trend for an increase in amusement from fair to under retaliation as found in the other "serious" condition? Again problems of achieving under retaliation may have contributed. Another explanation also appears possible. Increasing the "humaness" of the cartoon characters and the "realism" of the damage inflicted on the victim may not have "activated" the observer's negative attitudes toward aggression and injustice in each of the three retaliation versions. Only over retaliation high fidelity cartoon versions may have successfully switched the subjects into a serious judgemental set. In the high fidelity over retaliation versions the fatal damage was drawn to include blood and accurately depict tissue damage compared to the low fidelity over retaliation versions where the fatal damage was bloodless and stylistically characterized by the victim's body shattering like glass. The major difference between low and high fidelity versions of under and fair retaliation was primarily the degree of
"humanness" of the characters (anthropomorphized animal characters versus human-like characters). The damage depicted in the under and fair versions whether low or high fidelity was probably too similar in "realism" and not sufficiently extreme—no physical damage in under and no permanent or tissue damage in the fair retaliation versions. The subjects would, therefore, not react to the greater social unacceptability of the victor's behavior in the fair versions with less amusement than under. Only the high fidelity depiction of the extreme aggression and damage to the victim in the over retaliation version may have accomplished the playful to serious switch.

**Manipulating Aggression and Injustice in Humour**

Following Gutman (1968) a number of studies have attempted to exercise greater control over the stimulus material by creating different versions of the same humour item through varying the behavior of the 'joke' or story protagonists. This approach allows greater control of the effects that different characters, punch lines, story plots, writing styles, etc. may have on humour appreciation.

The present study was unique in its attempt to achieve varying degrees of aggressive retaliation through the visual component of a cartoon, while holding the dialogue and punch line constant. Both the Gutman and Priest (1969) and
Zillmann and Bryant (1974) studies used written humour stories. Gutman and Priest varied the behavior of both victim and victor and Zillmann and Bryant achieved their manipulations by varying the behavior of only the victim.

The retaliatory equity model has been challenged by the findings of the present study in which a decrease in amusement occurred from under to over retaliation for the hostile art and literature items-low fidelity cartoon treatment condition. Zillmann and Bryant (1974) might criticize the validity of these findings on the basis that the under retaliation manipulation was inadequate. The pre-test results though, appear adequate with under (-2.0), fair (+.8) and over (+4.3) retaliation being judged significantly different (p < .01). The lack of symmetry with respect to the distance from fair to over and fair to under still allows an adequate test of the equity hypothesis since Zillmann and Bryant would still predict under to be less amusing than fair retaliation, though not as low in amusement as over retaliation.

Zillmann and Bryant (1974) reported that their own pre-test performed on under, fair and over versions yielded differences (p < .05) between the three versions of their written humour items. While only the mean retaliation score for the fair condition is reported in their article, Zillmann (personal communication) has stated that they also were unable to achieve symmetry with respect to under
and over retaliation. As in the present author's pre-test Zillmann and Bryant's subjects were able easily to rank order the versions according to degree of retaliation but the "scale value" of the under retaliation items was not as extreme as over. On the basis of the pre-test ratings of retaliation the present study's manipulations appear as adequate as those of Zillmann and Bryant (1974).

The post-test retaliation ratings also strongly confirmed that the subjects were able to rank order the versions according to degree of retaliation (p < .01). The asymmetry of under and over versions though, was even more pronounced in these post-test ratings. This shift may have resulted from a number of factors. In both the Zillmann and Bryant and the author's pre-tests the concept of a "squelch joke" and the meaning of under, fair, and over retaliation were explained verbally. In the author's post-test the meaning of retaliation was only briefly explained in the test booklets. Subjects may not have completely understood the nature of under retaliation. Of course, if subjects did not understand the nature of under retaliation, can it actually be expected that a condition of under retaliation will influence humour appreciation. Perhaps subjects could only distinguish the under retaliatory version as under retaliatory when presented with all three versions of each cartoon as occurred in both the author's and Zillmann and Bryant's
pre-tests. This suggests the problem that under retaliation may not exist in humour, and that while an observer can distinguish between the social acceptability, hostility and degree of retaliation of the protagonists' behaviors he may not define a character who delivers a clever punch line as under retaliating. The post-test differences for judged degree of retaliation can be taken to suggest that the present study failed to achieve an under retaliation condition. But since the under retaliation versions clearly were judged under retaliatory in a pre-test similar to Zillmann and Bryant's pre-test, if also can be questioned whether their subjects distinguished under retaliation. Coupled with the criticisms made by La Fave et al. (1976) which suggest that support for the retaliatory equity model may have been due to experimental artifacts resulting from the nature of the technique used to manipulate the degrees of retaliation, there is evidence to question the model's usefulness.

