AN INVESTIGATION OF THE WRITTEN EXPRESSION OF HUMOR BY SIXTH-GRADE GIFTED CHILDREN

BY

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(ABSTRACT)

This qualitative investigation of the use of humor in written expression of sixth-grade children was conducted with two major questions as focus:

1. Are there identifiable conventions of initiated usage in the types and frequency of humor expression in written work of sixth-grade gifted students?
2. Are there identifiable conditions which tend to elicit humorous written expression from sixth-grade gifted children?

An analysis of three examples of written work by each of 169 students in five Gifted Center classes indicated considerable use of humor. Patterns of usage emerged, the most conspicuous pertaining to frequency of humor use in the three assignments. Frequency of humor use paralleled the continuum of intimacy of the assignments. Humor appeared most often in the most intimate assignment. Humor was used least in the least intimate assignment. Interpretations of this pattern are suggested in terms of societal awareness and self-disclosure. Wit appeared more often than any other category of humor technique, indicating a preference by these

youngsters for that form of humor which involves the greatest amount of cognitive ability. The relatively little use of Dig, the biting humor technique, is viewed as possibly related to the absence of emotionally laden subject matter.

Students identified as gifted in all areas with no distinguishable bent used humor more often than any other group. Although those students gifted in Math used Wit less than did any other group, this may not have indicated a lack of creativity in these high IQ children as Creativity was considered an attribute of intelligence.

Children of working mothers used humor to a greater degree than did those whose mothers were at home, possibly related to the greater independence and lesser conformity fostered in the former.

The teacher's manner of dealing with the behavior and work of students: informal, demanding, non-directive, traditional, appeared to be more highly related to student humor production than was the personality/style (static or dynamic) of the teacher.

Implications for education were discernible and areas for future investigation became evident.

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Chapter I

INTRODUCTION

History

October 5, 1957 brought the explosion of awareness and concern for the development of our intellectually superior students in the United States. Sputnik spurred investigations of the schools and demands for programs to insure our technical superiority over the U.S.S.R. Federal and state programs for the gifted were developed; local, state, and national organizations for the collection and dissemination of information on the special needs of the gifted became active and research in the area of teaching the gifted increased dramatically. Although voices raised in objection to special provisions for gifted students, emphasizing our egalitarian philosophy over our dedication to individualism, have often frustrated gifted programs, increasing attention is now being given to nurturing the talents of the most able students. Additional impetus for inquiry into gifted education has come from two areas:

1. Acceptance of the uniqueness of the individual child and the need to provide educational opportunities for each child to realize his/her potential.

2. Civil rights/due process legislation and interpretation by the courts seeking to insure equal educational opportunity for all.

Importance of the Problem

There is a growing appreciation of the fact that quality education for the gifted is an advantage to both the individual and society.

Failure to develop the gifts and abilities of those with potential for high contribution robs society of its greatest promise. Investigations which provide insights into the characteristics of gifted children and offer possible directions for the education of these children are significant and relevant. This study is an inquiry into an identified characteristic of gifted children: sense of humor.

> Humor alone [perhaps the most inborn and brilliant achievement of the human spirit] attains to the impossible and brings every aspect of human existence within the rays of its prism. (Hesse, 1929, p. 62)

Humor itself has become an area for scientific investigation in the past few decades. Its sequential development, therapeutic and educational potential and contribution to the rich fabric of life have drawn the interest of psychologists, sociologists, and educators alike.

Statement of the Problem

While virtually all profiles of gifted children include keen sense of humor as an identifiable characteristic (Bernal, 1974; Bleedorn, 1982; Burt, 1975; Cristel, 1981; Fine, 1964; Gallagher, 1975; Guilford, 1972; Jaricky, 1959; Krippner, 1967; Martinson, 1973; Rowe, 1967; Shields, 1968; Torrance, 1973), examination of research reveals little work specifically focused on this attribute. There have been no studies attempting to distinguish particular techniques or kinds of humor preferred or produced by children of high intellectual ability. The work that has been done in humor has dealt primarily with measurement of laughter as a humor response. This concentration creates four major points of concern for this writer:

1. There is no satisfactory standard measurement instrument for

humor, as there is no standard definition of humor itself.

2. The intensity/length of the laughter is not necessarily a reflection of the degree of appreciation of the humor stimulus. A titter from one subject may be the equivalent of a booming laugh in another.

> Laughter itself is not necessarily a response to or indication of a humorous situation. (Mones, 1939, p. 151)
>
> Laughter does not vary in any way with the keenness of humor perception. (Mones, 1939, p. 151)
>
> Humor and laughter are not synonymous. (LaFave, 1972, p. 195)
>
> Laughter and smiling are not necessarily related in any clearcut fashion to the funniness of humor. (Chapman & Speck, 1977, p. 221)

3. Humor is a socio-psychological phenomenon and should be studied in its natural setting, rather than in a laboratory setting. Babad (1974) argued that "tests should not be used in the assessment of humor" (p. 630) when he reported results which showed the sociometric method of humor assessment contrasting sharply with humor test outcomes, with one contradicting the other.

> Humor is generated and used in socially relaxed contexts and is fundamentally foreign to the testing situation. (Babad, 1974, p. 618)

4. The preponderance of work has been done on humor appreciation with few investigations into the creation or expression of humor. Ziv (1980) came to the same conclusion at approximately the same time as this writer; "What all these studies have in common is that the great majority of them focused on humor appreciation and very few only on

humor creation" (p. 162). Researchers have either assumed an appreciation/initiation link or have ignored existing or possible discrepancies between the two phenomena. Only recently has it been implied in some work that appreciation and production of humor may be separate and distinct phenomena (Singer & Berkowitz, 1972); stated emphatically by just one researcher, Ziv (1982), "There is no correlation between appreciation and production of humor; the creators are not the laughers".

Developmental trends in humor appreciation and production are apparent from early childhood to adolescence at which time individual preferences in humor become more prominent than changes related to developmental level. The process parallels Piagetian stages of cognitive development. These stages, suggested by several studies and described in detail by McGhee (1979), suggest the possibility that the humor of gifted children may reflect their advanced cognitive developmental level.

The Cognitive Congruency Theory developed by Zigler, Levine, and Gould (1966, 1967) states that humor at a moderate level of difficulty elicits the greatest humor response, that humor response is greatest when there is a match of cognitive demands with cognitive ability. This would seem to imply that more intelligent individuals respond to more "difficult" or more cognitively demanding forms of humor. If this is true, does this extend to the production of humor by more intelligent children?

Most recent investigators stress the cognitive processes involved in humor appreciation and production and view humor as a form of intellectual play, a special problem to be solved, with incongruity

central to all humor. However, they recognize that these cognitive processes are modified by social, motivational and personality factors and that the emotional investment in a situation is of great importance. Thus, a number of variables could affect humor appreciation and creation: i.e. sex, family configuration, academic orientation, social relations, and classroom atmosphere.

Indications of humor as a form of intellectual activity and the conclusions of investigators implying correlations between "humorousness" and intelligence or cognitive development lead to questions about the development and application of humor in children of high levels of intelligence. For example: Do gifted children have special humor preferences? Do classroom atmospheres/conditions affect the application of humorous expression of gifted children? The "keen sense of humor" attributed to gifted children may be discernible in their appreciation of humor and/or their initiation/creation of humor in their daily life experiences.

This writer believes that the examination of humor initiation in relation to gifted children should begin with the identification of preferred humor techniques as they appear in a natural setting and an analysis of environmental conditions which elicit the use of such techniques. Thus, the focus of this study is on the types and frequencies of humor created by gifted children and on identifying conditions which elicit the creation.

Purpose of the Study

The purpose of this study was to investigate the application/pro-

duction of humor by gifted children in a natural classroom situation in order to answer the following questions:

1. Are there identifiable conventions of initiated usage in the types and frequency of humor expression in written work of 6th-grade gifted children?

2. Are there identifiable conditions which tend to elicit humorous written expression from 6th-grade gifted children?

No attempt was made to show that more frequent use of humor indicates a more highly developed sense of humor. As McGhee (1979) stated, "humor development may be equal in two people even though one of them initiates humor frequently and the other merely reacts to the humor of others" (p. 187).

Conditions were established for a naturalistic inquiry into the creation of written humor by 6th-grade gifted children. Categories and hypotheses emerged from the data itself. Thus, the procedures of this study addressed the four areas of weakness evident in extant humor research. No measurement of humor response was involved; there was no concern with laughter as an indication of humor; the aspects of humor under investigation were viewed in a natural classroom setting; investigation was limited to creation/initiation of humor. Areas and specific questions for future investigation will be discussed later in this document.

Definitions

In this study the term "Gifted" is used to denote a student having an IQ of 140 or above as measured by a Stanford Binet Intelligence Test

or comparable individually administered intelligence test. Initiation of humor in written form is defined as expressions seen as funny or as attempts to be funny, by a majority of the members of a judging panel. The term "humor" is used to include all types and techniques of comedy employed in expressions which attempt to be funny.

In the progress of this study, further categories of humor emerged: Broad Humor, Wit, Dig, Neutral Humor. All of the techniques of comedy which were identified fit easily into one of these categories, with the exception of Self-derision, Taboo references, and Unclassified incongruity. Self-derision and Taboo references seemed to represent opposite ends of a sophistication continuum and the third was a catch-all category so those three techniques were designated as categories in and of themselves.

In order to conduct this study it was necessary to specify selected personal characteristics of students and teachers. These were addressed in terms of bi-polar adjectives. In the interest of clarity for the reader and for future researchers the following explanations of terms is given:

Aggressive - over-assertive and pugnacious as opposed to not aggressive
Not aggressive - pleasantly assertive or non-assertive and not disposed to pugnacity

Joiner - generally found in a group of two or more
Loner - spends the largest percentage of his time separate from groups of peers whether by choice or not, as opposed to joiner

Nice - considerate, cooperative, kind, compassionate, honest, as opposed to not nice
Not nice - mean, unkind, selfish, dishonest

Outgoing - friendly, open, participative, as opposed to shy
Shy - quiet, retiring

Well-liked - by peers as opposed to not well-liked
Not well-liked - observably disliked by peers

The following descriptions of teacher characteristics are in no way intended to signify degrees of expertise nor are they judgmental in the sense of one characteristic being more desirable than another.

Demanding excellence - teacher behavior/attitude insists upon student work at uniformly high levels
Not demanding excellence - teacher is more accepting of student work yet does not uncritically accept generally low quality work

Directive - teacher personality is imposing and classroom is structured and conducted to reflect the teacher's understanding of the abilities and needs of the students
Non-directive - teacher is more apt to manage the classroom in a way that reflects student personalities

Dynamic - teacher is energetic, enthusiastic, usually in motion, vocally opinionated
Static - teacher is more of a facilitator with an understated leadership style

Formal - teacher manner tends to establish some distance between student and teacher; to establish the teacher as the adult, with the teacher's position itself determining modes of respectful, standardized behavior by students
Informal - teacher manner is more loose, "laid back", more conduO cive to camaraderie

(It must be noted that both the traditional and non-traditional teacher are dedicated to developing and nurturing the creative potential of each student.)

Overview of the Paper

Chapter 2 will offer an extensive review of relevant literature on humor organized according to major humor theory strands and presented chronologically within the strands, with emphasis on developmental trends in humor appreciation and production. The chapter will also include a review of representative work concerned with definitions

and uses of humor as well as humor response related to characteristics of intelligence and creativity.

Chapter 3 will describe the design and procedures used in this study.

Chapter 4 will present results obtained in this study and a discussion and analysis of the results as well as a discussion of the significance of the results and implications for the education of gifted children and for future research in this and related areas.

Chapter II

THEORETICAL ISSUES AND BACKGROUND LITERATURE

The findings of this study must be considered in the context of extant theories and work in humor appreciation and production. Thus, familiarity with relevant research is essential to the discussion of results of the findings and the implications of this investigation. The following review of literature is presented to provide that familiarity.

