

HUMOR: A CRITIQUE OF CURRENT THEORIES AND RESEARCH

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CHAPTER ONE

HUMOR

Current research on humor has attracted the attention of scholars in such disciplines as anthropology, sociology, psychology, education, and communication. The humor literature reflects this diversity by including a broad range of research topics such as children's humor, black humor, ethnic humor, cross-cultural humor, psychotic humor as well as humor used by comedians, novelists, and playwrights. Communication research itself focuses on the functions and practical applications of humor in specific communication contexts, for example, therapeutic, educational, advertising, and interpersonal communication contexts. However, the research on humor does not always contribute directly to an understanding of humor itself.

What is humor? How can it be operationalized? How can it be experimentally manipulated? These questions are fundamental to theory construction and experimentation on humor. Without proper answers to these questions, it is difficult to ascertain whether specific research projects contribute to an understanding of the use of humor as a communication technique. The purpose of this study is to review and critique the major theories on the nature of

humor and the various methodologies used in humor research. This review will lead to a discussion of new directions for humor research. Prior to examining the various humor theories, it is important to describe how the research defines the concept of humor.

DEFINING AND MEASURING HUMOR

Any one who studies humor is confronted with the difficult task of theoretically and operationally defining humor. Some investigators argue that humor is a type of cognition; others contend that it is a form of emotion, and still others believe that it is a combination of cognitive and affective characteristics. Those who determine that humor is a type of cognition focus on the juxtaposition and the incongruity of ideas which elicit humor responses. They believe that humor is primarily a function of grouping ideas in different ways. Those who emphasize the emotions invoked by humorous stimuli concentrate on an individual's states of arousal or tension. They argue that humor induces a unique state of being. For instance, the feeling that something is funny, which can lead to smiling and/or laughing, is similar to the way that feelings of depression can lead to crying.

The problem of developing operational definitions is handled in two ways. Those studying humor have

operationalized it either by determining the elements within the humorous stimuli that subjects perceive to be funny or by equating humor with subjects' behavioral responses of smiling and laughing which accompany such stimuli. For example, Gruner (1976) defined humor as: laugh-or-smile-provoking stimuli of a good-natured sort, that is, likely to be minimally offensive to the object of the laughter or smiling. It is playful poking of fun with the sole aim of amusement. It is likely to deal with the inconsequential (or the serious treated as inconsequential), the whimsical, the incongruous. (p. 288)

In contrast, Foot and Chapman (1976) opted not to explicitly define humor but to construct operational definitions for the humor responses of laughing and smiling. For their experiment, laughter was defined as "inarticulate vocal sounds, of a reiterated ha-ha form." Smiling was defined as "an upward stretching of the mouth occurring without vocal sound but sometimes accompanied by a loud exhalation of breath at its genesis" (p. 196).

When researchers, such as Foot and Chapman, define and measure these humor responses in their experiments, they are implying that humor is defined in terms of these behavioral responses. McGhee (1977) clearly explains the difficulty that emerges when smiling and laughter are equated to humor when he states:

One might choose to operationally define humour in terms of measurable responses, such as laughter, which are known to be evoked in the presence of stimulus events commonly agreed upon as sources of humour (for example, jokes or cartoons), but the circular nature of this approach is immediately apparent. We must then define the peculiar properties of jokes and cartoons which lead to the common agreement that they are humorous. (p. 29)

Despite this paradox, the most prevalent operational definitions of humor created by researchers include both smiling and laughing. By employing definitions which use humor's behavioral correlates, researchers are circumventing the fundamental problem of understanding humor: the problem of identifying the specific qualities in humorous stimuli which make them humorous. However, current empirical work will strive to overcome this problem by examining both the creation of, and responses to humorous stimuli within specific communication contexts.

HUMOR AND COMMUNICATION

Humor serves as an important communication technique in a variety of social contexts. Four areas which have received considerable attention by researchers are humor's use in therapeutic, educational, advertising and social contexts. Within the therapeutic contexts, the role of humor in mental and physical health has been examined. For example, many clinical psychologists and psychiatrists employ humor in individual and group therapy sessions.

However, much of the experimental work in the area has generated mixed results. Some studies are finding that using humor techniques can facilitate client recovery (Grossman, 1977; Killinger, 1977; Hershkowitz, 1977; Salameh, 1983). Other studies result in warnings about the destructive effects of humor and caution therapists about the uncontrollable and negative factors which may inhibit a good therapist-patient relationship (Bloch, Browning, and McGrath, 1983; Sands, 1984; Kubie, 1971).

On a different note, research on humor's role in individuals' physical health has been very positive. Most of the studies have concentrated on the physiological correlates of humor which occur with laughter and smiling. Specifically, laughter has many of the same benefits as physical exercise in that it increases respiratory activity, heart rate, blood circulation to the brain, and activity of other metabolic systems (Fry, 1977; Fry, 1979; Robinson, 1983). In general, research has found that laughter and smiling are healthy behaviors.

Humor has been examined in different educational contexts, for example in children's educational television (Bryant, Hezel, and Zillman, 1979), communication textbooks (Bryant, Gula, and Zillman, 1980), and lectures (Kaplan and Pascoe, 1977). Although numerous studies have been conducted, the effectiveness of using humor on the

retention and learning of information has yet to be demonstrated. Findings generally indicate that humor is helpful in attention-getting, but not necessarily in the retention of an educational message.

Although educators and advertisers have different motives, both would like to understand the effectiveness of using humor on the retention and learning of information. Advertisers take the process one step further by trying to make inferences about how humor ultimately relates to consumer behavior and attitudes (Gelb and Pickett, 1983; Madden and Weinberger, 1982; Sutherland and Middleton, 1983; Murphy, Cunningham, and Wilcox, 1979; Duncan and Nelson, 1985; Brooker, 1981). Madden and Weinberger (1984) conducted a survey of advertising executives to synthesize the opinions of those individuals who decide when and how humor should be used. Executives felt that humor was most effective on radio and television commercials and least influential in direct mailings and newspapers. Humor was believed to help increase audience awareness and attention, but it was potentially disruptive to general comprehension. Overall, advertising executives did not think humor was directly linked to sales.

Many researchers have been interested in the social and communicative functions of humor. Kane, Suls, and

Tedeschi (1977) have described the flexibility and functions of humor in interpersonal interactions by positing that the use of humor:

can help the source to claim or disclaim responsibility for his/her actions, can reveal courage or relieve embarrassment, may invoke normative commitments or release the individual from commitments. Humour can serve such purposes because it generally can be interpreted in several different ways at the same time. The reason for this is that humour carries with it a cue that it is non-serious, that it is play. This means that the source can communicate a message and then take it back if need be by simply saying 'it was only a joke'. In fact, since everyone is aware of the ambiguous nature of humour the disclaimer may not even be necessary. At any rate the source can to some extent decide how s/he wishes his/her statement or action to be interpreted if s/he couches it in humorous terms. (p.13)

The authors distinguish six social functions of humor: self-disclosure and social probing, decommitment, face-saving, unmasking, antecedent of interpersonal attraction, and ingratiation. As a self-disclosure and social probing tactic, people use humor's ambiguous nature to approach taboo and serious subjects safely (Davis and Farina, 1970). As a decommitment tactic, individuals can use humor to deny the seriousness, harmful intent or responsibility for a behavior (Ullian, 1976). As a face-saving tactic, humor may be used to trivialize an embarrassing incident (e.g. "It could happen to anyone.") (Rosenfeld, Giacalone, and Tedeschi, 1983; Chapman, 1976). As an unmasking tactic, humor may be used to question a

person's identity or social "values", or to satirize political, social, or racial targets. Used in this way, humor allows one to question accepted policies and beliefs in a non-threatening manner. Humor may also occur as an antecedent of interpersonal attraction. Individuals may use humor to indicate spontaneity, cheerfulness, and openness to interact with others (Goodchilds, 1972; Gruner, 1976; Mann, 1961; Mettee, Hrelec, and Wilkens 1971). Finally, humor may be used as an ingratiating tactic when a person tries to appear more similar to another or conforms to expected norms in order to gain the favor of a powerful other. Although these six functions were initially based on Kane, Suls, and Tedeschi's assertions and observations, they are undergoing empirical testing.