Under Retaliation, Understatement and Gallows Humour

Creating a cartoon or 'joke' which subjects will judge under retaliatory may be difficult. Developing a humour mini-drama in which the victor's verbal retort (punch line) falls far short of "objectively" repaying the butt is possible though. So-called "British Understatement" and "Gallows" humour appear to rely on this
technique. For example:

A captioned cartoon shows an armless and legless man being carried through a crowd to a scaffold to be hanged. The low fidelity drawing of the event makes it obvious that the captive's military captors and torturers are responsible for his dismemberment. With bravado and glee the prisoner berates his captors for making a great mistake, for now he cannot be coerced to salute or stand at attention for the emperor.

The result is greater amusement perhaps, than if the retaliation were manipulated to be "objectively" equivalent (e.g., if somehow the captive caused an equivalent amount of damage to his torturers). Equitable retaliation would have no meaning here. Understatement has been recognized by Eastman (1936) to be an accepted technique for creating humour. He argues that, "The fact that their serious predicament has been understated to the point of absurdity makes us see their woes as laughable, not tragic" (p. 199). Obrdlik (1942) further suggests that "Gallows" humour, a form of understatement, often emerges from oppressed groups "who literally face death at any moment" (p. 712). He argues that "Gallows" humour may create cohesion in the oppressed group and undercut the morale of the oppressor.

In the present experiment it would have been possible to have the victim originally more seriously damage the victor, increasing the distance between the under and fair versions (of course, this would make the difference between fair and over more difficult to achieve).
This manipulation also may have led the victim's verbal retort (under retaliation) to generate more amusement than fair retaliation counter to retaliatory equity prediction—based on the fact that the under retaliation condition now would approximate a humour item utilizing the understatement humour technique.

"Playful" Appreciation of Aggression and Injustice in Humour

No significant difference was found between under, fair and over retaliation versions by "playful" subjects. The author had suggested that a significant increase in amusement from under to over retaliation might be found based on incongruity theory. Since the subject does not evaluate the aggression seriously he is free to enjoy the unexpected and highly exaggerated over retaliatory behavior of the victor and damage to the victim. Perhaps, the degree of exaggeration and expectancy violation was insufficient.

Psychoanalytic theory also has been used to derive a prediction for an increase in amusement with an increase in depicted damage and aggression (Zillmann and Bryant, 1973). Arguing that the enjoyment of "aggressive" humour is a function of the release of repressions and that higher levels of brutality are usually associated with stronger repressions and greater punishments, the depiction of highly violent incidents is predicted to lead to a greater release
of inhibitions and to greater amusement than the depiction of less extreme levels of brutality.

The previously mentioned study reported by Singer et al. (1967) was unable to test the above hypothesis, though subjects rated cartoons selected to represent "nonsense" and two levels of "aggressiveness." These cartoons also had been pre-selected to be equally amusing plus the two conditions of "aggressiveness" contained different cartoons. The latter technique would make difficult the determination of the factors responsible for any fluctuations in amusement.

Zillmann and Bryant (1973) while creating several versions of a cartoon, varying in "interpersonal" aggression, failed to support the hypothesis. They report technical difficulties which may have resulted in their subjects seeing through the disguise of the experiment—in the present author's terminology, causing the subjects to adopt a serious rather than playful judgemental set.

Conclusions

Whether or not the distinction made in the present study is labelled playful-serious, it appears important to recognize that the analysis of the role played by ego-involving attitudes toward the characters, their behavior and the issues or themes depicted in the humour requires consideration be given to the subject's "mental set"—
following from his definition of the context in which he encounters the humour communication, his beliefs concerning its purpose, etc. The appreciation of humour may be quite different in a night club compared to the psychological laboratory.

The present study has further documented the tendency for higher levels of interpersonal aggression depicted in humour, particularly when unjustified, to be accompanied by decreases in humour appreciation.