Early Theories

Superiority/Sudden Glory

Although research studies of humor have been few in number until the last two decades, that which elicits the smile, the chuckle, the laugh, has intrigued philosophers, writers, and social commentators at least since the time of Aristotle. That noted patrician equated humor with the ludicrous and insisted that it "resides in defects, deformities or ugliness which are neither painful nor destructive" (cited in Mindess & Turek, 1979, p. 1). He viewed laughter as the response to the recognition of a logical fallacy. But he felt that laughter is degrading to morals, an uncivilized form of behavior. This denegration of laughter as a socially disruptive force was in vogue among the "intellectuals" until Ben Johnson (cited in Lauter, 1964) in 1599 saw it as a social corrective criticizing the "follies of mankind." In Leviathan, published in 1651, Hobbes (cited in Mindess & Turek, 1979) expanded Aristotle's thesis into the Superiority or Sudden Glory Theory of Humor "[humor is] nothing but sudden glory attained in the comparison between the infirmities of others

and our own supremacy" (p. 1). Ludovici (cited in Mones, 1939), in The Secret of Laughter, 1932, supported this theory emphasizing humor as a superior adaptation technique in which the laugher feels more in control of the situation. He defined laughter as a "spiritualized snarl" (p. 150). Leacock (cited in Mindess & Turek, 1979) in Humor and Humanity: An Introduction to the Study of Humor, 1938, also supported Hobbes' theory declaring the original form of laughter to have been the "sarcastic 'ha-ha'" (p. 1). Later Conative theories of humor rest on this idea of the desire for superiority.

Conservation of Energy

Modern Affective theories of humor stress emotional components and are rooted in Freud's theories. Freud himself reformulated Spencer's Excess Energy theory of humor developed in 1860 which stated that laughter is a relaxing and relieving mechanism. Freud saw humor or laughter as providing a savings in the expenditure of psychical energy. He considered the purpose of the joke to be the expression of repressed wishes, and the techniques of joking to be basically unconscious. He distinguished two classes of jokes: Innocent (trivial) in which the technique itself makes us laugh and the saving of psychical expenditure is in "short circuiting the link between two normally distant ideas" and Tendentious humor involving the expression of sexual or aggressive feeling which would otherwise be barred by repression.

Surprise

The most widely accepted theories of humor build on the incongruity base of cognitive conceptualizations. These theories assert that humor

derives from the situation in which one is led to expect one idea and suddenly is given another; a situation involving surprise. In 1790, Kant (cited in Mindess & Turek, 1979) defined humor as "the sudden transformation of a strained expectation into nothing" (p. 1). Schopenhauer (cited in Mindess & Turek, 1979) in 1819 developed Kant's idea into the Incongruity Theory in which humor is viewed as a "trick played on our reasoning ability as laughter is generated by the sudden perception of incongruity between an abstract concept and reality" (p. 1). Bergson (cited in Navon, 1981) declared that humor arises from "events...capable of being interpreted in two entirely different meanings" (p. 5). Maier (1932) described humor as "stemming from a situation in which the individual is confronted with an incongruous or surprising situation which can be taken lightly" (p. 70).

Miscellaneous

Several early commentators and theorists have offered explanations of humor which do not lend themselves to the classifications mentioned but contain elements which are reflected in modern theories. Wallis (cited in Keith-Spiegel, 1972) in 1922 depicted laughter as "the jolly policeman who keeps the social traffic going after the approved manner" (p. 33). The following year, McDougal (cited in Keith-Spiegel, 1972) insisted that laughter is an instinct, "a balance to our capability for sympathy" (p. 33). Eastman (1936) found the essence of humor to be playfulness, "things can be funny only when we are in fun" (p. 3). Mones (1939) described the experience of humor as a "creative sort of play" (p. 152) as well as stressing the importance of cognitive devel-

opment in humor appreciation and recognizing the influences of temperament, attitude, and other emotional factors.

Expansion of Theories

Eysenck's (1942) model first formally presented humor in terms of the three dimensional structure of cognition, conation, and affection stating that cognitive, emotional, and motivational processes all play important roles in humor. His idea that a joke is "better if its parts are unexpected and contrasting in meaning and if they are integrally bound together by some deeper truth" (p. 296) is echoed in several later humor level schemes which identify the higher forms of humor as those concerned with recognition of the human situation and basic truths of life. Harms (1943) distinguished as "real humor" that humor showing positive "attitudes of profound understanding of the small and great tragedies of life...expressing humanitarianism" (p. 353). More recently, Heckel and Kvetensky (1972) identified the development of true humor as occurring as "man attains positive attitudes toward himself and mankind, understands in depth the profundity of man's predicament, sees his tragedies in perspective and tempers his attitudes with kindness" (p. 21). He insisted that "great humor" is never "small-minded pseudo-sophisticated cynicism." When distinctions are made among humor, wit, comedy, etc. it is humor that is considered the kindest, the most indicative of a mature, humanitarian personality and wit the most clever and creative.

Affective Theories

In 1948, Scheerer (cited in Keith-Spiegel, 1972) divided the study

of humor into two basic theoretical approaches: Those localizing the condition of humor in the objective content of the situation (thinking), and those explaining humor subjectively in terms of emotional content or motive. *Although he insisted that Freud used both of these approaches* the disciples of Freud have been most successful at expanding and substantiating the second approach in Affective theories of humor. These theories subordinate the intellectual or cognitive aspects of humor to the emotional components and maintain that humor is the result of repressed aggression or sexuality. Following Freudian precepts, Grotjahn (1957) elevated the pun, when used to release aggression, to the highest level of humor. Wolfenstein (1954) emphasized children's use of humor as a means of coping with stress. Steinfirst (1980) added the purposes of dealing with sexual curiosity, aggression, feelings of destruction towards others and rebellion against authority to children's use of humor. Strickland (1959) observed greater enjoyment of humorous stimuli which allow for vicarious need gratification. Fry (1963) agreed that humor has implicitly unconscious aspects. Goodchilds and Smith (1964) refuted some of these ideas; their results seemed to belie the view of humor as tension release mechanism and verbal aggressive attack only. Supporting Affective theory, Kreitler and Kreitler (1970) saw a possibility that the intellectual effort of examining and interpreting an event disrupts the spontaneity necessary for hearty laughter. In expanding on Freud's theories, Mindess (1971) offered his Theory of Laughter as Liberation. In this theory, laughter frees us from the constraints of conventionality, morality, and reason. Since any release

of vitality is pleasurable, it makes us feel joyful. Keith-Spiegel (1972) restated the positive value of humor as a defense, a relaxing and relieving mechanism. Pollio and Edgerly (1976) maintained that "all attempts at being humorous contain from a little to a lot of aggression and/or hostility" (p. 241). Scheerer (cited in Keith-Spiegel, 1972) himself combined both of the approaches he attributed to Freud, stating that "cognitive functions are involved in emotional reactions to humor" (p. 231) thus encouraging recognition of cognitive elements by Freudian theorists such as Arieti (1978), "We perceive a stimulus as witty when we are set to react to logic and we realize we are instead reacting to paleological or to faulty logic" (p. 233) and also encouraged formulation of combination theories.

While stating that all humor is based on incongruous situations, Kappas (1967) contributed to Affective theory by defining a Sense of Humor as an attitude of amusement which may be "bound up with positive or negative emotions" (p. 67). Leventhal and Cupchik (1976) developed a process model of humor judgment designed to combine a variety of affective and cognitive factors as well as underlying personality characteristics. Leventhal and Safer (1977) depicted the humor experience as a "social situation establishing the conditions...for the action of cognitive processes that construct incongruity units and then integrate these units at a second stage with an affective category" (p. 346). Prentice and Fathman (1975) asserted "the normal child's response to humor obviously represents a complex interplay of affective and cognitive components" (p. 215).

Without denying the contribution of "emotion based" studies to humor theory, it must be noted that the work done describing or explaining humor development solely or primarily on the basis of affective components has all been within the context of Freud's psychoanalytic theory reflecting denial of the ability of need for humor in the "first rapture of childhood."

Conative Theory

Conative theories resting on man's desire for superiority have been explored by Eastman (1936) who claimed that ascendancy jokes are the most frequent of all types of jokes for "rivalry is the commonest form of play. It is more fun than any other diversion and it is more fun, not because it is different from serious life, but because it is the same thing cast loose from care and consequences" (p. 247). Rapp (1951) described the original source of wit/humor as the "roar of triumph...by the superior duelist...in an ancient duel" (p. 5). Gruner (1978) presented a twist on Sudden Glory in his Derision Theory in which the loser (the victim of derision or ridicule) with the suddenness of loss, causes laughter. Essentially the Sudden Glory theory has been subsumed in the surprise element of Incongruity theory or combined with the latter in recognition of the essential element of perceived incongruity in humor, i.e., the linking of the Superiority element with perceived incongruity (in humor) by LaFave, Haddad, and Maesen (1976).

Cognitive Theories

The vast majority of the work done in the area of humor in the past two decades centers on the cognitive aspects involved in humor apprecia-

tion confirming incongruity as the foundation for all humor. Heider (1958) proposed a Cognitive Balance model of humor. Berlyne (1960) submitted that "arousal of humor may be engendered through intellectual maneuvers" (p. 2). Kappas (1967) viewed all humor as based on incongruous situations. Cherfas (1975) elaborated on the resolution of incongruity,"we laugh when our level of arousal is increased by incongruity or making a prediction of an unlikely event and then decreased by resolving the incongruity of finding that our prediction is correct" (p. 431). Rothbart (1977) accepted the perceived incongruity basis for humor but questioned the necessity for the resolution of the incongruity to generate humor, while Navon (1981) argued that the resolution of the incongruity is "seemingly appropriate but virtually inappropriate as the incongruity only seems to be resolved because the resolution conflicts with valid reasoning made previously" (p. 7). It is his contention that a joke must combine incongruity and inadequate resolution "disregard of an essential piece of information that is not explicitly stated but...inferred and that actually disambiguates the situation" (p. 7).

McGhee (1979) emphasized the important element of playfulness (first described by Eastman in 1936 and underscored by Fry in 1963, 1970.) "Humor in the young child, then, results from the playful contemplation of incongruity, exaggeration, absurdity or nonsense only when the child realizes that the events exist in fantasy" (p. 61). The child must regard incongruity as fantasy in order to perceive it as humorous (fantasy assimilation as opposed to reality assimilation.) Koestler

(1964) elaborated on the surprise element of humor coining the term Bisociative Shock, in his Bisociative Thinking theory. The Bisociative Shock is actually a "mental jolt, cuased by the collision of incompatible matrixes"; the surprise resulting when two domains of thought, never having been considered related, "suddenly have a common thread" (p. 59). Koestler was supported by Colell and Domino (1980) who found positive correlation between creativity and preference for incongruity humor. Fry and Allen (1976) described humor as a creative experience. The rare allusions to humor generation in experimental work include Koestler's Bisociative Thinking theory which equates the kind of thinking required for the creation of humor with that required for all other types of creativity. Shultz and Scott (1974) distinguished between the type of cognitive processing required to create humor (ambiguity) and the reverse involved in the reception of humor (incongruity to resolve ambiguity) with Shultz (1972, 1975) insisting that incongruity must be cognitively resolved to be seen as funny. Another mention of humor production is by Lieberman (1977) who spoke of recognition of the incongruous, surprising or novel in situations as a requirement for the generation of humor.

Developmental Trends in Humor Acquisition

Developmental trends in humor acquisition (or appreciation and production) paralleling Piaget's pattern of developmental acquisition of cognitive abilities have become apparent through the work of several researchers. Because these studies have proven so fruitful and their conclusions have been substantiated by further investigation, develop-

mental trends in humor has been a major focus of humor study for the last several years.