A closely related concept to these six functions is that humor may be used as a form of social control (Powell, 1977; Nilsen, 1983). In addition, social laughter has been noted to act as a social lubricant and can be used to maintain the flow of conversations (Martineau, 1972; Foot and Chapman, 1976). Although humor's social functions have only recently attracted researchers' attention, they are wide open for further investigation.

In conclusion, humor appears within a variety of

different communication contexts ranging from contrived therapeutic techniques to situationally created anecdotes. Despite the pervasive appearance of humor across social contexts, the thought processes and emotional states involved during the creation of, or responses to humorous stimuli are not well understood. Humor theorists are aggressively attempting to uncover implicit and/or explicit rules which affect individuals' perceptions and appreciation of humorous stimuli. The common bond between the empirical work within each of four areas is not merely understanding the applications and effects of humorous stimuli within specific contexts but the quest to contribute to the understanding of humor itself.

There are four remaining chapters in this report. Chapter two reviews the major cognitive and affective humor theories that have been proposed to explain the creation of, and responses to humor. Chapter three identifies two major theoretical issues and will be applied to the corresponding theories from chapter two. Chapter four illuminates several methodological issues which arise from examining the humor literature. Finally, chapter five offers suggestions for further research.

CHAPTER TWO
THEORETICAL BASES FOR HUMOR RESEARCH

A considerable amount of effort has been devoted to developing theories and models of humor. Despite these efforts, a global theory of humor does not yet exist. McGhee (1977) characterizes the current state of humor models when he writes that the current restrictions of these models

might be best overcome by initially developing theoretical models designed to provide very molecular levels of explanation of humour phenomena. Only after numerous such models have been advanced will it be possible to achieve the integrated level of explanation required from more global models. (p. 27)

Whether or not one agrees with this inductive approach, it appropriately describes the current state of humor theories.

Those models and theories which have been proposed may be classified generally as either cognitive or affective according to their emphasis. However, most of these models treat both cognitive and affective components as coexisting factors in humor responses. The major cognitive theories may be categorized as incongruity theories, and the major affective theories are Freud's psychoanalytic theory of humor, Hobbe's Superiority theory, and Berlyne's arousal models.

COGNITIVE THEORIES

Cognitive theories of humor emphasize the role of incompatible and contrasting ideas, or unmet expectations. Humor results when a person perceives two or more ideas as incongruous. This incongruity is often surprising or unexpected and creates a temporary cognitive imbalance that is quickly resolved. These theories conceive humor as a type of cognition. Nerhardt (1976) contends that perceived incongruity between two unrelated ideas lies at the heart of every humorous situation.

One cognitive theory focuses on the surprise that results from incongruity. The first to mention this effect of incongruity was Aristotle. In his Rhetoric, he explains that one method for evoking audience laughter is to plant certain expectations in the listeners and then thwart their expectations. Two major contributors to incongruity theory were Kant and Schopenhauer (Morreall, 1983). Kant described laughter as the result of an anxious expectation turned into nothing, and Schopenhauer contended that laughter is the result of receiving something that is not expected.

From these conceptual foundations, Suls (1972) extends the notion that creating or perceiving an incongruity is only the first stage in a humor model. Since incongruity arises from certain expectations being

questioned, the questions must be answered. A humor response requires a respondent to be able to resolve the incongruity, resulting in the title incongruity-resolution theory.

The first stage of a humor event requires the perception of an incongruity. This perception will be based upon individuals' classifications of objects/ideas and their expectations about them. The second stage is the resolution of that incongruity; in other words, people look for an explanation for the discrepancy. If they can not satisfactorily resolve the difference, they will probably not 'get the joke' and will not find it funny. This model predicts that as the divergence of people's expectations increase, their ratings and perceptions of funniness increase (Nerhardt, 1976).

McGhee (1977) examines children's cognitive development and its relationship to an incongruity model of humor. He states that "conceptual thinking is a necessary cognitive prerequisite for the experience of humor and is based on violation of cognitive expectancies" (p. 66). Incongruities can only occur after people have come to expect certain patterns. Laughter occurs when something does not fit into these patterns.

McGhee traces the stages of humor responses as they correspond to Piaget's stages of cognitive development.

He begins with infant smiling and laughter and ends with children's abilities to identify and appreciate incongruity. His first stage is entitled, "Humour in Action-Based Discrepancy During Object-Image Matching". During this phase children learn to distinguish between the properties of objects in their environment. Humor responses from children in stage one will be a function of these objects' movement and manipulation. In the second stage, "Humour in Discrepant Identification of Objects", children find delight in incongruous statements about an object (e.g. a cat is a dog) versus spacial action/manipulation of it. The third stage, "Humour in Violation of Language-Mediated Class Concepts", children around ages three and four begin to group objects into more complex categories. Humor during this stage could be derived from violations within categories, such as a human with two heads. Finally, during his fourth stage of humor, "Operational Thinking and the Humour of Multiple Meanings", children after age six are capable of understanding that a word may have multiple meanings. At this stage puns and other linguistic ambiguities can evoke humor responses.

Another significant cognitive model has been developed by Giles, Bourhis, Gadfield, Davies, and Davies (1976) who have created a model which emphasizes the

encoding and decoding processes of humorous material during social interactions. Assuming that the encoder deliberately sets up a humorous situation, the authors state that the encoder (E) has to decide whether/when to encode (e.g. make a joke) and then what to encode. If the person chooses to evoke humor responses from the audience, Giles, et. al. identify the following four reasons motivating the encoder, 1) creation or maintenance of in-group solidarity, 2) attack or superiority, 3) need for approval, and 4) removal of attention from an act which would receive disapproval.

Once the encoder is motivated to construct a message, the content may be broken into three structural components, the linguistic content (speech patterns), the semantic-thematic content (topic and theme), and the cognitive content (complexity).

If the encoder relates this message successfully to the decoder, the decoder will appreciate the humorous message. At this juncture, a series of steps are followed by the decoder. The first step involves a physiological arousal. The authors suggest that the arousal may be due in part to anxiety about "not getting" the joke. The second step requires the decoder to identify/perceive and resolve/comprehend the incongruity in the message. Only upon the decoder's successful completion of both the

perception and comprehension of the incongruity will authentic humorous laughter occur. After describing encoding and decoding stages, Giles, et. al. highlight the points at which the process might fail (i.e. not evoke authentic humorous responses).

All of the incongruity theories described above have limitations. A major shortcoming is that not all incongruous events will elicit laughter. For example, where a person might laugh at a bowling ball in her/his refrigerator, s/he would probably not laugh at a cobra in the refrigerator (Morreall, 1983). Other weaknesses are subsumed under this limitation. For instance, a person may not perceive an event as incongruous or may not be able to resolve the incongruity. Even if s/he perceives the incongruity and resolves it, s/he still might not consider the event to be humorous.

Another issue is that some studies have produced inconclusive and at times inconsistent results. For example, Nerhardt (1970) found that in a laboratory setting undergraduate psychology students, who lifted a series of weights, laughed and smiled more frequently as the weights diverged from their expectations. In contrast, Nerhardt (1976) conducted an experiment using adults ($N = 815$) walking through one of two underground stations in Stockholm. The subjects were asked to judge

the heaviness of a suitcase and then lift it. The results revealed that laughter and smiling did not increase as the weights diverged from the subject's range of expectancy.