Support was not provided though, for the Zillmann and Bryant (1974) notion of under retaliation in humour. While the subjects generally may have failed to view the under retaliation condition as sufficiently under retaliatory during the course of the experiment, the Zillmann and Bryant experiment is open to the same criticism. The present author has suggested that the role of under retaliation in humour as it relates to the humour techniques of "understatement" and "Gallows' humour warrants further study.

While two types of cues were utilized to activate a serious judgemental set in the present experiment, many conditions may cause our attitudes toward aggression and injustice to intrude into the playful contemplation of humour. Socialization into one's culture through family, educational system, popular literature, cinema, etc. alert us that certain symbolic fantasy forms are to be taken
seriously, being intended to engage our notions of justice and morality in an attempt to explore the "human condition" and often promote attitude change. The playful-serious distinction might prove useful in analyzing the ability of a humorous communication to promote attitude change, particularly satire which may "humorously" depict social injustice to criticize current social practices (e.g., Archie Bunker?). Does satire provide a useful medium for attitude change? Certainly it may protect the satirist from persecution by the authorities in the event that his message is threatening and adequate safeguards for his civil liberties do not exist. But what if this social criticism, dressed in humour, is taken playfully by the target group rather than seriously? Similarly, the effects of television violence in children's cartoons and adult dramas on attitudes toward violence may be mediated by the 'judgemental set' characteristically adopted.

The present study demonstrated that the interpretation of a humorous communication as fantasy or make-belief is not a sufficient condition to ensure that highly aggressive and unjust actions will be found maximally amusing. The adoption of a playful 'judgemental set' in which the observer's attitudes toward aggression and injustice are not 'activated' or made to appear 'relevant'
also seems necessary. High and low cartoon fidelity and benign and hostile art and literature evaluation tasks were two factors influencing 'judgemental set' examined.
APPENDIX A

Manipulated Cartoons
WATER. THIS RESTAURANT IS A DUMP!

IT'S POSSIBLE THE CHEF USED TO BE A TAILOR!

IT LOOKS LIKE THE KIND OF PLACE YOU'D FIND A FLY IN YOUR SOUP.
WHAT DO YOU MEAN, I DON'T WORK HERE?

AND I DON'T WORK HERE. I DON'T KNOW WHAT OWNERSHIP MEANS.

YOU'RE TOLD ME THAT THESE WORLDS

EVER TOUCH EACH OTHER, ONE IS OCEAN, ONE MOUNTAIN.

I DON'T KNOW WHAT OWNERSHIP MEANS.

GOING OUT WITH THAT IDEA ARTIST.

I THINK YOU'RE SO ACCURATE YOUNG.
CHART I: LILLO THOROUGH THE DIGESTIVE SYSTEM

I LAVE THOUGHT HE DIGESTIVE SYSTEM PROPOSED HE DO U.S. HE TOLD YOU HE FOUND GOING OUT WITH THAT STRANGE MESS.

I HATE YOUR SO LACQUER YOUR N.}

NO, BUT I TOLD HE THINK THEY WERE.
4
She's gone out 11

4
Know it
How do you

4

4

Hi

4

Hi

4

Is your boss
Expecting her

Sheru, et
Ye-Yen

Ahoh
IT'S POSSIBLY THE CHEF USED TO GET A TULIP ON.

I'M IN YOUR SOUP!

IT LOOKS LIKE THE KIND OF PLACE, YOUR FRIEND.

RESTAURANT ISN'T DUMPED.
It's possible the chief used to be a tailor!

Waiter, this restaurant is a dump!

It looks like the kind of place you'd find a fly in your soup!
Kim will they were.
And I don't ask
A lot of things in the past he was
No, but he told me that there were

I hear you're so disagreeable you are.
Can't touch he didn't stand
He go farthest, all once proposed
I don't suppose he told you he found
Going out with that stupid article.
CHANCE! EVEN THOUGH HE DIDN'T STAND A CHANCE, I STILL TRIED. I DON'T SUPPOSE HE TOOK YOU TO HEATO. DOING OUR LITTLE STRESS. NOT LIKE YOU'RE IMPORTANT.
She's gone.

How do you know me?

Hello."

Excuse me? Is your sister Naco Hill?
How do you know me?

Is your sister exercising here?