Kimmons (1922) was one of the first to attempt a detailed description of humor appreciation in children, noting the greatest change at ages 11-13 which he described as a change to "lower adult material" (p. 55). Washburn and Walker (1919) had previously noted a progressive decrease in the intensity of reaction to the comic from 4th-grade age through 7th grade with actual loss in adulthood. Without attempting to trace development, Eastman (1936) did distinguish between elemental, childish humor "not witty...a mere foolishness...delightful absurdity" (p. 10) and grown up humor "witty jokes" in which "neither word nor logic fail, yet the expected meaning is not there, something else is there: the point" (p. 11). He described humor as a graduated series of practical jokes beginning with the raw, physical prank and ending with the inward flash of wit. Laing (1939) concluded that the development of a sense of humor paralleled the development of intellect, characterizing humor appreciation ages 7-10 as visual, 11-13 as more linguistic and adolescence as the period of significant individual differences and verbal wit. Harms (1943) distinguished stages in juvenile pictorial humor and identified "real" (mature) humor as dependent on mental differences first experienced and created after adolescence. Wolfenstein (1954) identified the humor of the 3-4 year olds, 6-8 year olds and 9-11 year olds and declared riddles the favorite joke from ages 6 through 11 moderated at age 7 by the development of concrete operational thinking. Grotjahn (1957), although Freudian in orientation, contributed to devel-

opmental theory in stating "the sense of humor develops in stages which run parallel through human growth and maturation from childhood to adulthood" (p. 80). In 1958, Graham observed a "shift in types of things perceived as funny with increased maturity and/or experience" (p. 328). In presenting humor as overlapping play, Fry (1963) traced humor development in stages: up to age 3, ages 4-7, 5-8, 6-8, pre and early adolescence, each stage with its own favorite form of joke/humor. Jerseld (1963) stated that humor evolves in three divisions of development with accompanying themes: pre-school, older children, adult. Zigler et al. (1966, 1967) found a general positive relation between cognitive ability and humor expression while recognizing the importance of personality dynamics interacting with particular humor stimuli content.

Cognitive Congruency

In 1967, Zigler et al. developed the Cognitive Congruency theory which states that humor at a moderate level of difficulty elicits the greatest humor response, that humor response is greatest when there is a match of cognitive demands with cognitive ability. As mental age increases, more complex forms of humor elicit a humor response. In detailing the developmental stages of humor in children, McGhee (1979) verified Zigler's Cognitive Congruency principle and stressed the parallel to Piagetian levels of cognitive development indicating that "age dependent differences in humor response are related to changes in the child's underlying rule structure as the child acquires content and Piagetian structural or organizational rules needed to process different types of humor" (p. 150). His comprehensive works have contributed

important insights into the development of humor response and the child's appreciation of humor. His theory of Fantasy Assimilation vs. Reality Assimilation is partially based on the principle of the pleasure in Cognitive Mastery: "the pleasure in cognitive exertion required for humor stems from distortion (in fantasy) of previously established knowledge; not from its initial formation. Equal amounts of effort are required but humor results only when the effort exerted leads to resolution or understanding that is nonsensical in the world of reality at the same time that it is perfectly sensible in the world of fantasy" (p. 154). He stated that the child's level of cognitive mastery prepares him for the humor experience; humor comprehension is determined by intelligence and operational level but he also stressed the need for a playful frame of mind for appreciation of humor. Prentice and Fathman's (1975) results indicate linear increase of comprehension of joking riddles grades 1 to 5 with decreasing enjoyment and are consistent with Zigler's Cognitive Congruency thesis. In an interesting illustration of developmental humor trends and cognitive congruency, Schaier and Cicerelli (1976) observed regression of logical thinking in geriatric adults indicating the "loss of cognitive skills in reverse order of their acquisition resulting in children's jokes becoming funny again at an advanced age" and illustrating that "throughout the life span, humor is maximized at moderate levels of difficulty" (p. 581). Athey (1977) embraced the Piaget stages as the structural basis for humor development in concluding "all the results of this study indicate that humor comprehension and mirth responses in children can be predicted with a high

degree of accuracy by utilizing the structural and functional aspects of Piaget's theory of intellectual development", and in support of Zigler's principal found an optimal level of complexity for the child in responding to humor, one which "neither strains comprehension nor is too easily understood" (p. 218). Whitt and Prentice (1977) also supported Zigler's theory in noting declining enjoyment of more highly comprehended material (homonymic riddles) by older children. Additionally, they underscored sequential development of the enjoyment of logical incongruity.

Progression/Sequence of Development

Kappas (1967) presented the overall pattern as a "progressive expansion of the child's sense of humor into more and more areas of emotional and intellectual experience" (p. 69) with the maturing of the child's sense of humor paralleling his intellectual and emotional development. She saw visual forms of humor dominating until high school when verbal humor and wit take the ascendance; joking insults, and ridicule the most common. Heckel and Kvetensky (1972) recognized that humor development corresponds to cognitive levels which are best assessed by Piaget's stages of causality. Shultz and Horibe (1974) described the development of children's humor sequentially; explaining that as the child gets older he comes to understand different types of ambiguity in jokes in the same sequence as he is able to detect the ambiguities in a non-joke context adding that there is incongruity only if the child can detect it and without incongruity there is no joke. Suls (1972) originated a two-step model for the appreciation of jokes and cartoons: an information processing model. Rossi (1975) observed continuous development

of the child's ability to use figurative language, reflecting the interplay of language and experience, which, by extension to verbal humor, implies support of the sequential development of humor. Bariaud (1977), in her attempt to trace the development of the child's response to incongruity, attested to the Piagetian parallel development of humor and the necessity of previously constituted cognitive schemata for humor appreciation and also described a two-step process for appreciation based on incongruity with the second step involving questioning or even "making fun of" the usual ways of thinking. Bariaud discussed the reality concept which McGhee designated as central to humor, indicating that "for a given time reality is granted to the anamoly" (p. 232) and that the initial reality takes on a new meaning because of humor while she also stressed the need for emotional adhesion to fantasy. Sheppard (1977) correlated humor levels with Piaget's Idiosyncratic, Partial, Normative, Expectational, Relational, Extra-contextual, and Philosophical stages of cognitive development. She elaborated,"levels [of humor development] are presumed to reflect developmental changes in the meaning of humor, analagous to level schemes used in psychological studies of moral development...personality growth...the ego ideal...and intellectual changes during college" (p. 225). Sheppard also noted the ever widening bases for humor in general cognitive activity as the child matures. She also differentiated adolescent humor from childhood humor explaining that the difference lies in the adolescent's ability to "incorporate self-reference, to apply a metaphorical interpretation to events and to discover social truths in humor or satire" (p. 227).

Yalisove (1978) discriminated the sequential development of stages of appreciation for riddles: reality riddles through language ambiguity riddles to absurd riddles. Kurdek's (1979) studies involving the simultaneous decentering ability to consider and coordinate differing pieces of information as a major cognitive component underlying developmental trends in humor appreciation, "simultaneous coordinating and resolution of logical incongruities" (p. 93), did result in positive correlations although the magnitude of correlations was not very high. The work involved the rating and explaining of the funniness of cartoons. Tamashiro (1979) charted the stages of humor development corresponding to Loevenger's (1976) theory of ego development and Piaget's stages of cognitive development, providing implications for education which include: Teacher encouragement of children's expression of humor as a means of stimulating their cognitive and personal development and Teacher assessment of student's developmental level concerns and abilities to make determinations concerning "instructional and disciplinary measures that are in harmony with the child's developmental stage and make the learning environment more delightful and meaningful" (p. 74). Steinfirst (1980) presented humor as developmental depending on age, intelligence, grasp of language and environment. Martin and Lefcourt (1982) described a measurement instrument used in their experiments as based on the three required elements in a sense of humor: the ability to perceive humor in the environment, a positive evaluation of humor, and the tendency to express ones emotions.

Children's Humor Preferences

In addressing the sequential development of humor, investigators have described children's humor within chronological limits corresponding to the stages of cognitive development as distinguished by Piaget. They have contrasted it with adolescent as well as adult humor, describing adolescence as the most significant cut off point between "child" humor and "real" humor, adolescence being the time when individual differences of personality become more significant than developmental stages, although adolescent humor itself does have several distinguishing characteristics. The following represent points of general agreement on representative developmental humor preferences.

Pre-school/Kindergarten to age 5-6	Piaget's Pre-operational stage
Physical Activity-Action	
Visual-clowning, slapstick	
Physical body functions, taboo words, acts	
Nonsense, chanting	
Sound play, silly rhyming	
Hostile humor	
Sudden relief from strain	
Surprise, unusual	
Incongruity	
Defeated expectations	
Another's smile	
Improvisational joking fantasies	

Curiosity

Verbal humor is spontaneous, original, rambling based on perceptual properties of objects and events

Early Childhood ages 6-8 — Concrete operational

Anecdotal play — stage

Mistakes of others

Elementary word play RIDDLES
Reality riddles

Practical jokes

Insults

Forbidden things

Ready made jokes (very beginning)

(feelings of superiority begin to appear)

Late Childhood ages 9-11

Conventional jokes and funny stories

Word play RIDDLES Language ambiguity riddles

Affairs of classroom

Decreased interest in misfortune of others

Delightful absurdity

(feelings of superiority increasing)

Adolescence — Formal operational

(superiority feelings run riot) — stage

Stupidity of adults

Exaggeration

Verbal wit appreciation

Play on words, language

Original, good natured, tongue-in-cheek social satire

Competition/struggle

Stock figures

Caricature

Lampooning

Personification

Objectification

Phallic behavior

MARKED INDIVIDUAL DIFFERENCES

Adult

Double entendre

Self-derision

Witty joke

Pun to release repressed aggression

Real humor: positive attitude of profound understanding of the tragedies of life; humanitarianism, tempered with kindness

Uses of Humor

Interest in the uses of humor is evident in the writings of humorists themselves and in the observations of researchers.

Psychological Services

Freud (1906) was among the first to be concerned with the uses of humor. Integrated among his theories was an analysis of humor explaining

its function of expressing repressed wishes, relieving repressed aggression and sexuality and serving as an important defense mechanism in personal adjustment. In addition to the supporters of Freud already cited, Baughman (1979) discussed humor used to relieve aggression and reduce stress.

Erskine (1928) considered the value of humor to be the sudden awareness of tendencies in ourselves seen in the faults of others.

The therapeutic value of humor and its role in modern psychotherapy was treated by Baughman (1979), Hershkowitz (1977) Lefcourt, Sardoni and Sardoni (1974), and Mindess (1971).

Social Functions

The social functions of humor have been identified by Martineau (1972): means of achieving consensus, technique of social control, device for introducing competition and social conflict; Allen (1972): social lubricant, harmonizing agent; Fry and Allen (1976): easing social conflicts, relieving tensions and promoting order; Kane, Suls, and Tedeschi (1977): social probing, unmasking, antecedent of interpersonal interaction; McCormack (1979): social lubricant; Baughman (1979): deflate pomposity, unveil pretentions, social lubricant, safety valve, unification of group. Pollio and Edgerley (1976) described the "social event of humor" as allowing for the "cathartic release of aggressions, hostilities, and taboos" (p. 241). Social functions more specifically directed to the individual were enumerated by Kane: Self-disclosure, decommitment, face-saving, ingratiation; and by Mindess (1971): broadening our view of ourselves. Lefcourt, Antrobus, and Hogg (1974) contributed allowing

the individual to better cope with evaluative experiences. As a function of humor, Goldstein (1976) added: "humor may provide a means of temporarily transcending the immediate situation, objectifying it and in this way, coping with it" (p. 11). Chapman (1976) noted, "Humorous laughter is an important social behavior" (p. 182).

