A SENSE OF HUMOR: THEORIES, BENEFITS, & THERAPEUTIC APPLICATIONS

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DEDICATION

I wish to thank my fellow classmates and the faculty, especially Drs. Casenave, Davis, and Vreeland, for their support of my thesis project and my personal development in the program over the last two years.

A SENSE OF HUMOR: THEORIES, BENEFITS, & THERAPEUTIC APPLICATIONS

by

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Abstract

This paper aims to synthesize the literature on humor theory and its therapeutic application as is related to mental health. Though humor is a universally experienced phenomenon and it widely accepted that humor is a positive adaptive response to life's difficult moments, it is seldom formally taught in psychology programs today. Benefits of humor in therapy have been widely reported; whether clients benefit is a subject of ongoing debate. The paper attempts to define humor, present a discussion of the existing theories on humor, and then analyze the research findings regarding its effect on mental health and the therapeutic use of humor. It remains a largely unexplored psychotherapeutic technique and a potentially untapped resource.

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LIST OF ABBREVIATIONS

HuRL -- Humor Research Lab

CHS – Coping Humor Scale

POWs – Prisoners of War

COPE – Coping Orientations to Problem Experiences

HSQ - Humor Styles Questionnaire

AATH – American Association for Therapeutic Humor

REBT – Rational Emotive Behavioral Therapy

CHAPTER ONE

Statement of the Problem

The phrase "sense of humor" in common vernacular alludes to the fact that humor is inherently subjective—its ineffable definition mirrors this subjectivity. Researchers acknowledge the difficulty in creating a definition for humor that is inclusive of all the settings and situations in which it can arise (Martin, 2007; Dixon 1980). Most researchers who have attempted to define the elusive subject matter of humor seem to provide definitions that are reductive in nature. These minimalist explanations of humor seem to safeguard themselves from being disproven by obscure presentations of humor.

While many of the definitions themselves may be murky, most sources seem to follow their definition by listing the many functions and benefits of humor, including "coping, social coordination, and overall well-being (Dziegielewski et al., 2003)." As Martin (2007) and Dixon (1980) hypothesized, a possible reason that the study of humor has been largely neglected in mainstream psychology is the lack of a single, precise definition that fully encapsulates what humor is. The complexity and multifaceted nature of humor make it an extremely difficult concept for researchers to investigate in a controlled laboratory setting. Nevertheless, a composite literature review such as this seeks to establish clarity by juxtaposing those definitions, parsing them for meaning as they are measured against each other and each other's research.

As early as 1905, humor was identified as a topic of interest with Freud's publication of a book called *Jokes and Their Relation to the Unconscious*. While a number of notable therapists (e.g., Ellis, 1977; Freud, 1905, 1928; Frankl, 1960, 1975, 1984) have rhapsodized about humor over the years through essays, books, and clinical anecdotes, the amount of controlled research

about the therapeutic use of humor is comparatively scant. The sizeable amount of research that does exist on the subject goes largely unnoticed by mainstream psychology. The phenomenon is rarely mentioned in introductory undergraduate psychology textbooks. In 2002, Roeckelein scoured over 136 introductory psychology texts and only found three made reference to humor or related topics, all of which were published before the year 1930. Tellingly, Kuhlman (1984) was unable to find any reference to humor in behavior therapy literature before the early 1970s. Although there has been a longstanding call within the field of psychology for more empirical studies investigating humor, there remain many gaps within the research, including a void regarding the role of humor in a therapeutic capacity as it relates to mental health. Given the potential therapeutic benefits of humor, it seems sensible to shed light on the existing research as well as to advocate for more empirical research investigating the therapeutic benefits of humor in the future.