Hello! How are you?
APPENDIX B

Pre-test Retaliation and Hostility Scales
RATING SCALES

Item # __

-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5

retaliation falls far too short retaliation is just right retaliation goes much too far

8 very hostile
7
6
5 somewhat hostile
4
3
2
1
0 not at all hostile

Item # __

-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5

retaliation falls far too short retaliation is just right retaliation goes much too far

8 very hostile
7
6
5 somewhat hostile
4
3
2
1
0 not at all hostile

Item # __

-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5

retaliation falls far too short retaliation is just right retaliation goes much too far

8 very hostile
7
6
5 somewhat hostile
4
3
2
1
0 not at all hostile
APPENDIX C

Distractor Cartoons
1. I mean, you don't want to put up with this, right?
2. Take your team on, then.
3. I haven't seen the evidence until today.
4. How are you fixed?
APPENDIX D

Hostile Art and Literature Items and Cartoon Instructions and Rating Scales
INSTRUCTIONS

You are asked to judge three types of materials: (1) literary passages, (2) visual-pictorial art, (3) cartoon-humor. The administrator will briefly explain the use of the various scales you will use in recording your judgements.

TURN THE PAGE
INSTRUCTIONS FOR JUDGEMENTS OF THE LITERARY PASSAGES

After reading these instructions turn to the first literary item (Item #1) in the AESTHETIC-ITEM Booklet and read this passage once; also turn to Item #1 on the next page of this booklet. You will find two types of rating scales: (1) scales which range from 0 to 8 where you are asked to circle the number best representing your judgement of various characteristics of the materials you will be viewing, and (2) several "seven-point" scales consisting of pairs of adjectives. Mark all scales in a manner which best represents your judgements. Follow this procedure for the three literary passages. You will then come to the instructions for the visual-pictorial art items. (ALWAYS MAKE SURE THAT THE NUMBERS IN THE TWO BOOKLETS CORRESPOND.) Now turn to Item #1 in both booklets.
1. Please indicate your liking for Aesthetic Item # by circling a number on the scale below. Some of the numbers have phrases beside them, others do not. The phrases are guides to help you in using the scale. Circle the number below that best indicates your feeling about the passage.

8 like very much
7
6
5 like somewhat
4
3
2
1
0 like not at all

2. Please indicate how hostile you find the situation described in this passage by circling a number on the scale below.

8 very hostile
7
6
5 somewhat hostile
4
3
2
1
0 not at all hostile

3. Please indicate your impression of the literary passage by marking an "X" on each of the scales below for each pair of adjectives. Choose a position on the scale which best indicates your impression of the passage.

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<tr>
<td>beautiful</td>
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</table>

kind
soft
bad
light
strong
ugly

TURN TO NEXT PAGE FOR ITEM #
INSTRUCTIONS FOR JUDGEMENTS OF THE VISUAL-PICTORIAL ITEMS

After reading these instructions turn to the first visual-pictorial item (Item #4) in the AESTHETIC-ITEM Booklet and look at it; also turn to Item #4 on the next page of this booklet. Again, complete the two types of rating scales. Follow the same procedure with all 5 visual-pictorial items. Now turn to Item #4 in both booklets.

TURN PAGE FOR ITEM #4
1. Please indicate your appreciation for Aesthetic Item # by circling a number on the scale below. Circle the number below that best indicates your feeling about the item.

8 appreciate very much
7
6
5 appreciate somewhat
4
3
2
1
0 appreciate not at all

2. Please indicate how hostile you find the situation shown in this item by circling a number on the scale below.

8 very hostile
7
6
5 somewhat hostile
4
3
2
1
0 not at all hostile

3. Please indicate your impression of the visual-pictorial art item by marking an "X" on each of the scales for each pair of adjectives. Choose a position on the scale which best indicates your impression of the item.

1 2 3 4 5 6 7

cruel _______ _______ _______ _______ _______ _______ _______ kind

hard _______ _______ _______ _______ _______ _______ _______ soft

good _______ _______ _______ _______ _______ _______ _______ bad

heavy _______ _______ _______ _______ _______ _______ _______ light

weak _______ _______ _______ _______ _______ _______ _______ strong

beautiful _______ _______ _______ _______ _______ _______ _______ ugly

TURN TO NEXT PAGE FOR ITEM #
INSTRUCTIONS FOR JUDGEMENTS OF THE CARTOON-HUMOR ITEMS

Turn to the first cartoon-humor item (Item #9) in the AESTHETIC-ITEM Booklet and read and look at it; also turn to Item #9 on the next page of this booklet.