One final flaw in incongruity theories is that they have not accounted for the adaptive significance of humorous interactions and responses in human beings. When using an incongruity theory perspective, the answer to why humans use humor in communication remains obscure. Thus far, incongruity theories only provide important conceptual building blocks for the yet to be created global theory of humor.

AFFECTIVE THEORIES

Affective theories focus on the emotional responses or the psychological motivations for the emotional responses that incongruous ideas provoke. They concentrate on the increased emotional and physical arousal, tension, or drive caused by incongruity, surprise, and novelty and the subsequent decrease/relief of tension with the resolution of the arousal provoking stimuli.

Freud's Psychoanalytic Humor Theory

The first affective theory to be considered is Freud's (1905, 1916, 1960) psychoanalytic theory of humor and laughter. His work Jokes and their Relation to the

Unconscious "continues to be the most impressive single volume devoted to a psychological analysis of humor" (McGhee, 1979, p. 20). Freud asserts that individuals are motivated to economize their psychic expenditures and that "psychic expenditures are required for the formation as well as for the retention of psychic inhibitions" (1916, p. 180). His motivational approach emphasizes humor's effect on the conservation, repression, and release of psychic energy. In particular, the pleasure individuals feel when creating or responding to a joke is directly correlated with their economy of psychic expenditure. Hence, laughter and joking release the tension, caused by the normal repression of emotions and thoughts (especially hostile and sexual impulses). This repression acts to save individuals' psychic energies.

Freud (1905) describes two different categories of jokes. The first category contains "tendentious" jokes, which express normally repressed sexual or aggressive feelings. The second joke classification is comprised of innocent jokes, which involve the pleasure of discovering relationships between concepts, sounds, and words. Within these two categories, a person may employ one or more of several techniques when constructing a joke. Freud refers to this construction of a joke as "joke-work". Seven different techniques are used during joke-work; they are

displacement, absurdity, sophisticated reasoning, unification, representation by the opposite, reference to the similar, and play on words, which includes condensation, dividing up words, multiple use, and double meaning. Several of these techniques also served to act as the foundation for his work on the Interpretation of Dreams.

Many researchers have examined Freud's psychoanalytic approach (Trachtenberg, 1976; O'Connell, 1976; Kline, 1977; Rancour-Lafferriere, 1985). Two of the theory's primary limitations are the inability for the psychic mechanisms, used in the generation or appreciation of humor, to be authenticated empirically, and the theory's inability to accurately predict the individual's humorous responses. In contrast, some of the predictions about joke-work and humor appreciation are open to empirical investigation. For example, Nevo and Nevo's (1983) experiment, which required 12th-grade male students to generate either serious or humorous responses to pictures (taken from Rosenzweig's Picture Frustration Study) found that the subjects employed Freud's techniques perfectly by following clear rules when constructing their answers. They used more sex, aggression, and fantasy in their answers than their counterparts who responded seriously.

In another study, Schill and O'Laughlin's (1984)

findings reaffirm parts of Freud's theory of humor. They assert that male subjects' preference for sexual humor is used as a coping mechanism for stress. This use of humor is consistent with Freud's claim that sexual humor provides an outlet for sexual energy in a socially acceptable way.

Freud's psychoanalytic humor theory continues to be explored by social scientists. Although his theory was not founded upon empirical investigations, his techniques and predictions of humorous behaviors still stimulate hypotheses for empirical and rhetorical investigations. Researchers have to work with the fact that the mechanisms involved in humor creation/appreciation can not be confirmed empirically. Specifically, Freud's concept of psychic expenditures is unverifiable.

Superiority Theory

Approximately three centuries ago the British philosopher, Thomas Hobbes (1651), articulated the first concepts of a superiority explanation for humorous responses. Although he only wrote a few hundred words on the subject, his ideas have stimulated several experiments and are frequently cited in the humor literature.

Superiority theory hypothesizes that laughter is an expression of superiority over other individuals. In

other words, if person A is laughing and person B is not laughing, person A perceives him/herself to be superior to person B. In addition, a potential effect of person A's laughter is to make person B feel threatened. Conrad Lorenz's (1966) work supports this notion when he points out that the physical form of laughter is an aggressive behavior similar to animals' baring their teeth.

LaFave, Haddad, and Maesen (1976) comprehensively analyze Hobbes' ideas on humor and laughter. Through their interpretation of Hobbes' work, they further describe his ideas as well as pinpoint logical flaws in his theory. First, Hobbes treats amusement and laughter as equivalent. LaFave, Haddad, and Maesen demonstrate that several different types of laughter exist, some of which are independent of mental amusement, for example, laughter resulting from being tickled. Second, Hobbes not only emphasizes superiority (or glory) but also surprise in generating laughter. If surprise is a necessary component for amusement, then people could not be amused upon hearing a joke for a second time. Third, although Hobbes does allude to the role of incongruity in humor, he talks about absurdities in others (e.g. a physical handicap) not absurdities in the abstract (e.g. the clash of ideas). And fourth, Superiority theory may be criticized for not adequately explaining why

people may burst out in laughter when they see their enemies embarrassed, humiliated or injured, yet it appears that they do not enjoy witnessing their close friends suffer these experiences. Apparently we do not enjoy the infirmities of others indiscriminately. Ugliness, stupidity, weaknesses and other inadequacies appear funnier in those we hate than in those we love. Misfortunes and setbacks seem more amusing when they befall the 'right people'. (Zillman and Cantor, 1976, p. 95)

Taking the above limitations into account, LaFave, Haddad, and Maesen modify Hobbes' ideas and propose a superiority, enhanced self-esteem, and perceived incongruity humor theory. They contend that the necessary components of a humor theory require a "(1) sudden, (2) happiness emotion (a result of feelings of superiority or self-enhancement) which are a function of a (3) perceived incongruity" (p. 89).

Following from the above discussions, it becomes apparent that Superiority theory is narrow. Many instances of laughter occur in both humorous and nonhumorous contexts that do not involve feelings of superiority or pleasure from disparagement. For example, a person who laughs at a bowling ball in the refrigerator most likely is not feeling superior to the ball, but rather feels the incongruity of the situation (Morreall, 1983).

In summary, Superiority theory explains a specific category of jokes and humor responses and as a result has been referred to frequently in the literature. There are

numerous incidents where people laugh at other people's infirmities, especially their enemies' weaknesses. In fact, one of "the first things that children laugh at is the physical maladaptations of others, while later they come to also laugh at mental and cultural maladaptations" (Morreall, 1983, p. 7). Although Superiority theory does not sufficiently explain or predict all humor responses, it offers an explanation for many readily observable behaviors.

Berlyne's Arousal Models

Berlyne's (1960, 1969, 1972) general theory of collative motivation, which gave rise to two physiological models of humor, is another affective (in this case arousal) humor theory. Berlyne (1960) initially began studying the physiological relationship between pleasure and arousal changes in general. His theory describes how changes in the body's arousal level mediate the quality and intensity of affective responses. In turn, the intensity of the body's arousal level is affected by the strength of the stimulus. The stimulus' strength is determined by the combination of three stimulus properties, its psychophysical (e.g. the order in which jokes are presented), ecological (e.g. the theme of a joke), and collative (e.g. the complexity, incongruity,

and/or novelty of a joke) properties.

Following directly from his general theory, he delineates three types of arousal which are associated with pleasure. Berlyne's model depicts the relationship between arousal and pleasure as an inverted-U, which means that moderate levels of arousal are associated with the maximum amount of pleasure. High arousal leads to a negative experience, whereas low arousal usually manifests in feelings of indifference. They involve 1) conditions in which high arousal, exceeding an unspecified threshold, is reduced, 2) conditions in which moderate arousal is followed by a reduction, and 3) conditions in which moderate arousal is achieved and is rewarding in its own right.