Educational Applications

Several investigators have examined the potential of humor as a tool in education. In citing humor as one of the most important qualities of a good teacher, Highet (cited in Baughman, 1979) stated that the most obvious purpose served by humor is "that it keeps the pupils alive and attentive because they are never quite sure what is coming next" but he declared that the "real purpose of humor in teaching is deeper and more worthy. It is to hook the pupils and the teacher and to link them through enjoyment" (p. 28). Pilon (1971) suggested the use of humorous word play to motivate vocabulary development. Smith, Ascough, Eddinger, and Nelson (1971) demonstrated that humor facilitates learning of students high in anxiety. The study by Terry and Woods (1975) also supports the thesis that "humor serves to reduce the level of anxiety of highly anxious students towards a level of arousal that optimizes their test performances" (p. 184). Gruner (1976) found that humor improves the user's image with an audience, a finding which could have relevance in teacher/student relations. Zillman, Williams, Bryant, Boyton, and Wolf (1980) observed positive effects of humor on learning. However, Davies (1977) argued that "experimental evidence in support of facilitation of learning via the introduction of humor to the lesson is equivocal" (p. 468) and

Townshend and Mahoney's (1981) results "did not support the thesis that humor has a positive effect in evaluation by reducing tension and thereby facilitating the achievement of students who have high trait anxiety" (p. 232). Ziv (1982) insists that few positive correlations of humor use and increased student performance have been found because researchers were looking for quick results; we need to look at long term results and need to use carefully prepared humor which is relevant to the material being taught.

Several researchers have confirmed the value of humor in developing a desirable classroom atmosphere and encouraging creativity. Ziv (1976) determined that the laughter following the introduction of humor in the classroom has a liberating effect on the flow of ideas. McCormack (1979) acknowledged humor to be a spark to creativity, a motivator, a releaser of creative ideas. Sherman (1979) declared that humor has a serious place in education as "an initial way, and sometimes the only acceptable way, to call attention to a problem" (p. 175). Mogavaro (1979) proclaimed the strength of humor to be in the direction of "the more favorable social climate it is able to foster in the classroom" (p. 44) easing tension, establishing rapport, maintaining attention, creating interest, helping to create a mood that "often appears to be conducive to learning" (p. 44). Vizmuller (1980)noted that "humor facilitates creative and cognitive faculties" (p. 267) of students but viewed the functions of humor as resting essentially on the social plane "where it strengthens ties among students" (p. 267) and on the psychological plane "where it relieves tense situations" (p. 267). There is now

considerable agreement that humor serves to relax students and relieve tension and thus to maximize student comfort and readiness to learn.

Ziv (1982) determined that previous equivocal results on effectiveness of the use of humor in teaching situations was due to an incorrect approach of tests; that we needed to look at long range results in a teaching situation and that the humor must be relevant to the material being taught; also the humor must "slide" easily into the lesson and not be overused. On an end-of-semester test on material covered, the experimental class in his study; the class in which the teacher was trained to use carefully prepared, relevant humorous material at appropriate intervals had a mean grade score of 83.1 while the control class, in which no humor was used, had a mean score of 72.6 suggesting the effectiveness of humor use in the teaching situation.

Mindess, Turek, Miller, and Corbin (1982) in a conference session discussing the development of their Sense of Humor Inventory, agreed that the instrument really is best used to tell something about the individual by telling us about the kind of humor he appreciates most and tends to use in the laboratory situation, but that it cannot purport to be a definitive measurement of an individual's sense of humor since elements such as the individual's use of humor in daily life situations is not considered.

Humor (Response) and Intelligence/Creativity

Although Sense of Humor is a recognized characteristic of gifted children, investigations seeking to correlate humor response directly with intelligence have not been conclusive. Early parallels appear in

statements grounded primarily in personal judgment and opinion:

> Lilly (1896): Those who are lacking in humor reveal their mental poverty. (cited in Goldstein & McGhee, 1972, p. 32)
>
> McComas (1923): The intellectual element in humour becomes more apparent as one moves from childhood to maturity. (cited in Goldstein & McGhee, 1972, p. 27)
>
> Hellyar (1927): [A] sense of humor is dependent on the ability to perceive shades of meaning which might go unnoticed by a clumsy mind. (cited in Goldstein & McGhee, 1972, p. 32)
>
> Erskine (1928): Sense of humor = Intelligence + Heart. (cited in Goldstein & McGhee, 1972, p. 32)
>
> Menon (1931): We can expect to find the best humor in the most intelligent...The man with great humor is one with a keen and reflecting mind, a mind richly stored with experiences and capable of alertness. (cited in Goldstein & McGhee, 1972, p. 32)

Presentations of results of later studies in this area have been limited by the designs and by the conceptual separation of intelligence and creativity. This limitation will be addressed later in this paper.

Positive Correlations: Humor/Intelligence

In 1925, Bird obtained a correlation between IQ and success in a humor test. The test required that children choose the funnier of two cartoons. Generalization of his results has questionable significance as measurement of sense of humor was confined to choice of cartoons.

Kenderdine (1931) found that high IQ preschoolers averaged a greater number of laughs out of defined possibilities than did the total group, but do all children laugh when amused? And is laughter not contagious, especially in children? Justin (1932) reported coefficients of correlation between IQ and length and number of laughter responses

to the incongruity of humorous situations ranging from .40+ at age 3 to .12+ at age 6. Again, laughter is not necessarily an indication of a sense of humor. In 1938, Schiller (cited in Keith-Spiegel, 1972) defined humor as the "joy of reasoning" (p. 32). Stump's (1939) conclusion that high intelligence is not necessarily related to a sense of humor is questionable. His evidence of intelligence was high scores on college entrance exams. High scores on college entrance exams do not necessarily indicate the presence of intelligence. Mones' (1939) paper referred to Gregg's statement (upon failing to find any correlation between children's laughter and IQ) in which Gregg insisted that such a correlation might indeed be found if appreciation of humor were studied rather than the simple manifestation of laughter. Mones himself stressed the importance of cognitive development in humor while recognizing also the influence of temperament, attitude and other emotional factors.

Laing (1939) asserted that the development of the sense of humor parallels the development of intellect. Williams (1946) found that children with a high appreciation of humor were intelligent rather than dull. Feibleman (cited in Keith-Spiegel, 1972) in 1949 defined humor as an "intellectual affair dealing chiefly with logic" (p. 32).

Zigler et al. (1966) reported "some evidence has been presented suggesting a relation between the appreciation of humor and cognitive functioning as indicated by various tests of intelligence" (p. 509) citing the work of Overlade (cited in Zigler et al., 1966) from 1954 on joke comprehension and Redlich, Levine, and Sohler (1951) with psychiatric patients and naval enlistees.

In her analysis of Children's Response to Humor, Kappas (1967)

observed that "there appears to be a positive correlation between an individual's intelligence and his sense of humor. More intelligent individuals are able to perceive greater variety of humorous situations" (p. 70). Rowe (1967), while studying techniques for teaching creative writing to the gifted, commented that gifted children often have a sophisticated sense of humor and appreciate various forms of wit.

Negative Correlations: Humor/Intelligence

Cunningham's (1962) work resulted in negative relations between all aspects of the Thurston Intelligence Test and the Roley Cartoon Test administered to 70 high school freshmen, but he noted the possibility that the cartoons presented no intellectual challenge and thus evoked little response and therefore the findings could not be generalized to conclude that no relationship exists between sense of humor and intelligence. Muthayya and Maltiparjunan's (1963) attempt to devise a test to measure humor and explore the relationship of humor to intelligence (using cartoons and a rating system) produced negative relationships suggesting inverse relationships. However, the use of cartoons and a rating system provide an insufficient basis for establishing significant relationships, in the opinion of this writer.

Zigler et al. (1966, 1967) mentioned work by Cattell and Luborsky (1947), Hester (1924), Kombouropoulou (1926, 1930), and Omwake (1939) as providing no significant relation between humor and intelligence. Singer and Berkowitz (1972) found no relationship between the tendency to assume the wit role and intelligence. This negative finding is limited by the use of SAT scores to measure intelligence and the use of

a brighter college population as subjects for the study. Prentice and Fathman (1975) discerned no major relationship between intellectual level and enjoyment of joking and nonjoking riddles although comprehension of joking riddles was significantly related to intelligence in children in the 1st, 3rd and 5th grades. Koppel and Sechrist (1970) insisted that "sense of humor has not been established as a discernible trait" (p. 77), and that the evidence on humor/intelligence correlation is contradictory with some studies showing no effect due to intelligence and others indicating that "people of higher intelligence appreciate humor more" (p .77).

Correlations: Humor/Creativity

Getzels and Jackson (1958, 1962, 1975) emphasized a distinction between intelligence and creativity, a distinction not recognized by this writer. Working with groups which they labeled High IQ, Low Creative and Low IQ, High Creative (we must keep in mind that their "low IQ" was, nevertheless, in the national gifted range; thus not actually "low IQ") they noted that the Low IQ, High Creative group ranked sense of humor second only to emotional stability as an important and desirable personality trait while the High IQ, Low Creative group ranked it last.

Several studies have shown positive correlations of intelligence and creativity. If one takes the position that intelligence and creativity are inseparable, creativity being an attribute of intelligence, (a position defended by this writer) support for the humor/intelligence link is more convincing. Gowan (1979) declared, "If creativity is the flowering of giftedness due to developmental escalation, we have merely discovered another relationship between adjacent components of humanistic

psychology" (p. 11). Guilford (cited in Gowan, 1979) in 1972 stated "Intelligence is a broader concept than creativity, but includes creativity" (p. 25) and in 1975, "this definition [of intelligence] has a place for creative-thinking abilities within the realm of intelligence. There is no need to contrast these two concepts, as is sometimes stated or implied" (cited in Gowan, 1979, p. 287). In 1962, Gordon (cited in Treadwell, 1970) found a sense of humor a consistent characteristic in adult creative trainees. Koestler (1964) described the act of bisociation, "Perceiving of a situation or idea...in two self consistent but habitually incompatible frames of reference" (p. 35) as basic to all forms of creativity including the creation of humor and posited that creative thinkers should be better at creating humor. Wallach and Kogan *(1967) proclaimed that there is little "solid evidence to support the* claim that creativity can be distinguished from intelligence" (p. 43).

Goodchilds and Smith (1964) linked wit to creativity: "the wit by his witticism reveals himself to be cognitively creative, and by his success in amusing his peers to be socially creative as well" (p. 23) also noting that the "creatives" in their study groups valued and employed a sense of humor. Yamamoto (1965) indicated that "the true correlations of IQ and creativity may be as high as .88" (p. 305). Feldhusen and Hobson (1972) correlated humor with playfulness and high level divergent thinking. Torrance (1966) designated humor as a part of the mental processes of the highly creative individual. Gallagher (1966) placed humor in the divergent thinking category. Treadwell (1970) ascertained patterns of interrelationship between humor and creativity. Goldstein and McGhee

(1972) submitted the exercise of wit as a form of creative behavior. *Babad (1974) insisted that the producer of humor must be creative.* Rouff(1975) stated that her results in experiments involving university freshmen captioning jokes "suggest that comprehension of humor and creative thinking are related and have a common basis in the ability to link disparities" (p. 1022). She added that this relationship "appeared to transcend intelligence" (p. 1022) as measured by SAT scores; a distinctly unreliable measure in the opinion of this writer. Gallagher (1975) speaking of creativity allowed that there was some suspicion that in our eagerness to specify new dimensions we may have overestimated the separateness of those dimensions (i.e., creativity) from high intellectual ability. McGhee (1979) found that the more creative children use fantasy, incongruities and absurdities (humor) to "maintain an optimally varied and interesting environment" (p. 166). He also proposed that "children with a special language facility might be expected to become especially interested in humor because of the great enjoyment that comes from symbolic manipulation and distortion of events" (p. 166) and stated that "the person with a more developed sense of humor [he consciously avoided use of the term "better"] generally initiates more behavioral or verbal forms of humor" (p. 166). His discussion of humor and creativity included the observation: "During childhood more creative individuals are already viewed by their peers as having a better sense of humor. By adolescence, they attach greater importance than their less creative peers to having a good sense of humor. Given this greater interest in humor, it is not surprising that more creative individuals

are generally more appreciative of humor, understand it better, initiate it more often and produce funnier material when they are trying to be funny" (p. 166). McCormack (1979) identified the "casting off of the chains of convention" (p. 49) as the essential element of humor as well as in creative thinking. Baughman (1979) described humor as "the attribute of a creative mind" (p. 30). Colell and Domino (1980) determined that appreciation of incongruity in humor may be related to the process of creativity. Ziv (1980) concluded that his work demonstrated the relationship between humor and creativity. He maintained that creativity is not only thinking in a special way but also involves special forms of behavior and "what is generally scored as originality could also frequently be humorous responses" (p. 169). He submitted that humor is part of creativity and the creativity part of intelligence. He also stated that the "creators are not the laughers" (Ziv, 1982).