TURN PAGE FOR ITEM #9
AESTHETIC ITEM #  

1. Please indicate how amusing you find Aesthetic Item # by circling a number on the scale below. Circle the number below that best indicates your feeling about the cartoon.

9 very amusing
8
7
6
5
4 somewhat amusing
3
2
1
0 not at all amusing

2. Please indicate how hostile you find the situation shown in this item by circling a number on the scale below.

8 very hostile
7
6
5
4 somewhat hostile
3
2
1
0 not at all hostile

3. Please indicate your impression of the cartoon-humor item by marking an "X" on each of the scales for each pair of adjectives. Choose a position on the scale which best indicates your impression of the item.

1 2 3 4 5 6 7

---
cruel
hard
good
heavy
weak
beautiful

---
kind
soft
bad
light
strong
ugly

TURN TO NEXT PAGE FOR ITEM #
APPENDIX E

Hostile Art and Literature Items
The mounted troop circled out over the sands and then came thundering back past the caravan in solid formation. One of them leaned from his saddle and tossed a coil of rope over the boy with the parasol. The little slave shrieked with terror as he was yanked from the ground and pinned to the rider's saddle while one expert hand tied the rope tightly around his waist. After making a loop, the rider tossed the struggling form into the air and the next in line caught the loop with a shrill whinny of delight. Up went the boy again, legs and arms moving frantically, to be caught by another of the galloping demons. The game became fast and furious, the whole troop rocking in their saddles with laughter and maneuvering to get the next turn. The cries of the boy were cut off as the violence of the motion drove the air from his lungs. Perhaps Nature decided to be merciful; at any rate his head hung limply after he had been transferred half a dozen times, and it seemed likely that he had fainted.

The sport came to an end when one grinning rider decided to use the flat of his sword instead of his hand. The blade turned with the weight and the edge cut through the rope. Falling to the ground with a thud, the body rolled over and over in the sand. A flying hoof crushed in his skull and, after a second horse had trampled over him, the form of the little slave lay as still as an empty bundle of rags. The jeering troop then rode back to camp.
At that instant I noticed that all the long mits had strong leather drawstrings, like a boot, and before I knew what was happening, the girls had whipped the laces together, tangling them into loose knots. The three men stared at each other trussed up in this way in their new stiff thumbless mits. They started to laugh at each other, trying to jerk their hands apart, which only served to tighten the knots.

One of the girls screamed into the entrance passage, "Tuavi. Tuavi. Hurry. Hurry." In horror I saw Tungilik come lunging through the entrance. He clutched his sea knife in his right hand.

Pilee knelt on the bed in front of him, shouting, writhing and fighting to free his hands from the binding mits, trying to reach around for his own knife. Tungilik lunged straight at him and drove the sea knife downward into the side of his neck. Then with his left hand he swiftly raised Pilee's parka and drove the blade up under his rib cage until it must have touched his heart.

As Pilee fell sideways, I saw Atkak, the strong man, leap into the snowhouse, knife in hand, and fling himself at Portagee. The big brown man, struggling against his bonds, rolled back on the bed, drew up his legs and in one smooth motion lashed out at Atkak with both feet. Atkak sprawled on the icy hardness of the snow floor, and Portagee, naked to the waist and still tearing at his bindings, roared and stamped over Atkak's body and threw his full weight against the side of the igloo. The curved snow wall gave away, and almost half of the roof blocks fell around him. His arms were still bound, and so great was his momentum that Portagee could not regain his balance. He stumbled and rolled across the snow outside the walls, jerking wildly at his lacing. Shartok, the comic, the fool, separated himself from the crowd of onlookers and ran, crouching, to the entrance. He snatched up a long, sharp killing spear and reared back in a slow comical way that had often made people laugh. He aimed and launched the harpoon. But this time he was not fooling. The point struck with great force, driving deep into the center of Portagee's naked back.

The big brown man stiffened in horror as he felt his death-blow. He struggled for an instant, but I could see his movements weaken as thick artery blood ran out and stained the snow. Shuddering, he drew his knees up to his chin, then straightened out and died without uttering a sound.
Torry slowly began to turn. Then came the rattling of the door knob. A cry and pounding on the heavy door. It was enough. Dowding leapt, his arm raised with the automatic. Torry twisted to one side, felt a ghastly sickening blow on his right shoulder, then sprang in close, his left hand going for Dowding's gun arm. Contact. Fingers slipping against the material of the dressing-gown sleeve, then a hold, pushing the man's arm up.