He distinguishes between two models which link arousal to pleasure, as a function of humorous acts. The 'arousal boost' model predicts that humor creates a temporary, moderately heightened, and rewarding level of arousal. In this condition, individuals experiencing pleasure may not display overt affective responses. On the other hand, his 'arousal jag' model describes the building up of tension (brought on by sexual, aggressive, anxiety-inducing, complex, incongruous or novel stimuli) which is subsequently released through a punchline. The sudden reduction of this tension is pleasant and results

in a humor response. Berlyne's model aptly depicts Freud's concepts of psychic tension.

Berlyne's arousal-jag model best describes the typical humor process in which a joke results in an affective response. He further states that "humour and laughter do not work through pure arousal boost. They appear to require arousal jags or arousal boost-jags" (1972, p. 59). The studies which have focused on this concept of arousal have not indicated how much arousal maximizes a humorous response (Maase, Fink, and Kaplowitz, 1984).

Some of the hypotheses generated by Berlyne's arousal models have been supported empirically. One such study was conducted by Shurcliff (1968), who found that increasing anxiety followed by the introduction of a safe resolution increased a subject's humor ratings. Langevin and Day (1972) also found that changes and amplitude in a subject's heart rates and galvanic skin responses are positively correlated with the subject's appreciation (humor ratings) of cartoons.

On the other hand, some studies do not support Berlyne's theory. Godkewitsch (1976), who refined Langevin and Day's experiment, found that punchlines versus the 'joke-bodies' (that is the body of a joke) are the major source of arousal. In fact, he found that a

subject's ratings of funniness varied "positively with the amount of arousal induced by the punchlines, rather than reduced by them...increased arousal was linearly and positively related to judged funniness" (p. 130). This finding does not support Berlyne's arousal-jag hypothesis for two reasons. The first reason is that the relationship between the subject's arousal and pleasure is linear not curvilinear (i.e. an inverted-U). The second reason is that the punchline induced, not reduced, the subject's arousal. Rothbart (1973, 1976, 1977) also found support for a linear relationship between arousal and pleasure in her arousal-safety theory. Her experiments demonstrated that increases in arousal of any size will be accompanied by pleasure with the contingency that the subjects perceive the situation as safe or non-threatening.

McGhee (1983) adds a new twist to the interpretation of Berlyne's predictive models. In referring to work conducted by Wilson (1979) which suggests that "if only a portion of the arousal continuum is represented, a positive linear relationship may be obtained at either the lower or upper ranges of arousal" (p. 15). This effect reveals that actually any relationship can exist between arousal and pleasure (humor appreciation), positive, negative, or curvilinear. This fact makes it impossible

to test Berlyne's hypotheses because they can not be disproved. In addition, McGhee suggests that researchers most likely use jokes and cartoons which would not result in extreme arousal changes. As a result, most studies would report positive linear relationships, and occasionally an inverted-U relationship.

Despite the flaws of Berlyne's models, his hypotheses about the relationship between physiological arousal and humor appreciation have stimulated a large body of research, and it is certain that research will continue as scholars try to understand this relationship.

In conclusion, several scholars have suggested combining two or more of the aforementioned theories to produce a comprehensive theory of humor. Rothbart (1977) proposes combining arousal theory with cognitive processing theories. Suls (1977) offers a synthesis between the disparagement model and the incongruity-resolution model. Morreall (1983) delineates a "new theory of laughter" which combines concepts from Superiority theory, incongruity theory, and Freud's tension relief theory. Even in combination, these theories have not yet yielded a global explanation of humor.

As a result of reviewing the above cognitive and affective theories, two major theoretical issues in humor

research will be identified and described in the next chapter. These issues will provide criteria for evaluating humor theories in general and will be employed to critique each of the theories presented in this chapter.

CHAPTER THREE
A CRITIQUE OF HUMOR THEORIES

Two theoretical issues arise when analyzing current humor theories. The first issue emerges from the application of a communication framework to the various humor theories. The second issue is derived from the philosophy of science and focuses on a theory's testability and predictive potential. The primary problem affecting a theory's testability is the current inability to understand the relationship between individuals' cognitive processes and their behavior.

MODELS' STRUCTURES AND EMPHASES

Five concepts are borrowed from general communication theories to identify the structure and emphases of the various humor theories. These concepts dominate many general communication models (Lasswell, 1948; Shannon and Weaver, 1949; Schramm, 1954). Four of them are labeled by Berlo (1960), namely the source, message, channel, and receiver. The fifth concept, the environment, is taken from general systems theory (Ruben, 1972). These five elements should be taken into account when attempting to create a humor model. Currently, they are emphasized differently or even excluded in humor models. For example, sources' motivations have been a focal point of

psychoanalytic works, whereas receivers' responses have been central to arousal models.

Each of these five factors is a special system which acts interdependently with the other factors to create a humorous event's structure. Each factor will be briefly described, and where appropriate, its role in the aforementioned humor theories will be highlighted.

The first element to be considered in a humor theory is the source. The person who generates a humorous message is a unique system comprised of several interacting factors. His/her behavior will be a function of his/her physiology, social and educational background, and personality. Also, the individual's beliefs, attitudes, values, goals, capabilities, and needs all affect the intentions and motivations behind his/her actions.

Table 1 highlights the main factors which appear to be especially relevant to the source in humor theories. These factors are the person's physical well-being and appearance, motivation for creating the joke, and cognitive development. The source's health and appearance are often sources of humor (e.g. fat jokes). His/her motivation, conscious or unconscious, in creating a humorous event can serve different social functions (see chapter one). Finally, his/her cognitive development will

Table 1:

Source	Physiology and physical appearance
	Motivation for creating joke (see environment)
	Social functions of humor
	Cognitive development
Message	
	Joke Typology
	Nonverbal
	Slapstick
	Sight, Smell, Sound, Taste, Touch
	Verbal
	Linguistic Genres (Pepicello and Weisberg, 1983)
	Riddle, Joke, Joking question, Conundrum,
	Pun, and Enigma
	Techniques of Humor (Berger, 1976)
	Language (verbal - exaggeration, repartee)
	Logic (ideational - absurdity, ignorance)
	Identity (existential - before/after, mimicry)
	Action (physical - chase scenes, slapstick)
Channel	
	Oral
	Interpersonal
	Mass Media
	Television, Radio
	Written
	Mass Media
	Newspapers, Books, Cartoons
	Nonverbal
	Sight, Smell, Taste, Touch, and Kinesthetics
Receiver	
	Physiology and physical appearance
	Motivation for responding (see environment)
	Humor appreciation (felt or feigned)
	Cognitive development
Environment	
	Social forces affecting response
	Relationship between sender and receiver
	Presence of other people
	conformity
	social facilitation
	Physical factors
	Place, Time, Temperature, Noise

determine the level of sophistication in creating a humorous message.

For instance, Superiority theory focuses on the source's physical appearance as well as the source's motivation in creating a humorous situation. As was mentioned in Chapter Two, this theory points out that one of the first stimuli that evokes laughter in children is the physical maladaptations of others. It also describes a source's laughter (or the receiver's laughter) as a behavior which is used to establish a position of superiority over other interactants. According to the theory, when the source laughs, s/he is attempting to establish his/her position of superiority over the receiver. On the other hand, if the receiver of a message laughs, s/he is working to attain a position of superiority over the source.

Another affective theory, Freud's psychoanalytic humor theory, also emphasizes the source's motivations in creating a joke (referred to as "joke work" in Freudian terms). His theory contends that those ideas which increase psychic tension in the source, especially sexual or aggressive thoughts, can drive him/her to release psychic energy through "joke work". The source's motivation in "joke work" will be a function of his/her ability to control pent up psychic energy. Freud's theory

concentrates on the source's role in a humor event more than the other four factors. He categorizes the types of messages in terms of the source's motivation in creating the message. Even his description of the receiver's role in a humorous situation is constructed from the source's frame of reference. He states that the presence of the recipient acts as a measurement of success for the comic (source) based upon the recipient's response.