Chapter III

METHODOLOGY

Qualitative Inquiry

The principles and basic analytic techniques of scientific inquiry are the same for research termed quantitative and that labeled qualitative. All scientific inquiry searches for a relationship between some X and some Y whether starting with a previously formed hypothesis, as in quantitative research or allowing the hypothesis to develop as a result of critical observations, as is usual in qualitative research. Legitimate scientific inquiry may also eschew formation of hypotheses and aim only for full and rich description to allow observations of relationships among variables. In any case, the basic assumptions required in analysis are the same; the same rules of inference apply. However, procedures of discovery and verification differ greatly. The methodology used by the researcher must be determined by the purposes of the study and, to some extent, the subject area of the study.

Grounded Field Theory

Grounded Field Theory as developed by Glaser and Strauss is a method of inquiry for generation of theory as opposed to verification or testing of theory. It is a systematic approach for description which enables prediction and explanation of behavior and thus is particularly suited to studies seeking to describe behavioral phenomena occurring in natural settings. The process is one of picking out salient characteristics and finding relationships among them. The underlying operation is

the simultaneous collection, coding and analysis of data so that categories emerge in the process and hypotheses or generalized relations among the categories and properties emerge and are systematically worked out during the course of the study. The researcher is able to observe continuous change which is the essence of real social situations. Through inductive analysis, patterns, themes, and categories emerge and are adjusted, modified, and altered in the direction dictated by the data. Initially more collection than coding and analysis occurs; the degree of analysis increases as the study progresses and relationships become apparent. The constant comparative analysis focuses on regularities while searching for exceptions or negative cases. Data analysis is exploratory as the researcher searches for better "fit". Integration takes place as new categories or properties are generated and related. Dimensionality is determined at the analysis stage; thus the researcher is free to consider all pertinent data. Variables often overlooked in standard category systems are captured in this way. Categories arise from the data itself and are altered as new evidence directs; relationships are discovered in the process. Variables are not controlled; control comes from continuous re-examination of evidence and testing for completeness of categories and the search for negative cases. Validity is based on multiple sources of evidence, triangulation, the weight of evidence and the predictive power of the theory which emerges. Generalizability comes from the fact that relationships which occur in a natural setting are more likely to be observed again. Reliability is addressed in continuous checking and cross checking, constant comparison

and multiple data sources.

Adaptation: Grounded Field Theory/Present Study

As previously stated, research methodology must be matched to the problem under investigation. The problem of the present study was best matched to the general procedures of Grounded Field Theory. In reckless defiance of Berger's (1976) warning that "Dissecting humor is an interesting operation in which the patient usually dies" (p. 113), and Benchley's (cited in Mindess, 1979) insistence that "Defining and analyzing humor is a pastime of humorless people" (p. 84), the writer sought to investigate the written use of humor by gifted children in a natural setting. The natural setting was of paramount importance since the aim was to observe the use of humor in ordinary daily school activities and because of the writer's conviction that the investigation of humor, a psycho-social phenomenon, does not lend itself to a laboratory setting. Thus, the procedures used in this study were basically that of Grounded Field Theory. The only interferences in the natural "Slice of Life" setting was the administration of the three assignments to the student. There was no pre-conceived hypothesis; categories and their properties emerged as data was simultaneously collected, coded and analyzed. Integration was achieved as the emerging categories and properties were related. Reduction occurred in the final stage as patterns were adjusted and modified as directed by the data. Humor use was observed from a complexity of stimuli. However, there was no attempt at systematic measurement. The purpose was description and provision of bases for generation of hypotheses in future studies.

A relatively uncommon technique of qualitative work employed in this study was the use of a computer to total frequencies and cross-tabulate variables. Computer usage enabled the researcher to organize the data in a variety of ways so that a multitude of possible relationships could be explored. Frequency of use of humor categories was cross-tabulated with Sex, Class, Birth Order, Parent Occupations, Area of Giftedness, and Personality Characteristics. Patterns and relationships were more readily discerned in the final stages of analysis through computer usage.

Identification of incidences of humor in student papers was achieved through majority agreement of panel members working independently. Each incidence was then coded under a specific humor technique. Constant comparison and re-examination of data for humor technique labeling and analysis proceeded throughout the data collection. Humor categories were altered and adjusted and finally several were subsumed under four broad categories. Continuous observations were made on emerging patterns for classes, sex, birth order, parent occupations, area of giftedness, personality traits and teacher characteristics. Notes were kept in a running log. In the final stages of the study, data were programmed into a computer which provided frequencies and cross-tabulations. This computer usage greatly facilitated analysis providing support for previous observations as well as supplying a few surprises for consideration.

The Setting

Site and Subjects

The five classes of 6th-grade gifted students were randomly selected from a total of 12 such classes within a Gifted Center Program. The Centers are housed in elementary schools; two centers per geographic/ administrative area of a large, affluent, suburban community (county). This upper middle class suburb has a large number of families of military officers, federal government employees, and professionals. There is a high level of concern for education and involvement in school affairs.

The Center program was originally a grass-roots development evolving from the efforts of parent and teacher groups within the county. It is now a major component of the total county program budgeted from county and state funds ($1,894,300 annually) and serving 2,125 children. The only requirement for entry into the program is a score of 140 or above on a Stanford-Binet Intelligence Test or an equivalant standardized measurement instrument. The program operates in grades 3 through 7 and students are eligible for entry at any of those levels. Center curriculum includes the total mainstream elements plus extensions and accelerations. The Centers are administered by the local program managers, school principals.

Non-subject Participants

Gifted Center teachers are not currently required to have special credentials but must attend a series of county workshops on teaching the gifted. They are selected for positions in the centers by the local school principals and have all actively sought the positions after con-

siderable experience in mainstream classes. They retain the option of participating in research projects after approval has been given at all other levels. Adult members of the panel of judges and the technique validator for this study were chosen by the researcher based on the following criteria:

Understanding of and fondness for children

Sense of humor; enjoyment of the "lighter side" of human experience

Intelligence

Flexibility

Dependability

Procedures

In order for the reader to have a clear understanding of the procedures used in this study and to facilitate replication, the methods will be explained in an instructional manual format. What follows is a step-by-step description of the implementation of this research.

I. Design three written assignments to be completed by 6th-grade gifted students who will be unaware of participation in the study.

   A. Assignments should be designed for a range of subject matter and structure, and for appeal to students, and for practicality of completion within time constraints.

   B. Assignment 1: A Letter to Mom explaining why student will be late coming home from school tomorrow.

      Assignment 2: Editorial on any topic of student's choice.

      Assignment 3: Essay summarizing what student has learned from

a recently completed class unit of study in Social Studies, Science, Math, or Language Arts.

II. Design individual student analysis sheets for each assignment to record incidences of humor and humor technique appearing in the title, in work with a humorous theme (to be designated with a * to indicate holistic humor), in work with a non-humorous theme (to be designated as partly humorous), and to record work with no incidences of humor. Demographic data for the student are to be noted on the sheet. Such data includes: age, sex, family configuration, birth order, parent occupations, area of giftedness. A brief personality description is also to appear on this sheet.

III. Assuming participation of five gifted classes in five schools, vary time allotments of 30, 45, and 60 minutes per assignment among schools and among assignments for individual classes. Also vary the relative importance of the assignment (to be marked for a grade or unmarked) among classes and among assignments.

IV. Select and enlist a group of experts to serve as a panel to identify incidences of humor appearing in student work:

A. One teacher of 6th-grade general education class

B. One teacher of 6th-grade gifted class (class is not to participate in the study)

C. One professional comedian

D. Two students, 6th-grade gifted classes (classes not to participate in the study)

Judges are to work independently. Final identification of inci-

dences of humor are to be made by majority agreement of the panel.

V. Purchase a notebook to be used throughout the study to record impressions of teacher characteristics, a list of humor techniques used, observations, emerging categories and possible emerging relationships and patterns.

VI. From among a total of twelve schools housing Gifted Programs, randomly select five classes of Fairfax County Gifted Center children

A. The classes should be located in five separate elementary schools in three geographic/administrative areas in Fairfax county.

B. Center students are identified as gifted on the basis of a score of 140 or above on a Stanford Binet Intelligence Test.

C. Sample should consist of at least 139 6th-grade gifted students: 77 male, 62 female.

D. In three schools classes should be self-contained; two classes of straight 6th grade, one class 5th/6th grade combination (only 6th-grade students to be included in the study); total 71 students, 35 male, 36 female. In two schools instruction should be departmentalized with assignments given in Language Arts sections. Both classes should be straight 6th grade; total 69 students, 42 male, 26 female.

VII. Begin the study during the second semester of the school year. Classroom atmospheres and student-teacher relationships are well established at that time. This will provide a sounder basis

for inferences made from results of the study.

VIII. Arrange for access to schools and communication of data.

A. Call the principal at each site school to enlist his cooperation. Assure him that your work will cause no disruption of his program.

B. Interview potential participant teachers to explain the merits of the study and the value of participation. Explain the aims of the study, their roles, and procedures for data collection. Offer to grade assignment papers if they would like you to do so (hopefully, they will refuse your offer but it indicates your sincerity in avoiding an increase in their workload).

C. Provide each teacher with an information sheet containing instructions for administering assignments.

1. Assignments are to be given as part of the normal class program.
2. Assignments are to be spaced over a three-month period.
3. Time allotments for each assignment should be indicated.
4. Relative importance to students of each assignment should be indicated.

D. Provide each teacher with three stamped, addressed envelopes for transmitting completed assignments to the researcher.

E. Arrange for two additional interviews with each teacher; one to be dedicated to collection of student demographic data. Arrange for interview with principal.

F. Record impressions of teacher personality and style.

IX. Reproduce and distribute copies of each paper.

A. As each set of completed assignment papers arrives, make a copy of each paper for each panel judge.

B. Obscure the students' names. Issue the student an ID number. Fill out a student analysis sheet for each paper in the first assignment, using student name and number. Information from assignment #2 and #3 will be added to this sheet.

C. Return the original student papers to the teacher.

D. Distribute copies to judges, who are instructed to underline incidences of humor, and return the copies to the researcher in envelopes provided for the purpose by the researcher.

X. Record on student analysis sheets incidences of humor and humor technique used by the students.

A. When all judges' copies of assignment papers have been returned, identify incidences of humor according to majority agreement of panel members.

B. Assign a humor technique designation to each identified incidence of humor and add the technique to the List of Techniques Used. Categories of humor will emerge as data is collected and analyzed (Broad, Wit, Dig, Neutral, Unclassified incongruity, Self-derision, Taboo references).

C. Designations are to be validated by professional actor. Data collection and analysis should proceed simultaneously.

XI. Formulate general theory which has been emerging throughout the procedures. Re-examine individual analysis sheets and modify

theory.

XII. Collect demographic data on each student.

A. Interview teachers a second time for this purpose and to obtain additional information on student personality characteristics. This is a much lengthier process than you would imagine. Allow two to three hours per class.

B. Record impressions of teachers.

C. Interview teachers a third time to verify data. Confirm or adjust impressions of the teacher's style and characteristics.