Dowding was clawing at his face with his left hand. Torry flicked his body to the left, then hard to the right. They spun like a pair of exhibition dancers. Dowding's breath came in gulps against Torry's cheek. There was something of the maniac about the man's strength as he tried to force his gun hand down. Panting. The trembling power of two men locked together. A crashing at the door. Then Torry suddenly found the advantage. Heaving with his left arm he brought Dowding's gun hand smashing down against the desk edge. Dowding grunted and the weapon thumped to the floor. Now, for the final moment. Torry let go and brought back his right arm. The fist caught Dowding in the mouth. He went back but kept his balance. Now the left, still to the face. That one was for the child in Berkshire. Another right, for the thing in the ditch, here. Dowding sprawled, whimpering against the wall. Torry's right knuckles smashed into his nose, the head going back and bumping against the wall. Blood. Lips screwed out of shape. Eyes glazed. Moaning. Torry pulled him up by the lapels of his dressing-gown, swung him round and connected again.
APPENDIX F

Benign Art and Literature Items and Cartoon Instructions and Rating Scales
1. Please indicate your liking for Aesthetic Item \# by circling a number on the scale below. Some of the numbers have phrases beside them, others do not. The phrases are guides to help you in using the scale. Circle the number below that best indicates your feeling about the passage.

8 like very much
7
6
5
4 like somewhat
3
2
1
0 like not at all

2. Please indicate your impression of the literary passage by marking an "X" on each of the scales below for each pair of adjectives. Choose a position on the scale which best indicates your impression of the passage.

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TURN TO NEXT PAGE FOR ITEM \#
1. Please indicate your appreciation for Aesthetic Item # by circling a number on the scale below. Circle the number below that best indicates your feeling about the item.

8 appreciate very much
7
6
5
4 appreciate somewhat
3
2
1
0 appreciate not at all

2. Please indicate your impression of the visual-pictorial art item by marking an "X" on each of the scales below for each pair of adjectives. Choose a position on the scale which best indicates your impression of the visual-pictorial item.

1 2 3 4 5 6 7

active ____________________________ passive
hard _____________________________ soft
wise _____________________________ foolish
calm _____________________________ excitable
slow _____________________________ fast
heavy _____________________________ light
thick _____________________________ thin

TURN TO NEXT PAGE FOR ITEM #
1. Please indicate how amusing you find Aesthetic Item # by circling a number on the scale below. Circle the number below that best indicates your feeling about the cartoon.

8 very amusing
7
6
5
4 somewhat amusing
3
2
1
0 not at all amusing

2. Please indicate your impression of the cartoon-humor item by marking an "X" on each of the scales below for each pair of adjectives. Choose a position on the scale which best indicates your impression of the item.

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TURN TO NEXT PAGE FOR ITEM #
APPENDIX G

Benign Art and Literature Items
ITEM 

They found that they were looking at a most extraordinary face. It belonged to a large Man-like, almost Troll-like, figure, at least fourteen foot high, very sturdy, with a tall head, and hardly any neck. Whether it was clad in stuff like green and grey bark, or whether that was its hide, was difficult to say. At any rate the arms, at a short distance from the trunk, were not wrinkled, but covered with a brown smooth skin. The large feet had seven toes each. The lower part of the long face was covered with a sweeping grey beard, bushy, almost twiggy at the roots, thin and mossy at the ends. But at the moment they noted little but the eyes. These deep eyes were now surveying them, slow and solemn, but very penetrating. They were brown, shot with a green light. Often afterwards Pippin tried to describe his first impression of them.

"One felt as if there was an enormous well behind them, filled up with ages of memory and long, slow, steady thinking; but their surface was sparkling with the present: like sun shimmering on the outer leaves of a vast tree, or on the ripples of a very deep lake. I don't know, but it felt as if something that grew in the ground—asleep, you might say, or just feeling itself as something between root-tip and leaf-tip between deep earth and sky had suddenly waked up, and was considering you with the same slow care that it had given to its own inside affairs for endless years."
The kalunait had been with us for less than one whole moon when the domes of all our snowhouses collapsed. It happened late one morning after the men of our camp had been out hunting most of the night and were all asleep. The wind was still, and the heat of the spring sun was strong. Suddenly the snowhouses were filled with blinding light. I could hear people laughing at themselves, shouting to their neighbors, babies crying and dogs howling. It was always like this with us. When the roofs crumbled, we laughed at ourselves for our laziness in not cutting the domes off the igloos when we knew they would fall. We also laughed with joy at the thought of a new season coming to us and did not mind the piles of snow scattered over our beds.