Another component is the source's cognitive development, particularly as it relates to incongruity theory. The source's ability to distinguish between categories of ideas will affect his/her ability to create different types of jokes and humorous situations. His/her age, education, work, and so forth will determine the range of ideas s/he selects, and these ideas formulate the message which lies at the heart of incongruity theories.

The message, plays a key role in making a humorous interaction a distinct type of communication. A message may be nonverbal (using sight, smell, sound, taste, touch or kinesthetics) or verbal (for example, riddles, jokes, joking questions, conundrums, puns, and enigmas (Pepicello and Weisberg, 1983)). Berger (1976) classifies the different techniques used to create a humorous message into four major categories, "language (the humor is verbal); logic (the humor is ideational); identity (the

humor is existential); and action (the humor is physical)" (p. 114). His categories provide a constructive basis from which a humorous message may be created or dissected. Unfortunately, as Berger humorously states, "dissecting humor is an interesting operation in which the patient usually dies" (p. 113). However, the only way to detect patterns within and between humorous interactions is to be able to identify the components of the humorous messages. Through discovering patterns, scholars may model humorous interactions which can ultimately result in accurate predictions of their outcomes.

The message's ideas and structure compose the building blocks for incongruity theories. Using Berger's techniques, a source can select one or more of the categories, combine it with a context, and generate a plethora of incongruous ideas or actions. For example, Carol Burnett, on her nightly television comedy show, often evokes audience laughter based on the Before/After technique. Viewers will see her formally dressed during her opening monologue. Then, in the next skit she will appear as a voluptuous (with obvious, exaggerated padding) blonde wearing a cheap, risque, orange and pink pant suit. She can use this same technique many times and convey many different types of messages (incongruous ideas).

The channel has received the least attention by humor

theorists. Channels may be classified as either oral, written, or nonverbal. Oral channels may be broken down further into interpersonal and mass media, such as television and radio. Written channels are primarily mass media such as newspapers, books, and cartoons. While these channels usually lie in the shadows of the humorous messages, the nonverbal channels often are inextricably bound up with the humorous message. Nonverbal channels include sight (e.g. pratfalls and acts of physical aggression between people), taste (e.g. faking enjoyment of terrible food), kinesthetics (e.g. movement involving unfamiliar sensations), and smell or touch (e.g. having expectations thwarted). While researchers manipulate messages being transmitted through a specific channel, the use of different channels for the same humorous messages has not received similar attention. A good humor model should account for different channels' effects on humorous messages.

The receiver has been widely examined by social scientists because s/he can supply overt behaviors which researchers can measure. Most humor theories attribute the receiver's responses to be a function of his/her physiology and physical appearance, motivation for responding, and cognitive development. There are also social, relational, and/or cognitive forces acting on the

receivers' reactions to a humorous event.

Arousal models have concentrated on the physiological correlates of humor responses in receivers. These models measure different physiological changes and have illuminated patterns of increasing and decreasing cardiovascular and respiratory activity. Although these findings are products of scientific experimentation, they do not contribute to the understanding of a humor event's social and interpersonal factors. Also, such results are difficult to apply in a natural setting without the appropriate physiological monitors being available.

Arousal models attempt to explain the response after the humorous response has occurred (i.e. after the fact) and neglect to examine factors in the source and the environment. It would appear that monitoring the physiological responses of the source might reveal certain patterns which differ according to the his/her success or lack of success at creating a humorous event. Measurement of such effects could assist in predicting humor attempts.

Incongruity-resolution theory also attempts to account for the receiver's response or lack of response to a humorous event. The receiver's behavior is a product of his/her ability to discern the incongruity in the situation and then to resolve the incongruity. As two ideas, events, or actions become more discrepant and as

long as the receiver can perceive and resolve this discrepancy, his/her humor ratings will increase accordingly. To the incongruity-resolution model, the receiver's ability to decode the message successfully is equally as important as the source's encoding ability. The theory does not, however, attempt to explain the social forces operating upon the receiver's motivation to respond, for instance laughing even when the incongruity has not been resolved.

McGhee's (1977) incongruity model of humor which matches the stages of children's humor responses to Piaget's stages of cognitive development is based upon the receiver's viewpoint. Children's humor responses initially are due to their ability to distinguish between properties of objects in their environment. In their final stage of cognitive development, they are capable of understanding abstractions such as linguistic nuances. An interesting study might be to verify whether and/or how children follow these stages when they begin generating humorous messages (i.e. when they are the source versus the receiver).

The last factor affecting a humorous event is the environment, which includes social and physical factors. One social factor is the concept of social facilitation (Zajonc, 1965), which predicts that the presence of

another person who laughs or is laughing at a joke encourages others to laugh (Chapman, 1973a, 1974). Physical factors are comprised of the context and setting in which a humorous event occurs. In addition, temperature, time of day, and noise (to name a few) are other physical factors which can affect interactants' perceptions and expectations of a humorous message/situation.

While the social functions of humor have been described by several researchers (see chapter one), very few models have generated hypotheses about environmental influences on interactants involved in a humor event. While Giles, et. al. (1976) include the concept of social interaction in their model, their primary emphasis is on the differing cognitive processes and motivations of the encoder and decoder of humor messages. The effects of the social environment on the humor event need to be explored further.

In summary, each of the factors described above may be considered to be a unique system yet also interdependent with the other factors. By identifying these systems, it is possible to pinpoint the models' emphases, which can reveal their strengths and weaknesses. For instance, once the sender creates or tries to create a humorous message/act, a researcher can focus on the

sender's motivation (psyche), the message (linguistic or ideational), the channel (mass media or interpersonal), the receiver's affective response (his/her motivation for response/nonresponse), and/or the environment (social cues and physical factors). All of these factors need to be accounted for or proved to be negligible in a complete humor model.

TESTABILITY AND THE PROBLEM OF UNDERSTANDING COGNITIVE PROCESSES THROUGH BEHAVIOR

The second issue which may be used to evaluate humor theories arises from the philosophy of science (Popper, 1959). In order for a theory to be scientific, it should be able to generate hypotheses which can be verified experimentally. Simply stated, it must be testable. Unfortunately, most humor theories like theories in other areas of the social sciences contain elements that are untestable. In particular, humor theories which attempt to explain the cognitive processes underlying humor contain an untestable element: cognition. Specifically, cognition can only be measured through its effect on behavior. Since many different cognitive processes can give rise to the same behavior, it is difficult to identify which cognitive processes give rise to a particular behavior. For example, it is often difficult to predict when one person will laugh at something while

another person will not. Even if the individuals do laugh, the problem of knowing why they laughed can remain mysterious. The difference between the when (which is the behavior) and the why (which is the cognitive process) is that it is possible to test when something will be perceived as funny, where it is not currently possible to accurately test why something is perceived as funny. In addition, predicting and understanding the degree of an individual's enjoyment of something humorous is extremely difficult. The when and why and the degree to which interactants perceive something as funny appear to be significantly affected by participants' idiosyncratic characteristics (i.e. physical, social, educational, and cultural backgrounds).

Freud's theory makes an admirable attempt at linking interactants' psyches with their behavior. His theory generates numerous experimental hypotheses which help predict receivers' overt responses (Kline, 1972, 1977). Unfortunately, his concept of the unconscious mind which is necessary to his theory of humor is unverifiable because it can be used to explain anything. His theory is untestable.

Incongruity theory shares this problem of not being able to test an individual's cognitive processes. As a result, fundamental concepts in incongruity theory can not

be empirically verified. Specifically, theorists can not test individuals' expectations of events except through the behavioral correlates which accompany their expectations (see chapter four). In addition, researchers can only infer what cognitive processes permit one person to resolve and appreciate an incongruity where another person can not resolve nor appreciate the same incongruity.