The main purpose of this paper is to supply an integrative literature review on the theory and study of humor, followed by a discussion of the effects of humor on mental health and the forms humor manifests itself in therapy. This paper will attempt to define humor, albeit in a purposefully narrow way, so that the ensuing discussion is not lacking in clarity. Following this, the historical evolution of our understanding of humor will be examined, demonstrating the ways theories about humor and laughter have dramatically evolved through interdisciplinary studies of psychology, linguistics, and sociology. Finally, the interpersonal role of humor and its therapeutic benefits will be explored.

A Brief Etymology of Humor

Although it is often experienced spontaneously as a playful and lighthearted phenomenon, research suggests humor serves a variety of serious cognitive, social, and

emotional functions. Surprisingly, despite the prevalence and importance of humor in human behavior, scholarly texts on psychology allot little space to this ubiquitous activity. While a wealth of research on humor exists, it appears many mental health professionals lack a systematic knowledge of humor and its uses.

In today's culture, the word *humor* functions as an umbrella term, able to refer to anything a person says or does that can be perceived as funny and bring about laughter and mirth in themselves and others. It is only relatively recently that this all-inclusive meaning of humor has developed (Martin, 2007; Wickberg, 1998). In his 1998 book, *The Sense of Humor: Self & Laughter in Modern America*, cultural historian Daniel Wickberg explores and traces the transformation of the word and its meanings over many centuries.

The word humor takes its origins from the Latin word *humorem*, meaning fluid or liquid (Wickberg, 1998). In the 4th Century B.C., the connotation of the word was related to the field of medicine, with Greek physician Hippocrates promoting the theory that good health was due to a balance of four liquids, or "humors," in the body (Martin 2007; Wickberg, 1998). Eventually, these four humors of the body-- blood, phlegm, black bile, and yellow bile-- began to have psychological qualities attributed to them (Wickberg, 1998). By the 2nd Century A.D., it was believed that if one of these fluids were overabundant in the body, this would manifest itself in an individual's temperament, both in temporary moods and in long-term character traits (Wickberg, 1998). Too much blood was responsible for a cheerful temperament, while excesses of the other humors were thought to be responsible for phlegmatic, choleric, and melancholy temperaments (Wickberg, 1998). Therefore, the word humor slowly evolved from referring to a physical bodily substance to describing both enduring and more fleeting psychological states.

This concept of humor as a description of a person's character is still present in the English language of today when we describe someone as "good-humored."

It wasn't until later that the word became associated with laughter or the sense of funniness that dominates the connotation of the word today. In the 1500s, the use of the word to describe someone with an unbalanced temperament who was viewed as peculiar and odd emerged (Martin, 2007). These eccentrics were first referred to as "humors" and later on, as "humorists" (Wickberg, 1998). The odd, funny behavior of these humorists started the word's association with the world of comedy. These ideas gradually accumulated into our modern understanding of humor as an amusement.

Historically, humor has been a topic of interest for many academic disciplines including anthropology, communications, linguistics, medicine, philosophy, psychology, religious studies, sociology, and even mathematics (Casadonte, 2003). These other academic areas have tackled the subject rigorously; literary theory, in particular, has published lots of criticism on humor. Theories of humor, often written initially to address the concerns of a specific disciplinary audience, do not tend to respect traditional disciplinary boundaries (Veatch, 1998). The methods, theories, and empirical findings from each of these academic disciplines amplify our psychological understanding of humor. Although each individual theory varies, it seems that widely accepted that humor is a positive adaptive response to life's difficult moments. Most of the psychological theories on humor can fall into one of four general theoretical approaches seen in the research: psychoanalytic, superiority/disparagement, arousal, and incongruity (Martin, 2007). Earlier research on the psychology of humor tended to focus on the reaction of research participants to jokes and cartoons presented in a laboratory setting, which limited findings to

specific areas of humor. More recent theories attempt to explain why humor happens across all domains in an attempt to illuminate how humor is expressed in our daily social interactions.