D. Interview principals to validate impressions of teachers.

XIII. Re-evaluate theory

XIV. Construct Grids

A. Construct grids to illustrate frequency and types of humor used by each student for each assignment.

B. Construct grids to illustrate student, sex, family configuration, birth order, frequency and category of humor for all three assignments, parent occupations, area of giftedness, dominant personality characteristics.

XV. Define variables and code for computer format.

(see Appendix A for complete description).

XVI. Run computer program

A. Obtain total frequencies of humor techniques by sex, class, birth order, teacher characteristics, and student personality traits.

B. Obtain total frequencies of humor use across all assignments.

C. Obtain frequencies of humor use in each assignment.

D. Obtain frequencies of humor techniques used by sex, class, birth order, teacher characteristics, and student personality traits.

XVII. Identify relationships and patterns as modified theory emerges from the data. Make inferences and generalizations. Analyze for implications. Identify areas of investigation for future research.

XVIII. Throw a thank-you party for judges and participating teachers. Celebrate!!

Chapter IV

RESULTS: INTERPRETATION AND DISCUSSION

This chapter will offer five major findings related to the research questions. Each finding will be presented and a discussion focused on interpretation of the finding and its implications will follow each presentation.

Finding 1

The subjects (students) used humor to a considerable extent: 60% of the total papers contained incidences of humor or were holistically humorous. Patterns of usage did emerge, the most conspicuous pertaining to frequency of humor use in the three assignments. While time allotments and graded/ungraded differentiation seemed to have no effect on humor usage, the topic or content of the assignment had great effect.

The assignments in this study can be viewed on a continuum of intimacy. The most intimate, the Letter to Mom, was directed at an audience which is the closest and most familiar to the student. The Summary of Learning was directed at a wider, but still familiar audience: teacher, school. The editorial was concerned with the most distant, least intimate audience: society. The frequency of humor use parallels this continuum. Humor appeared most frequently in the most intimate assignment and the humor was most often holistic. Humor was used the least in the least intimate assignment and when it was used, it was most often incidental.

It is possible to interpret this pattern of humor usage in terms of

a well-developed societal consciousness in gifted children. The National Association for Creative Children and Adults' (1976) guidelines for identifying gifted children include "are interested and concerned about world problems". Ruth Lawless' (1976) list of characteristics of the gifted mention "interest in society's problems". Terman and Oden (1947) attributed "more wholesome" social attitudes to gifted children. The Renzulli Hartman Scale for Rating Behavioral Characteristics of Superior Students includes the categories of "Developed sense of right and wrong" and "Moral concern/judgmental". Roy Jaricky (1959) alludes to the "warm good humor and gentle emphasis on ethical concerns" of gifted adolescents. The serious side of the personalities or characters of gifted children is readily seen when moral, ethical and broad, socially significant questions are explored. The social message of the editorial could be considered serious business and not legitimate turf for joking.

When humor was used in the editorial, it was used in an incidental manner rather than constituting the general tone of the work. The less intimate nature of the assignment, the wider, less familiar and more weighty audience may have been intimidating. The children may be unsure of their position in regard to that audience and less willing to risk "fun", being sincerely concerned with establishing their worth as serious thinkers in that wide, adult world.

It is also possible that self-disclosure interacting with intimacy affected the pattern of humor usage. More frequent use of humor appeared in the work directed at the audience which called for the least pro-

tection of the self by the students. When society was the audience the risk of damage to the self was the greatest, resulting in the least self-disclosure by way of humor initiation. This supports the work of May (cited in Lefcourt, Antrobus & Hogg, 1974) "it is not generally realized how closely one's sense of humor is connected with one's sense of selfhood" (p. 633). Although Lefcourt, Antrobus, and Hogg (1974) said that "humor creation results from and augments distance from experiences" (p. 649), Kane et al. (1977) asserted that humor is used for self-disclosure.

These results suggest that teachers of gifted students should consciously try to assure the children that humor is, indeed, valued in the thinking, adult society. Sometimes such assurance could serve to free the children to use humor upon inclination without fear of appearing frivolous or immature to the adult community.

Teachers should be able and willing to help those children who do initiate and desire to use humor to develop skill in using it with taste in such areas as social commentary, assisting them in realizing judgments as to frequency of use for optimum effectiveness. Such skill undoubtedly requires maturity, but guidance during development is valuable and efficacious.

Finding 2

In total usage, Wit appeared more than any other category of humor technique. Although Broad Humor was found slightly more often in the first, most intimate assignment, Wit was used more in both of the other assignments and in total work.

In the various schemata offered by researchers attempting to define and differentiate humor techniques and to categorize them into levels of difficulty or sophistication, when Wit and Humor are separated Wit is most often distinguished from Humor by its intellectuality and bite and placed higher on the cognitive scale but lower on the humanistic scale.

Rapp (1951) offered the essence of Wit as a mental duel and described it as sharp, flashing, quick, creative, and cognitive while characterrizing Humor as slower and more leisurely. Gruner (1965) although stating that "Wit is only relatively distinguishable from Humor" (p. 18) did distinguish Wit as "persuasive, tending to reinforce and strenghthen already extant attitudes rather than change them, having a serious purpose (to ridicule folly), based in truth or sense and reality, absurd and true and having a limited audience." He described Humor as playful, fun, based in reality or fantasy, not for persuasion, adsurd, and untrue, with a wide audience. Later, in 1976, he identified Wit as a verbal cleverness with the potential for amusing but intended for other purposes as well. The other purposes could include: demonstrating verbal cleverness; and maliciously ridiculing some person or object. He contrasted this with Humor which he described as good

natured, minimally offensive, playful poking of fun to amuse and dealing with the inconsequential, the whimsical or the incongruous. Untermeyer, (1972) explained Wit as "intellectual, sharp, swift, piercing" (p. 2) while stating that Humor is "indefinable, sympathetic, wholesome, healing" (p. 2). He quoted Hazlitt (cited in Untermeyer, 1972) "Humor is the describing of the ludicrous as it is in itself, the growth of nature and accident. Wit is the exposing of it by comparing or contrasting it with something else; the product of art and skill" (p. 2). Browning (1979) characterized Wit as an "intellectual mechanism involving quickness, imagination and cleverness" (p. 2), using "cognitive processes to provide amusing surprise, sharp, unkindly, even bitter, situational and ephemeral" (p. 2). His description of Humor included "pecularities and incongruities expressed in clever, amusing manner...designed to entertain, provide pleasure,...set in a playful frame...explaining, illuminating human weakness or foibles in kindly, sympathetic, understanding manner" (p. 1).

In distinguishing the Wit from the Clown, Singer and Berkowitz (1972) approached the present study's separation of Wit from Broad Humor. They described the Wit as using word play "and verbally communicated manipulation of visual images to convey meaning" (p. 4) and as being high on "ideational creativity but not on adaptive regression" (p. 4) and the Clown as using exaggeration and caricature, words or action to "subject some aspect of human experience, the self, or another to ridicule in a manager which evokes humorous pleasure" (p. 4) and as "more regressive in the sense of using developmentally earlier forms of expression and

and communication" (p. 4).

However, the categories and their properties in the present study differ from previous schemes in that the biting, sharp thrust type of humor is separated from Wit and labeled as Dig.

Freud (1906, 1928) made a similar separation in distinguishing among comic, humor, and wit and distinguishing further two categories of wit: Harmless wit, in which the technique of the joke elicits laughter and Tendency wit which has a hostile or obscene purpose. In this study, both Wit and Dig are differentiated from Broad humor and the term "humor" is used as an umbrella term under which all techniques are grouped. Berger (1976) implied a synonymous relationship between Wit and Humor by excluding Wit as a technique of humor in his schemata. Nevertheless, when Wit is considered a separate and distinct form of humor, it is the most "cerebral" of the categories and it would appear that these cognitively able youngsters prefer to use that form of humor which involves the greatest amount of cognitive ability and intellectualization. Humanistic considerations are not applicable here since the definition of Wit in this study does not include the hostile Dig.

The relatively little use of Dig may be attributed to the fact that written expression, by its very nature, occasions more careful consideration than oral expression. One often uses the jibe, the insult, ridicule or sarcasm in oral expression where there is little time for reflection on the effect of its use on the victims. The same individual may resist the temptation to "dig" after the reflection required for putting it in writing. Friendly derision between close companions

was not included in the category of dig in this study.

The absence of Dig could also be related to the absence of emotionally laden subject matter. The tendency to lash out with hostile humor may be greater when content is highly emotional. None of the three assignments in this study involved subject matter or audiences which would be emotionally charged for the majority of the students. Exceptional cases such as mother-child conflict, could account for the incidences of Dig which did occur.

The comparison of oral and written humor holds great promise as an area of investigation for researchers as does the relation of hostile humor to emotionally laden material/situations/audiences. Maturity and skill in expressing contradictory emotions should be considered in such studies.

Finding 3

Students identified as gifted in all areas with no particular distinguishable "bent" used humor the most often, followed closely by those gifted in Math. However, although 58% of those gifted in Math did use Wit, this was the group that used Wit less than any other group. As previously illustrated, most definitions of Wit view it as the most creative form of humor. The elimination of biting humor from the category of Wit in the present study would have no effect on this view. It remains the category which involves the greatest amount of creativity. This could lead to a consideration of students gifted in Math as less creative than those gifted in other areas. However, such a conclusion is unwarrented when we perceive creativity as part of intelligence. Although there have been a number of studies separating intelligence from creativity (Getzels & Jackson, 1958; Torrance, 1973; etc.) this writer maintains that creativity in the sense of creative thought as distinguished from creative talent, is not a separate attribute, but an attribute of intelligence.

When Torrance insists that standard IQ tests miss 70% of the students who score in the top 20% of creativity tests, this does not mean that creativity and intelligence must, therefore, be separate and distinct traits. It does mean that our IQ tests have missed an essential measurement in intelligence...creativity...and we must include items on the tests which detect originality, flexibility, fluency and these components of creativity should be used as part of the intelligence measurement itself. It is misleading to use a term "high IQ, low

creativity" (Getzels & Jackson, 1958) since the IQ measurement should include measurement of creativity. What may seem to be Creativity as opposed to Intelligence could really be Intelligence with less concern for societal approval as evidenced by individuals with more self-confidence, willingness to take risks, to ignore social norms, to question established order. Guilford (1979) used these terms to describe creatives.

All intellectually gifted individuals are not equally gifted in all areas. Those gifted in certain areas may also be more "gifted" or more inclined to produce humor (also dependent on other personality and/or environmental factors) explaining the increased proclivity in this study of those gifted in all areas or gifted in the arts to produce humor as differentiated from those gifted in Math and/or Science areas. Further investigation with greater numbers of children is needed to generalize this proclivity. However, this does not mean that there is a distinction between giftedness intellectually and creatively. If the elements of creativity are included as measurements of intellect, the correlation between humor and creativity found by several researchers are simply correlations of certain components of intelligence and humor.

Recent work in this area supports the inclusion of creativity as an element of intelligence. Guilford (1979) states, "Intelligence is a broader concept than creativity but includes creativity....This definition [of intelligence] has a place for creative thinking abilities within the realm of intelligence. There is no need to contrast these two concepts, as is sometimes stated or implied" (p. 25). Khatena

(1979), in discussing the progress of the gifted movement, notes "Relative to the expanded concept of intelligence was the structure of Intellect Model (Guilford, 1967) which focused attention not only on the many ways a person could be intelligent but also suggested that there were qualitative differences in intellectual functioning which included divergent [and the less precise but more inclusive term, creative] thinking...The characteristics of the gifted child now included the component of creativity; and to the earlier concepts of gifted people could now be added elements of behavior that were creative, spontaneous, and nonconforming, that involved a more sensitive apprehension and interaction with the external environment, that identified more intense emotional involvement and commitment, that involved creative leadership and adjustment adeptness far above the ordinary" (p. 215). Wallach and Kogan (1967) found that there is "little solid evidence to support the claim that creativity can be distinguished from the more familiar concept of intelligence" (p. 43). Ziv (1980) declared that his work "clearly demonstrates the relationship between humor and creativity" (p. 169) and suggests that "humor is part of creativity and creativity part of intelligence" (p. 169).