For a little while we lived within the crumbling walls of the snowhouses, and the women stretched makeshift roofs of sewn sealskins over them. The sun grew hot, and the melting snow revealed the vast gravel bank on the high ground behind the igloos. When the third moon of spring grew old, the big tides rose with mighty strength and carried away most of the heavy floes of winter ice that had clung outside our bay. The sea stretched endlessly beyond our land, sparkling deep blue in the sunlight.

It was almost time to move into tents, and everyone grew excited at the thought of the change. It did not grow dark at all now, and at midnight the sun only hid behind the edges of the hills, then rose again and followed its ancient course through the sky. It was time to move to the Big River, to move to the summer camp.
In his dream he was shutting the front door with its strawberry windows and lemon windows and windows like white clouds and windows like clear water in a country stream. Two dozen panes squared round the one big pane, coloured of fruit wines and gelatins and cool water-ices. He remembered his father holding him up as a child. 'Look!' And through the green glass the world was emerald, moss, and summer mint. 'Look!' The lilac pane made Concord grapes of all the passers by. And at last the strawberry glass perpetually bathed the town in roseate warmth, carpeted the world in pink sunrise, and made the cut lawn seem imported from some Persian rug bazaar. The strawberry window, best of all cured people of their paleness, warmed the cold rain, and set the blowing shifting February snows afire.
APPENDIX H

Post-Amusement Hostile Item Instructions and Rating Scales
INSTRUCTION-Scale Booklet 'B'

INSTRUCTIONS FOR JUDGING CONTENT OF AESTHETIC ITEMS

You are now asked to rate a selection of those items you have already rated. Now that you have given your overall impression of these items, we are interested in your opinion concerning the content of some of these items. Now turn to Item #1 in both booklets and after rating each item continue to the next.

TURN TO NEXT PAGE FOR ITEM #1
1. Please indicate how vividly the situation is described in this passage by circling a number on the scale below.

3 very vividly
7
6
5
4 somewhat vividly
3
2
1
0 not at all vividly

2. Please indicate the sympathy for the plight of the little slave that this passage is able to evoke.

8 very sympathetic
7
6
5
4 somewhat sympathetic
3
2
1
0 not at all sympathetic
1. Please indicate how terrifying you find the situation depicted by the artist by circling a number on the scale below.

8  very terrifying
7
6
5
4  somewhat terrifying
3
2
1
0  not at all terrifying

2. Please indicate how successful you feel the artist is in conveying the emotion of his subject matter by circling a number on the scale below.

8  very successful
7
6
5
4  somewhat successful
3
2
1
0  not at all successful
AESTHETIC ITEM #

1. How socially acceptable is character A's (labelled in Item # ) overall behavior in this cartoon?

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</thead>
</table>

VERY UNACCEPTABLE SOCIAL BEHAVIOR

SOMewhat UNACCEPTABLE SOCIAL BEHAVIOR

SOMewhat ACCEPTABLE SOCIAL BEHAVIOR

VERY ACCEPTABLE SOCIAL BEHAVIOR

2. How socially acceptable is character B's overall behavior in this cartoon?

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VERY UNACCEPTABLE SOCIAL BEHAVIOR

SOMewhat UNACCEPTABLE SOCIAL BEHAVIOR

SOMewhat ACCEPTABLE SOCIAL BEHAVIOR

VERY ACCEPTABLE SOCIAL BEHAVIOR

3. Please indicate how justified you find character B's retaliation at the end of the cartoon by drawing a vertical line through the appropriate place on the scale below.

| -5 | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 | +5 |

retaliation falls far too short

retaliation is just right

retaliation goes much too far

TURN TO NEXT PAGE FOR ITEM #
APPENDIX I

Post-Amusement Benign Item Instructions and Rating Scales
1. Please indicate how vividly the situation is described in this passage by circling a number on the scale below.