In comparing Freud's theory and incongruity theory, it appears that incongruity theory could be subsumed or explained using Freudian concepts. Specifically, incongruity theory posits that humor responses result from perceiving an incongruity and then resolving that incongruity. To Freud, the perception of the incongruity results in the retention of psychic energy and the resolution results in the energy's sudden release. Deeper study would be required to identify contradictory predictions of humor responses, if any exist, between Freud's theory and incongruity theory.

In contrast to Freud's theory and incongruity theory, arousal models are conducive to testing. However, they contribute little to the general understanding or predictability of the cognitions and behaviors involved in humorous interactions. The reason is that they only examine physical arousal associated with the perception of

humor. They make no attempt to define why something is perceived as humorous in the first place.

In summary, the problem ailing both cognitive and affective theories which try to account for human cognition is that portions of the theories will be untestable. Given this fact, it is important to identify what aspects of a humor theory are testable, e.g. what aspects allow the investigator to generate testable hypotheses. Then, these hypotheses must be validated and found to be reliable through experimentation before a theory is considered to be scientifically valid. From the previous discussion comparing Freud's theory and incongruity theory, it becomes apparent that current theoretical models are not necessarily well enough defined to identify experiments which easily differentiate between models. Arousal models avoid this problem by ignoring cognitive processes altogether. These models therefore circumvent the most difficult problem in humor research, which is identifying the processes which lead to the behavioral responses.

In conclusion, this chapter has examined two theoretical issues which confront scholars studying humor. The five structural factors employed in humor models were identified, and the theories from the first chapter were matched with the factors that they most emphasize. Then,

the problem of testability and its connection to the problem of deducing cognitive processes from behavior was discussed. The next chapter complements this study of theoretical issues by providing a critique of humor research methodology and offering suggestions to overcome weaknesses in the current methodology.

CHAPTER FOUR
RESEARCH METHODOLOGY

How does one research humor? Where the previous chapter identified two major theoretical issues which affect the study of humor, this chapter looks at methodological issues in humor research. This chapter will cover 1) the humorous stimuli and measures employed by researchers, 2) general methodological problems currently confronting humor experiments and recommendations for their correction, and 3) suggestions for strengthening researchers' methodological practices in future empirical work.

HUMOROUS STIMULI AND MEASURES

Conducting an experiment in humor involves the tasks of creating operational definitions, selecting humorous stimuli and collecting data about subjects' responses to these stimuli. The problems associated with creating operational definitions were described in chapter one. The next task involves selecting humorous stimuli.

Several different types of stimuli have been employed to provoke humor responses from subjects. These stimuli are usually created, tested, and if needed, rehearsed intensively before the experiments are performed. Jokes, cartoons, monologues, skits, photographs, and humorous

articles have all been used to elicit humor responses from subjects. These stimuli have been presented using videotapes, records, magazines, and newspapers and have been observed in contrived and noncontrived social interactions.

After selecting and creating the appropriate stimuli, the stimuli must be tested to determine whether they successfully evoked humor responses from subjects. Three measures have been utilized extensively: smiling, laughter and self-rating (both verbal and written). Unfortunately, smiling and laughter can occur in situations without apparent humorous stimuli. As a result, these behaviors must be closely examined in order to identify their relationships to humor. Each of these measures, smiling, laughter and self-rating, is accompanied by certain methodological problems and will be discussed individually.

Smiling

Smiling, may be used by individuals for a multiplicity of purposes: to express enjoyment, to release tension, or to imply inside knowledge (e.g., 'I know something that you don't know'). This fact leads to the first problem associated with using smiling as a measure of humor appreciation, which is what causes a

person to smile. Unfortunately, the answer to the question is not always apparent. Also, a person who may really have enjoyed a humorous event might not smile as brightly as a person who actually did not enjoy the same humorous event. In other words, the degree of humor appreciation is not necessarily associated with linear increases in the type of smile, i.e. a slight grin or an ear to ear grin.

Despite smiling's ambiguous relationship to humorous stimuli, what is of most interest to humor researchers is that smiling frequently appears as a response to humorous stimuli. Because smiling (and laughter) is not necessarily evoked by feelings of enjoyment or amusement, a major methodological problem concerns the distinction between smiles that are products of genuinely felt humor versus feigned funniness or smiles that have nothing to do with humorous stimuli.

LaFrance (1983) offers an excellent discussion of this dilemma. She describes Ekman and Friesen's Facial Action Coding System (FACS), which codes forty-four muscle-based action units, and explains how it helps discriminate between an individual's felt and feigned funniness. The system utilizes four main scoring categories of smiles: intensity, laterality (symmetry), location, and timing. Certain scores (measured in action

units) indicate whether a person authentically feels or feigns responses to humorous stimuli. For instance, scores have shown that more asymmetrical smiles are associated with more deliberate and feigned feelings of humor. LaFrance writes a compelling argument about how FACS could help humor research and suggests that researchers attempt to create a similarly precise system for coding laughter.

Laughter

Laughter has frequently been employed by researchers because it provides an easily observed behavior for them to measure. Yet, as noted in chapter one, laughter may be intentionally used as a communication tool in social interactions as well as being a response to a specific funny stimulus. Pollio, Mers, and Lucchesi (1972) discuss the importance of understanding the social context in which laughter is induced. The reason is that the social context affects not only the occurrence of laughter but its latency (time between a punch line and laughter), amplitude (laughter's highest intensity), and duration (length of time between laughter's onset and end). The authors state that more will be learned about laughter's relationship to humorous stimuli by measuring its latency, amplitude, and duration within different social contexts.

They also hypothesize that the cognitive difficulty of a joke might affect latency; a subject's emotional arousal may influence amplitude; and the social context might control duration.

Although laughter may appear independently of a humorous event, acts of laughter are still used as measures of humor responses. Giles and Oxford (1970) have classified seven different types of laughter. These categories are defined in terms of the existence of a humorous stimulus, the presence of other people, or both. The first and most common category of laughter is labeled "humorous laughter" and occurs when a person perceives something (anything) as funny; this laughter can happen when an individual is alone. The second category, "social laughter", is used by a person to integrate or affiliate with a particular social group. A person will use social laughter to gain social approval and/or help the flow of conversations. The third category, "ignorance laughter", which can overlap with social laughter, is exhibited when a person does not understand a humorous stimulus, but others around him/her are laughing at it. This laughter is used to mask one's ignorance in front of others. "Derision laughter", the fourth category, most commonly occurs when children laugh at each other because of a physical maladaptation or lack of conformity to social

norms and values (e.g. 'being a chicken'). A fifth category of laughter is "anxiety laughter", which is the result of nervous tension. The sixth laughter category, "apologetic laughter", only appears in the presence of others and signals that an individual is acknowledging a personal inadequacy. Finally, the last category of laughter emerges in response to tickling. In contrast, Bergler (1956) presents over fifty 'theories' or categories of laughter. The categories are not mutually exclusive and are quite unwieldy for practical assistance in experiments.

Further strides in classifying laughter's relationship to humorous stimuli are essential. New and more refined classification and coding schemes will enable researchers to distinguish between laughter as a social behavior and laughter as a response to humorous events. This important methodological area is wide open for examination.

Self-rating

Self-rating has been the most often used method to measure humor appreciation. Self-rating can include subjects' rating a joke's funniness on a nine-point scale or rating their perception of their own senses of humor, which include either the generation or appreciation of

humor (Turner, 1980; Wicker, et. al, 1980; Feingold, 1982).

One measurement problem facing researchers who rely on self-ratings is the possibility of self-persuasion by the recipients of humorous messages (Bem, 1967). As has been mentioned before, people might find themselves 'coerced' into laughing due to social circumstances. Once they observe themselves laughing, they might rate the humorous event as more humorous than if they had not laughed. Along this line, Foot and Chapman (1976) have also stated that "judgments of funniness, like behavioral responses, have themselves been found to be influenced by the social situation..."; however, "humor ratings have proven to be less consistently susceptible to social influence than behavioural responses, and the presence of companions has not always promoted assessments of funniness" (p. 191).