The temptation to assume that the high total usage of humor by those gifted in all areas indicated a correlation between the "all around individual" and humor usage or creativity should be resisted in discussing 6th-grade children as the likelihood is great that their particular "area of giftedness" has not yet matured into focus.

These findings may suggest the need for revision of standard IQ

tests to include additional creativity items that would be a part of the measurement of intelligence.

Future studies should explore the desirability of liberation and encouragement of humor expression in the classroom and avenues for such liberation. Continued investigation of humor as a teaching tool is surely warranted. Another vital area for study is that of the humor creators compared to the humor appreciators.

Finding 4

Students whose fathers held a "people" job and whose mothers were employed outside of the home evidenced the most total use of humor. Children with military fathers and mothers at home used humor the least. The latter group also used Wit less than did any other group. Students with mothers employed outside of the home, regardless of father's occupation, used Broad humor and Wit to the highest degree. This would seem to support the findings of Getzel and Jackson (1958) that high creative families have mothers often employed outside of the home.

It is possible that working mothers foster greater independence and less conformity in their children which nurtures the latter's inherent creativity and encourages development of humor productivity. It may be that a military father, traditionally considered to be "strict" and less tolerant of joking, and a mother at home with time and inclination to protection and making fewer demands on the child than a working mother, combine to inhibit expression of creativity/humor.

A point of conjecture: Children of working mothers spend more time alone and seek ways in which to amuse themselves. The expression of humor may be a result of this independent amusement. Perhaps gifted children who spend a great deal of time alone have a natural proclivity towards humor expression in achieving self-amusement, and extend this expression into classroom activities. Research is needed in this area to examine the relationship between humor expression and time spent in one's own company as a child.

The study seems to indicate that humor initiation in daily life

activities should be included in any attempt to describe or inventory an individual's sense of humor. A change of emphasis or objective in humor inventories is essential so that the inventory is used as a reflection of individual personality, telling us about the person rather than attempting to quantify his sense of humor. This re-direction of objective is suggested by Mindess et al. (1982) in their conference presentation describing their humor inventory presently being developed. They evidenced doubt that any test or inventory could measure humor, but declared that an inventory such as the one under discussion could indicate personality characteristics and humor preferences (appreciation as well as production).

Finding 5

The two classes with the most total humor usage had teachers who were demanding, informal, non-directive and traditional, (one of these teachers was static; the other dynamic).

These results suggest that the teacher's personality style (static or dynamic) may be of less importance to creation of an atmosphere conducive to humor production than is his/her manner of dealing with the behavior and work of the students. For this small sample group the demanding qualities of the teacher seemed to encourage, rather than inhibit, humor use. The same seemed to be true of the teacher's traditional attitude toward education and his/her responsibility toward students. The qualities of high demands and traditionalism are not usually considered as teacher characteristics which would encourage the use of humor by students. However, once an atmosphere of ease and mutual respect has been established, the demanding teacher can easily encourage humor. If, as seems indicated, these gifted children place a high value on humor, they would use it in a highly demanding classroom offering the humor as high quality work. In other words, their proclivity toward humor use would be stimulated by a demanding teacher provided the children were sure that high quality humor was equally valued by the teacher. The less demanding teacher may not spur the use of humor to as great an extent because humor production, especially production of Wit, is hard work. It is great fun, but it takes considerable effort, and students in the less demanding classroom may not feel obliged to make additional effort needed to "polish" Wit to the desired level.

The requirement to complete a written assignment within a specific time period may have increased the general level of tension in these children. It is possible that the humor was used as a release or coping mechanism. This interpretation is consistent with the theories of:

> Wolfenstein (1954) who stated that children use humor as a means of coping with stress,
>
> Keith-Spiegel (1972) who identified the positive value of humor as a relieving mechanism,
>
> Lefcourt, Antrobus and Hogg (1974) who saw humor as allowing the individual to better cope with evaluative experiences,
>
> and Fry and Allen (1976) who emphasized the impact of humor in relieving tension.
>
> Goldstein (1976) observed "humor may provide a means of temporarily transcending the immediate situation, objectifying it and in this way, coping with it" (p. 111).
>
> Baughman (1979) noted "Humor is used as safety...to dissipate anxiety, reduce stress" (p. 30).
>
> Vizmuller (1980) stated "Functions of humor are more essential ...on the psychological plane where it relieves tense situations" (p. 267).

The results of the study suggest that the combination of informality, non-directiveness and high demands in a teacher is the most conducive to creation of an atmosphere which encourages humor production and perhaps, by extension, divergent thinking and creativity in general. Training programs for teachers of the gifted should consider development of such teacher characteristics.

Further study should be directed to examination of the relationship between teacher initiation of humor in the classroom and humor initiation by his/her students.

Additional Findings

A serendipitous finding, not directly related to the research questions, which occurred during the course of the study was the emergence of humor categories into which the humor techniques fit smoothly and comfortably. The categories and the techniques contained therein were:

Broad Humor	Wit	Dig	Neutral
accident	caricature	ridicule/insult	making light of event/situation
burlesque	cartoon	jibe	repetition
disguise	drollery	mimickry	slang
exaggeration	epigram/bon mot	mockery	sounds
hyperbole	facetiousness	stereotype	surprise/ unexpected
mistakes	flipness	superiority	
nonsense words	kindly insult	wisecrack	
slapstick	irony		
unmasking	lampoon		
	understatement		
	mock seriousness		
	parody		
	play on language		
	satire		
	spoof		
	tongue-in-cheek humor		
	whimsey		
	quip		

Implications

Relationships indicated in this study will generate bases for further investigation of development and cognitive aspects of humor appreciation and production, humor theory, humor as a problem-solving tool, humor as a teaching tool, correlations between personality traits and humor production and comparative use of humor by gifted children and non-gifted children.

Patterns in humor application by gifted children have important implications for identification and motivation of gifted children as well as for development of instructional strategies and materials designed for gifted programs.

Summary

The study generated information relevant to the questions formulated at the design stage of the investigation.

The students expressed humor in their written assignments to a considerable extent. Topic/target audience seemed to impact on frequency of humor use and on technique of humor used. Time allotments and relative importance of the assignment had no observable effect.

Preferences in humor technique were apparent in relation to subject/assignment, area of giftedness, parent occupation and teacher characteristics.

Implications for education were discernable and areas for future investigation became evident.

The rewards to the participants in the study were many: smiles, chuckles, guffaws, hours of pleasure and the establishment of close friendships - due in part to the fact that

"Laughter is the beginning of love"

Sides (1913)

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APPENDIX A: Operational Definitions of Humor Techniques

Absurdity	- something clearly untrue or unreasonable, and therefore laughable, ridiculous
Accident	- happening that is not foreseen, expected or intended
Alliteration	- repetition of an initial sound in two or more words of a phrase, line of poetry etc.
Bon Mot	- witticism, apt saying
Burlesque	- a broadly comic or satirical imitation of something; derisive caricature
Caricature	- deliberately distorted picturing or imitating of a person, literary style, etc. by exaggerating features or mannerisms for satirical effect; something so distorted, ugly or inferior as to seem a ludicrous imitation
Coincidence	- an accidental and remarkable occurrence of events, ideas, etc. at the same time, in a way that sometimes suggests a causal relationship
Comeback	- a retort, a quick, sharp or witty reply especially one that turns the words of the previous speaker back upon himself
Conundrum	- a riddle whose answer is a pun
Debunking	- exposing false or exaggerated claims, pretensions, etc.
Disguise	- things not the way they seem
Drollery	- anything quaintly amusing; humorously odd
Epigram	- terse, witty, pointed statement often antithetical (containing a contrast or opposition of thoughts)
Exaggeration	- overstating, magnifying beyond the fact, increasing or enlarging to an abnormal degree, overemphasizing
Hyperbole	- exaggeration for effect; not meant to be taken literally
Ignorance	- lack of knowledge, education
Impersonation	- mimicking the behavior, manner of (a person) for purposes of entertainment

Incongruity (simple)	- inappropriateness, lacking harmony or agreement, having inconsistent or unharmonious parts, elements
Insult	- an act, remark etc. meant to hurt the feelings of self-respect of another; affront; indignity
Irony	- a method of humorous or sarcastic expression in which the intended meaning of the words used is the direct opposite of their usual sense
Jibe	- a jeer, taunt, sarcastic or derisive comment making fun of a person or thing in a rude manner
Mimickry	- imitation in speech or action as in ridicule
Misfortune of others	- bad luck, trouble, adversity, mishap, mischance, unlucky accident, embarrassment occurring to others
Mistake	- a fault in understanding, perception, interpretation, blunder, error
Mockery	- holding up to ridicule; imitation as in fun or derision, burlesque
Nonsense	- words that convey an absurd meaning or no meaning at all
Onomatopoeia	- the use of words formed by imitating the natural sound associated with the object or action involved
Parody	- literary composition imitating the characteristic style of some other work or of a writer or composer, but treating a serious subject in a nonsensical manner, as in ridicule
Pun	- the humorous use of a word, or of words which are formed or sounded alike but have different meanings, in such a way as to play on two or more of the possible applications; a play on words
Quip	- gibe, jest, witty or sarcastic expression or allusion
Riddle	- a problem or puzzle in the form of a question, statement, etc. so formulated that some ingenuity is required to solve it
Ridicule	- words intended to make someone or something the object of contemptuous laughter by joking, making fun of, mocking, deriding.

Satire	- the use of ridicule, sarcasm, irony etc. to expose, attack or deride vices, follies etc.
Self-derision laughter	- making fun of or ridiculing oneself
Stereotype	- an unvarying form or pattern; fixed or conventional expression, notion, character, mental pattern, etc. having no individuality as though cast from a mold
Superiority (simple)	- having or showing a feeling one is better than others; arrogance
Surprise	- sudden or unexpected event or unusual thing that causes wonderment or astonishment
Taboo reference	- mention of sex, bathroom subjects etc.
Tongue in cheek	- facetiousness
Unintentional slip	- accidental error of speech, action
Unmasking	- disclosing the true nature of; revealing, exposing; removing a disguise form
Whimsey	- curious, quaint or fanciful humor
Wisecrack	- flippant or facetious remark, often a give or retort
Wit	- clever, ironic or satirical remark, usually made by perceiving the incongruous and expressing it in a surprising manner
Witticism	- a sharp, cleverly amusing saying

APPENDIX B: Student Analysis Sheet

Student Number _____

Title H																												
Technique																												
Theme H																												
Technique																												
Theme NH a																												
Technique																												
Theme NH b																												

Sex

Age

FC Family Configuration

FP Family Placement

PO Parent Occupation

PE Parent Education

IPD Ind. Personality Desc.

GA Area of Giftedness

Key: Title H - Title Humorous

Theme H - Theme Humorous

Theme NHa - Theme Non-humorous incidences of humor in generally non-humorous wit

Theme NHv - Theme Non-humorous No incidences of humor

APPENDIX C: Sample Guide to Assignments for Teachers

ASSIGNMENTS

1. Letter to Mom explaining why student will be late coming home tomorrow.

   Time allotted: 30 minutes

   Relative importance: ungraded

2. Editorial - any subject of student's choice

   Time allotted: 45 minutes

   Relative importance: ungraded

3. Essay summarizing recent unit in Social Studies
   Science
   Math
   Literature
   What has the student learned from this unit?

   Time allotted: 45 minutes

   Relative importance: graded

Note:

Times/Relative importance were varied among classes and among assignments.