- 8 very vividly
- 7
- 6
- 5 somewhat vividly
- 4
- 3
- 2
- 1 not at all vividly

2. Please indicate how hostile you find the situation described in this passage by circling a number on the scale below.

- 8 very hostile
- 7
- 6
- 5 somewhat hostile
- 4
- 3
- 2
- 1 not at all hostile

TURN TO NEXT PAGE FOR ITEM #
1. Please indicate how joyful you find the situation depicted by the artist by circling a number on the scale below.

8  very joyful
7
6
5  somewhat joyful
4
3
2
1
0  not at all joyful

2. Please indicate how successful you feel the artist is in conveying the emotion of his subject matter by circling a number on the scale below.

8  very successful
7
6
5  somewhat successful
4
3
2
1
0  not at all successful

TURN TO NEXT PAGE FOR ITEM #
1. How socially acceptable is character A's overall behavior in this cartoon?

![Scale from -5 to +5]

VERY UNACCEPTABLE SOCIAL BEHAVIOR

SOMewhat UNACCEPTABLE SOCIAL BEHAVIOR

SOMewhat ACCEPTABLE SOCIAL BEHAVIOR

VERY ACCEPTABLE SOCIAL BEHAVIOR

2. How socially acceptable is character B's overall behavior in this cartoon?

![Scale from -5 to +5]

VERY UNACCEPTABLE SOCIAL BEHAVIOR

SOMewhat UNACCEPTABLE SOCIAL BEHAVIOR

SOMewhat ACCEPTABLE SOCIAL BEHAVIOR

VERY ACCEPTABLE SOCIAL BEHAVIOR

3. Please indicate how justified you find character B's retaliation at the end of the cartoon by drawing a verticle line through the appropriate place on the scale below.

![Scale from -5 to +5]

retaliation falls far too short

retaliation is just right

retaliation goes much too far

4. Please indicate how hostile you find the situation shown in this item by circling a number on the scale below.

8 very hostile

7

6

5

4 somewhat hostile

3

2

1

0 not at all hostile

TURN TO NEXT PAGE FOR ITEM #
APPENDIX J

Instructions Read to Subjects
INSTRUCTIONS READ TO SUBJECTS

You are being asked to participate in a study of aesthetics. Specifically that part of aesthetics which involves how we experience different forms of art. You need not have any special training in art because we are interested in your first impressions. You are asked to act as judges using your own feelings as a guide in judging the materials to be presented.

You are not required to give any form of personal identification since we do not need to know your name.

The materials will be handed out now. Further instructions will follow. Please do not examine the materials until instructed to do so.

This task will take approximately 20 to 30 minutes.
APPENDIX K

Instructions on Large Envelope and Envelope A
INSTRUCTIONS

Contained in this large envelop are 2 smaller envelopes marked A and B. After reading these instructions remove envelop A, setting this large envelop aside for now. The administrator will read the instructions for envelop A with you and demonstrate how your judgements of the enclosed material are to be recorded. Now remove envelop A.
INSTRUCTIONS

Contained in this envelop are: (1) a booklet of aesthetic items to be judged. You will find three types of aesthetic materials (literary passages selected from several novels, visual-pictorial art, cartoon-humor) and (2) a booklet of instructions and rating scales. This "instruction-scale" booklet will indicate what number of aesthetic item from the "aesthetic-item" booklet to judge. You are asked to look at and rate each item in the order presented, not to look ahead or go back to earlier pages, not to change any ratings once they have been made and not to communicate with any other judge. Please remove the two booklets from the envelop and follow the instructions on the first page of the instruction-scale booklet.
APPENDIX L

Last Page  Instructions of Booklet #1
INSTRUCTIONS

Now that you have completed rating the preceding items close both booklets and replace these in envelop A. Place envelop A in the large envelop and remove envelop B.
APPENDIX M

Instructions on Envelope B
INSTRUCTIONS

Remove the two booklets from envelop B and read the instructions on INSTRUCTION-SCALE BOOKLET 'B'.
APPENDIX N

Last Page Instructions of Booklet #2
THE END

Since some researchers have found that males and females react differently to various forms of aesthetic materials, we need to know your sex in order to analyze for sex differences. Please indicate your sex by checking the appropriate box below. This is the only form of identification we will be asking for from you.

☐ male       ☐ female

Now return the two booklets to envelop B, and envelop B to the large envelop. The administrator will pick these up from you.

THANK YOU VERY MUCH FOR YOUR COOPERATION
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