An experiment which supports Foot and Chapman's claim was conducted by Chapman (1973b). He found that adults who were alone when listening to tape recordings, laughed more when jokes were accompanied by canned laughter than adults who listened to jokes without any background laughter. An interesting result of the experiment was that the addition of laughter to the soundtrack did not significantly affect subjects' ratings of funniness (using

a ten-point scale) or cleverness. In contrast, other studies which employed canned laughter have found that the dubbed laughter did positively affect subjects' humor ratings (Fuller and Sheehy-Skeffington, 1974; Nosanchuk and Lightstone, 1974; Smyth and Fuller, 1972). In order to understand these apparently conflicting findings, researchers need to be precise in recording and more detailed in writing about their experimental methods and protocols. This precision can help clarify and determine whether the findings are truly conflicting or if they are due to contextual differences. Because self-ratings will most likely continue to be a primary method by which researchers study humor, researchers must account precisely for contextual and methodological factors.

On a different note, some interesting results have emerged from experiments which have used the self-rating method. Sheppard (1983) found that photographs received higher humor ratings than cartoons which had been drawn from the photographs. The author contends that subjects' beliefs that an event could have actually happened could be a key factor in creating effective visual humor. In another study, Connelly and Kronenberger (1984) studied the effect of serial position on joke appreciation. By moving a target joke from the ordinal positions one, five, ten, fifteen and twenty in a series of twenty jokes, they

learned that funniness "ratings increased from the first to the fifth and tenth positions, decreased in the fifteenth position, and increased again in the twentieth position of the series" (p. 501). This study demonstrates that a joke's position in a series can affect its funniness ratings. These and other studies help to identify experimental and situational factors which can confound a study's results and affect subjects' humor ratings independently from the independent and dependent variables.

Each of the three measures, smiling, laughter, and self-rating, can be used to develop different empirical coding schemes. These schemes provide frameworks within which data can be collected. For example, Pollio, Mers, and Lucchesi (1972) designed a simple coding scheme. They delineate four categories of humor responses. The first category is 'no response' to humorous material. The second category is smiling, which varies in magnitude from a gentle smile with small cheek furrows to a broad smile producing a total pattern. The third category is laughter, which can range from a laugh with normal voice sounds to a deep-throated laugh accompanied by moderately active head and shoulder movements. The fourth category which rarely occurs in a laboratory setting is explosive laughter. Explosive laughter is manifested in profound

body movements, changes in respiration, tears, and possible loss of muscle control and tone. This coding scheme is quite simple in comparison to the Facial Action Coding Scheme described in the section on smiling.

A different type of category scheme was developed by Landis and Ross (1933). Their scheme could be used to identify humorous messages based upon the type of humor employed. Their categories, which they operationally defined, consisted of the following: humor of quantity, humor of incongruity, humor of unexpected, humor of truth, humor of superiority, humor or repression, and humor of ridiculous. These and other schemes are used for data collection and assist in content analyses and in participant observation methods (Apte, 1983). The next step is of course to interpret the data and learn the results of the experiment.

In summary, this section has identified types of humorous stimuli, explored three measures of humor and identified humor coding schemes. As research continues more will be learned about why and when people smile and laugh and about methods which measure these behaviors with better precision. Research efforts should also be focused on identifying the situational and psychological factors that affect self-ratings.

GENERAL METHODOLOGICAL WEAKNESSES AND APPROPRIATE RECOMMENDATIONS

In addition to the measurement problems described above, there are some general methodological issues which become apparent when the humor literature is perused. These issues can be classified into two main categories, which are problems with current experimental protocols and the gap between empirical studies and theoretical work.

Problems with Experimental Protocols

First, one of the primary weaknesses confronting humor research has been the over-dependence on cartoons and prepared jokes to elicit humor responses. The data are useful and interesting, but they fail to reflect natural day-to-day situationally created puns and funny events. Jokes used in the experimental setting are often out of context and detached from the natural settings where humor is used as a communication tool. This problem could be alleviated by using more applied or clinical settings.

A major conflict arises when considering the use of controlled experimental conditions versus applied or clinical settings. Before the early 1960s, the major body of humor literature was heavily anecdotal. The lack of empirical verification for scholars' descriptions about the uses of humor was a severe weakness in the literature.

Yet, at the same time these descriptions and observations tended to depict humor's appearance in real-life contexts.

During the last two decades, more and more experimental work has been conducted. The problem is that the pendulum has swung too far in the opposite direction. Current experimentation is often heavily contrived and is isolated from humor's use in natural situations. Researchers need to achieve a balance between studying the responses to, and generation of, humorous stimuli in laboratory experiments and the responses to, and generation of, more natural and situational occurrences of humor. For instance, in their quest to discover humor appreciation and generation patterns, social scientists might seek to employ informant diaries more often. The systematic collection of this subjective data could supply significant insights for directing laboratory work, which results in the desirable coupling of applied data with controlled experimental designs.

Second, many studies have shown that humor is used for different social and communication functions. Researchers agree that humor does not occur in a vacuum and that when people are together during a humorous event, their individual responses affect the behaviors of others in the group. Unfortunately, few empirical models which depict these humor functions exist. One of these models

was proposed by Giles, et. al. (1976) and does incorporate these functions into its structure (see chapter two); however, more models are required. Researchers need to aggregate the findings of studies which have examined humor's social and communication functions and create specific or general models which include these important aspects. (See chapter five for a more detailed discussion of this issue.)

Finally, another problem which is common to the social sciences in general is the use of undergraduates as the primary source of experimental subjects (Gruner, 1976). This biased subject pool becomes an inhibiting factor when researchers attempt to generalize their findings. The ability to generalize experimental findings to the population is particularly essential for theory construction. To this end, researchers should include a broader spectrum of subjects, such as individuals from different age groups, occupations, and ethnicities. By sampling from the general population, researchers will make greater progress in understanding humor outside of the university setting.

The Gap between Empirical Work and Theoretical Work

A problem with many empirical studies is that they are not designed to test specific theoretical hypotheses

or models. Although some researchers have tried to find empirical support for Freudian hypotheses about humor, few empirical studies have analyzed the basic premises upon which incongruity theory is built. On the other hand, arousal models are built upon physiological experimentation; however, they reveal little about the social functions of humor. In order to make theoretical progress, scholars should integrate their experimental hypotheses with new or old humor theories and models.

In summary, researchers need to find alternatives to the joke and cartoon paradigm, try to balance controlled, empirical investigations with investigations using natural settings, work on incorporating the prevalent social functions of humor into general humor models, and avoid sampling only from the undergraduate population. They also must strive to design their empirical work to assist with the development of humor theories and models.

SUGGESTIONS FOR STRENGTHENING HUMOR RESEARCH

The key issue in strengthening humor research is to understand the relationships between the measures used to assess humor appreciation and creation and subjects' actual appreciation and creation of humorous events. As methodological advances are made, the types of contexts in which humor is studied can be expanded. Given the

measurements currently available, there are still a number of experimental scenarios waiting to be explored and developed.

La Giapa (1977) offers several suggestions for expanding humor research in the area of social functions. He recommends that the following five paradigms be included in future work: "(1) the use of cohesive friendship groups instead of ad hoc groups of strangers; (2) the study of situational jokes instead of written or canned humor; (3) the conducting of research in naturalistic settings instead of in a laboratory; (4) the analysis of temporal sequences of conversation rather than ad hoc interpretations, and (5) the use of video-recordings instead of participant observers" (p. 421).