APPENDIX D: Computer Format

Column	Item	Symbol	Coding
1-3	ID	ID	Students' List
4	Sex	S	1=female 2=male
5	Class	C	Teachers' List
6-13	Assignment #1	A1H	Humor List direct
14-21	Assignment #2	A2H	Humor List direct
22-29	Assignment #3	A3H	Humor List direct
30-31	Sibling Order Variable	BO	Variable definition #1
32	Parent Occupation	PO	Variable definition #2
33	Gifted Area	G	Code of areas
34	Assignment type for #1	AT1	Variable definition #3
35	Assignment type for #2	AT2	Variable definition #3
36	Assignment type for #3	AT3	Variable definition #3
37-41	Personality configurations of Students	P(1,5)	Binary
42-50	Teacher characteristics	T(1,9)	Variable definition #4

Column 1-3	ID	ID	Students' List
001-139			
Column 4	Sex	S	1=female 2=male
Column 5	Class	C	Teachers' List
1 Singleton			
2 Lindstrom			
3 Cramer			
4 Spaulding			
5 Williams			
Column 6-13	Assignment #1	AiH	Humor List direct
6	1 Whole humorous		
	2 Parts humorous		
	3 No incidences of humor		
7	Broad humor (number of incidences)		
8	Wit "	"	
9	Dig "	"	
10	Neutral "	"	
11	Incongruity "	"	
12	Self-derision "	"	
13	Taboo references "	"	

Column 14-21	Assignment #2	A2H	Humor List direct
14	1 Whole humorous		
	2 Parts humorous		
	3 No incidences of humor		
15	Broad humor	(number of incidences)	
16	Wit	"	"
17	Dig	"	"
18	Neutral	"	"
19	Incongruity	"	"
20	Self-derision	"	"
21	Taboo references	"	"

Column 22-29	Assignment #3	A3H	Humor List direct
22	1 Whole humorous		
	2 Parts humorous		
	3 No incidences of humor		
23	Broad humor	(number of incidences)	
24	Wit	"	"
25	Dig	"	"
26	Neutral	"	"
27	Incongruity	"	"
28	Self-derision	"	"
29	Taboo references	"	"

Column 30-31	Sibling Order variable	BO	Variable definition #1
1	Only child		
2	Eldest child, same sex family, fewer than 3 siblings		
3	Eldest child, same sex family, 3 or more siblings		
4	Eldest child, multiple sex family, fewer than 3 siblings		
5	Eldest child, multiple sex family, 3 or more siblings		
6	Middle child, same sex family, fewer than 3 siblings		
7	Middle child, same sex family, 3 or more siblings		
8	Middle child, multiple sex family, fewer than 3 siblings		
9	Middle child, multiple sex family, 3 or more siblings		
10	Youngest child, same sex family, fewer than 3 siblings		
11	Youngest child, same sex family, 3 or more siblings		
12	Youngest child, multiple sex family, fewer than 3 siblings		
13	Youngest child, multiple sex family, 3 or more siblings		

Column 32	Parent Occupation	PO	Variable definition #2
1	Father - People job, Mother at home		
2	Father - People job, Mother employed		
3	Father - Desk job, Mother at home		
4	Father - Desk job, Mother employed		
5	Father - Lab Job, Mother at home		
6	Father - Lab job, Mother employed		
7	Father - Military, Mother at home		
8	Father - Military , Mother employed		

Column 33	Gifted Area	G	Code of areas
1	Math		
2	Science		
3	Math/Science		
4	Language Arts		
5	Social Studies		
6	Arts/Music		
7	All		
8	Not discernible		

Column 34	Assignment type for #1	Variable definition #3
1	30 minutes, marked	
2	30 minutes, unmarked	
3	45 minutes, marked	
4	45 minutes, unmarked	
5	60 minutes, marked	
6	60 minutes, unmarked	

Column 35	Assignment type for #2	Variable definition #3
1	30 minutes, marked	
2	30 minutes, unmarked	
3	45 minutes, marked	
4	45 minutes, unmarked	
5	60 minutes, marked	
6	60 minutes, unmarked	

Column 36	Assignment type for #3 AT3	Variable definition #3
1	30 minutes, marked	
2	30 minutes, unmarked	
3	45 minutes, marked	
4	45 minutes, unmarked	
5	60 minutes, marked	
6	60 minutes, unmarked	

Column 37-41		Personality configurations of students	P(1,5)	Binary
37	1	well liked		
	2	not well liked		
38	1	aggressive		
	2	not aggressive		
39	1	loner		
	2	joiner		
40	1	outgoing		
	2	shy		
41	1	nice		
	2	not nice		

Column 42-50		Teacher characteristic	T	Variable definition #4
42	1	male		
	2	female		
43	1	married		
	2	single		
44	1	black		
	2	white		
45	1	under age 40		
46	1	formal		
	2	informal		
47	1	demanding excellence		
	2	not demanding excellence		

48 1 directive

2 non-directive

49 1 dynamic

2 static

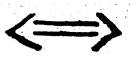
50 1 traditional

2 non-traditional

Family Placement

counting from first born as 1

2/5 second of five children

 all same sex

 only child

Parent Occupation

 Pe People

 Daled Desk

 Lamed Lab

 Zion Military

Area of Giftedness

 Pi Math

 Shin Science

 He Language Arts

 Tzadik Social Studies

 Gimel Art, Music etc.

 Alef All

 Kuf Not discernible, non-gifted (?)

Assignment Time  30 minutes

 45 minutes

 60 minutes

Importance  graded

 not graded

Humor notations Categories

BROAD	WIT	DIG	NEUTRAL
Absurdity/ outlandishness	Caricature	Jibe	Making light of
Accident	Cartoon	Mimickry	Repetition
Burlesque	Drollery	Misfortunes of others	Slang
Disguise	Epigram/ Bon Mot	Mockery	Sounds
Exaggeration/ Hyperbole	Facetiousness	Ridicule/ Insult	Surprise/ Unexpected
Incongruity	Flipness	Stereotype	
Mistakes	Insult (kindly)	Superiority	
Nonsense words	Irony	Wisecrack	
Self-derision	Lampoon		
Slapstick	Litote		
Taboo references	Mock Serious		
Unmasking	Parody		
	Play on Language		
	Quip		
	Satire		
	Spoof		
	Tongue in Cheek		
	Whimsey		

The following tables illustrate the results of the process by which data was programmed into the computer and frequencies were obtained. By successive re-coding and re-programming tables were developed to show:

Frequency of humor use across assignments and by assignment

Frequency of humor technique across assignments and by assignment

Frequency of humor technique by Sex

Frequency of humor technique by Class

Frequency of humor technique by Birth Order

Frequency of humor technique by Area of Giftedness

Frequency of humor technique by Personal Characteristic

Frequency of humor technique by Teacher Characteristic

The tables included here are those which relate most closely to the findings discussed in this document.

TABLE 1

FREQUENCY OF HUMOR USE

Assignment	#1	#2	#3
All humorous	75%	22%	5.6%
Partly humorous	9.8%	24.4%	37.6%
Non-humorous	15.2%	53.7%	56.8%

TABLE 2

FREQUENCY OF HUMOR TECHNIQUE

TAH2	(Total Broad Humor Assignments 1, 2, 3)	62.6%
TAH3	Total Wit Assignments 1, 2, 3	66.9%
TAH4	Total Dig Assignments 1, 2, 3	36.0%
TAH5	Total Neutral Assignments 1, 2, 3	25.9%
TAH6	Total Incongruity Assignments 1, 2, 3 (unclassified)	40.3%
TAH7	Total Self-derision Assignments 1, 2, 3	20.9%
TAH8	Total Taboo ref. Assignments 1, 2, 3	4.3%

TABLE 3

FREQUENCY OF HUMOR TECHNIQUE BY AREA OF GIFTEDNESS

TAH2	Total Broad	Math	61.5%
		Math/Science	16.7%
		Language Arts	59.3%
		Social Studies	50%
		Arts/Music	70.6%
		All	75.7%
		Not discernible	50.0%
TAH3	Total Wit	Math	55.6%
		Math/Science	66.7%
		Language Arts	55.6%
		Social Studies	83.3%
		Arts/Music	82.4%
		All	67.6%
		Not discernible	72.2%
TAH4	Total Dig	Math	15.4%
		Math/Science	33.3%
		Language Arts	40.7%
		Social Studies	50.0%
		Arts/Music	41.2%
		All	45.9%
		Not discernible	22.2%
TAH5	Total Neutral	Math	30.8%
		Math/Science	16.7%
		Language Arts	22.2%
		Social Studies	33.3%
		Arts/Music	23.5%
		All	29.7%
		Not discernible	16.7%
TAH6	Incongruity (unclassified)	Math	53.8%
		Math/Science	33.3%
		Language Arts	37.0%
		Social Studies	50.0%
		Arts/Music	35.3%
		All	37.8%
		Not discernible	27.8%

TAH7	Self-derision	Math	7.7%
		Math/Science	33.3%
		Language Arts	18.5%
		Social Studies	33.3%
		Arts/Music	5.9%
		All	37.8%
		Not discernible	5.6%
TAH8	Taboo references	Math	3.8%
		Math/Science	---
		Language Arts	7.4%
		Social Studies	---
		Arts/Music	5.9%
		All	5.4%
		Not discernible	---

TABLE 4

FREQUENCY OF HUMOR TECHNIQUE BY PARENT OCCUPATION

TAH2	Broad	1. 60.9%
		2. 66.7%
		3. 44.2%
		4. 66.7%
		5. 71.4%
		6. 85.7%
		7. 63.0%
		8. 72.7%
TAH3	Wit	1. 59.6%
		2. 62.5%
		3. 70.8%
		4. 66.7%
		5. 57.1%
		6. 85.7%
		7. 55.6%
		8. 72.7%
TAH4	Dig	1. 47.8%
		2. 37.5%
		3. 37.5%
		4. 16.7%
		5. 42.8%
		6. 28.6%
		7. 33.3%
		8. 27.3%
TAH5	Neutral	1. 39.1%
		2. 32.3%
		3. 25.0%
		4. 25.0%
		5. 28.6%
		6. 14.3%
		7. 22.2%
		8. 9.1%
TAH6	Incongruity	1. 39.1%
		2. 54.2%
		3. 50.0%
		4. 16.7%
		5. 42.9%
		6. 42.9%
		7. 25.9%
		8. 45.5%

TAH7	Self-derision	1. 26.1% 2. 45.8% 3. 16.7% 4. 8.3% 5. ---- 6. 14.3% 7. 14.8% 8. 18.2%
TAH8	Taboo references	1. ---- 2. 12.5% 3. ---- 4. ---- 5. ---- 6. 28.6% 7. 3.7% 8. ----

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Key:
1. Father - People job, Mother at home
2. Father - People job, Mother employed
3. Father - Desk job, Mother at home
4. Father - Desk job, Mother employed
5. Father - Lab job, Mother at home
6. Father - Lab job, Mother employed
7. Father - Military, Mother at home
8. Father - Military, Mother employed

TABLE 5

FREQUENCY OF HUMOR BY ASSIGNMENT BY CLASS

Class	Assignment	#1	#2	#3
1	All or some Humor	65.6%	54.5%	35.3%
2	All or some Humor	86.7%	32.0%	29.0%
3	All or some Humor	92.8%	46.4%	60.0%
4	All or some Humor	82.3%	82.3%	50.0%
5	All or some Humor	100%	20.0%	52.6%

Note. Teacher characteristics:

Class 1 Male, Single, White, Age 40-50, Informal, Not demanding, Non-directive, Static, Traditional

Class 2 Female, Single, White, Age 40-50, Informal, Not demanding, Directive, Dynamic, Non-traditional

Class 3 Female, Married, White, Age under 40, Informal, Demanding, Non-directive, Dynamic, Traditional

Class 4 Female, Single, White, Age 50+, Informal, Demanding, Non-directive, Static, Traditional

Class 5 Female, Married, Black, Age 40-50, Formal, Demanding, Directive, Static, Traditional

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