In addition to LaGiapa's suggestions, researchers should combine as many different types of measures as possible in order to detect patterns and correlations. For example, by using video equipment, they could employ the Facial Action Coding Scheme for smiling as well as take measurements of laughter's latency, amplitude, and duration, and in addition to smiling and laughter measurements, they could include self-ratings.

Another area of weakness has been the difficulty of comparing across studies and contexts. As new methodologies are developed and refined, these comparisons

will become easier. By using uniform coding schemes, investigators will be able to clarify and understand apparently conflicting findings through identifying contextual differences. Replications of previous studies could also help clarify some of the apparent contradictions. For example, recall the conflicting results in the the self-rating experiments studying the effects of dubbed laughter discussed earlier in this chapter.

In conclusion, this chapter discussed the humorous stimuli and measures employed by humor researchers. Specifically, the use of smiling, laughter, and self-rating as measures was described. Some general methodological weaknesses were identified and appropriate recommendations were offered to overcome these weaknesses. Finally, suggestions for strengthening humor research methodologically were offered.

CHAPTER FIVE

FUTURE DIRECTIONS FOR HUMOR RESEARCH

As humor research continues to explore why, how, and when people perceive certain stimuli as humorous, new theories and methodologies will be proposed. This paper has attempted to describe the general state of humor research. The first chapter described definitions of humor and presented a brief overview of research which has examined its pervasive pragmatic functions. The second chapter presented and critiqued the major cognitive and affective theories which try to explain the creation of, and responses to humor. Chapter three identified two theoretical issues, which involve understanding the structure and emphases of a model and then assessing its testability and predictive potential by understanding its treatment of the relationship between cognitions and behavior. These issues were applied to the theories depicted in chapter two and can be used to analyze any proposed humor model. Finally, chapter four examined methodology and pinpointed strengths and weaknesses of current empirical research.

One of the most apparent problems that emerges from the examination of the humor literature, mentioned in chapter four, is the gap which appears between theoretical work and empirical research. This gap reflects the lack

of integration between theory construction and relevant experimental work that appears in the literature. This gap in the humor literature is acting to stymie progress in modeling humor. While the theories in chapter two are continuing to be tested, many independent experiments have generated data about humor's use in a specific laboratory setting, which are isolated and not integrated into a predictive model. This final chapter will describe this problem and highlight general areas for future research.

As might be predicted from the discussion above, one of the first areas in humor research needing further work is the integration of experimentation and modeling. Much of the current experimental work in humor is best described as the gathering of empirical findings. The next step is for theorists to review these findings and select which ones can be built into self-consistent models. These models should have predictive value and generate testable hypotheses. By aggregating these findings into models, the basic principles underlying humor comprehension, appreciation, and generation will become clearer.

An example of one such finding could be based upon men's and women's responses to audience laughter (Levanthal and Cupchik, 1976). This finding could be phrased in the following way: humorous events accompanied

by audience laughter can "stimulate more expressive behavior for both males and females," but these higher levels of mirth in females will often "accompany consistently more favorable judgments of cartoons" or jokes as long as the females are not explicitly told to use the audience responses in their ratings (p. 193, 195, 196). Any proposed humor theory would have to incorporate this finding into its structure and be able to explain why females' reactions to humorous stimuli are more susceptible to social facilitation. While this finding could not be explained by incongruity theories, an interpretation using principles from Superiority theory might propose that females in mixed sex groups (who usually have lower status than their male companions) do not want to appear inferior to others in the group and hence, attempt to be superior to others by increasing their humor ratings, which could signify that they "get the joke" better than others. While this explanation is not the only possible interpretation, principles from Superiority theory allow for this specific finding.

Because there have been many published experiments in the area of humor's social functions, research could build on these specific findings to construct self-consistent models of humor. The findings that composed the model could then easily be rephrased in terms of hypotheses and

be tested in different contexts.

This last idea, testing hypotheses for contextual effects upon humor appreciation and generation, is another area needing further exploration. To assist in the modeling efforts, scholars need to identify patterns in individuals' appreciation and generation of humorous events and to learn how these events affect individuals' perceptions of, and behavior towards, each other. Hence, testing hypotheses within different paradigms and social contexts is required for constructing general humor models.

In the search for more information about humor's use as a communication technique, researchers might try new methods for examining humor. Two methods which have not yet been employed are simulations and role-playing. Although both of these techniques are based upon contrived situations, they can stimulate and simulate real-life problems and interactions (Lederman, 1987). Developing a simulation or creating a situation in which participants are requested to generate humorous events could provide insights into how individuals use humor in natural contexts.

If the simulations were videotaped, researchers could use different content analysis schemes in order to reveal patterns in interactants' generation and use of humorous

acts. Berger's (1976) classification of humor techniques, mentioned in chapter three, could be used to identify the most frequent categories and techniques employed by participants. Researchers could then construct experiments based upon the types of humorous events that were enacted by the participants. In addition, by using FACS to code participants' smiles and measuring the amplitude, latency, and duration of subjects' laughter, researchers could accumulate more data for modeling patterns of humor responses.

Another source of data which humor researchers have not exploited appears daily on network television's situation comedies. Although producers spend millions of dollars annually to create these shows, there has been very little academic research examining how humor is used between characters or the type of humor techniques employed. Precisely because so much effort goes into creating the humor on situation comedies, such effort should be studied for its own sake as well as for the insights it could provide in directing experimental efforts. For example, content analyses could uncover patterns in the techniques and categories used by situation comedy writers. Also, social scientists could study how humor is used interpersonally across situation comedies. These are but two ideas concerning how

researchers could explore humor's role in situation comedies.

Finally, another method which could be helpful to researchers would be the use of telemetry, for example mounting recording equipment upon a subject to record his/her daily interactions. The recordings would be used solely for the purpose of capturing situationally generated humor. Obviously, such methodology is subject to ethical questions and barriers, but possibilities for employing recording equipment which are ethical should be explored.

In conclusion, this paper has highlighted the major humor theories, provided criteria to critique proposed theories, examined the strengths and weaknesses of the experimental methodology employed in humor research, and offered suggestions for future research. The body of humor literature will burgeon as scholars continue to examine the the physical, psychological, and social effects of humor phenomena. Although researchers take the study of humor seriously, this communication topic is inherently fun, appealing and interesting. As individuals seek, generate and appreciate humorous phenomena in their environments, they can significantly improve the quality of their lives; however, humor can also raise destructive barriers between groups of people (for example, ethnic

jokes) (La Fave and Mannell, 1976; Zillman and Stocking, 1976). By studying how individuals use humor, researchers can understand why, how, and when humor can act as a constructive or destructive factor socially and personally. The use of humor as a personally constructive tool is best captured by Joel Goodman (1983) when he affirms, "Humor is a wonderful gift for living with our imperfection; it is the [bridge] between the perfection we seek and the imperfection we have" (p. 9).

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HUMOR: A CRITIQUE OF CURRENT THEORIES AND RESEARCH

by

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Humor may be used as a communication technique in many different contexts and serves many important social and communication functions. Humor research focuses on understanding why, how, and when people perceive certain stimuli as humorous. Although within the past two decades empirical research on humor has burgeoned, this proliferation of work has often not attempted to understand the fundamental nature of humor. Only through work which is directed at answering the question, "what is humor?" will it be possible to understand humor's qualities and applications.

This report, which examines the current state of humor research, is divided into five chapters. Chapter one identifies the fundamental questions in humor research which are understanding what humor is, operationally defining humor, and experimentally manipulating it. Chapter two reviews and critiques the major theories that have been proposed to explain the creation of, and responses to humor. Chapter three discusses the importance of identifying the structure and and emphases of different humor models, and describes the problem of testing a theory when it infers cognitive processes through behavior. Chapter four covers 1) the humorous stimuli and measures employed by researchers, 2) general methodological problems and recommendations for their

correction, and 3) suggestions for strengthening research methodology. Finally, chapter five offers suggestions for future research.