A Note on Research and Terminology

Most of the vocabulary, citations, and data in this paper originate from the field of psychology; however, the contributions of several other disciplines to the investigation of humor are touched upon. Humor tends to permeate all aspects of our lives, so it should arguably be only natural that an inter-disciplinary approach presents the strongest analysis on the topic. Concepts from several fields, including philosophy, linguistics, literary theory, sociology, and biology also enhance our understanding of humor. When information hails from a discipline other than psychology it will be noted. The integration of ideas from this variety of disciplines is key in fully capturing our understanding of the phenomena of humor today.

CHAPTER TWO

Review of the Literature

What is Humor?

Thomas Veatch, the Stanford linguist whose 1998 work, *A Theory of Humor*, serves as a cornerstone for more recent humor research, succinctly describes humor as, "a certain psychological state which tends to produce laughter." While Veatch's definition certainly describes humor, it fails to provide a deeper explanation of what humor *is*. Even so, Veatch's barebones definition is preferable to research studies regarding humor that do not attempt to define humor, such as those by Dziegielewski, Jacinto, Laudadio, and Legg-Rodriguez, (2003). They simply acknowledge that it is "difficult to define the concept of humor," and alternately state two physical characteristics that are "usually present" when humor occurs-- laughter and smiling (Dziegielewski, et al., 2003). Such explanations focusing strictly on the physical responses fail to make reference to the cognitive processes associated with humor. Other definitions that leave room for ambiguity choose to focus on the commonalities all humorous experiences share. Definitions that include more detail attempt to provide a more comprehensive overview of humor.

Martin (2007) describes humor as, "essentially a type of mental play involving a light hearted, non-serious attitude towards ideas and events ... which is typically elicited in social contexts by a cognitive appraisal process involving the perception of playful, non-serious incongruity, and which is expressed by the facial and vocal behavior of laughter." Incongruity includes anything that can be perceived as odd, unusual, or unexpected. The complexity of humor is noticeably evident in Martin's definition—a definition that specifically seeks to illuminate humor's often incongruous relationship to reality, which itself is subjective too. The

subjective nature of both reality itself (as it is understood by individuals) and of the humor being applied in playful manner to that subjective reality make humor a doubly subjective social experience.

McGraw and Warren (2010), researchers at the University of Colorado at Boulder's Humor Research Lab (HuRL), rephrase Veatch's 1998 definition while adding to it. In 2010, the pair declared, "Humor is a psychological state characterized by the positive emotion of amusement and the tendency to produce laughter." Four years later McGraw and Warren, with the addition of Williams, fine-tuned their definition of humor by calling it, "psychological *response* [emphasis added] characterized by amusement and the tendency to laugh" (McGraw, Warren, & Williams, 2014). Instead of describing humor as a "psychological state" they altered their definition to describe humor as a "psychological response." This change of word-choice suggests the authors' felt the need to further emphasize humor as a reaction to stimuli-- an interesting change of phrase which will be explored later.

The Four Major Theoretical Approaches to Humor

By definition, a well-founded theory is detailed and specific. A good theory should have clearly defined conditions that are required for the phenomenon of study to occur. Because of these specific parameters, it also means that a good theory is one that can be potentially disproven if the predictions made in the theory are proven untrue (Martin, 2007).

The changes in popularity of different theories of humor parallel the broader theoretical approaches that have fallen in and out of fashion throughout the evolution of psychology as a whole. The theoretical direction of humor research has visibly shifted over time, with various directions acquiring and losing popularity over the years. Prior to the early 1970s, the two major theoretical approaches towards humor were the psychoanalytic and superiority/disparagement

theories (Martin, 2007). Interest in arousal-based theories of humor grew in the 1960s and 1970s as social psychologists began to take a closer look at physiological arousal and emotion (Martin, 2007). At the same time research on aggression gained popularity, returning attention to superiority theories of humor, which looked at humor as a form of aggression (Martin, 2007). Today, cognitive incongruity theories tend to dominate more recent research on humor, again mirroring the rise in popularity of cognitive approaches in psychology as a whole.

Themes from each of these major theoretical approaches to humor continue to influence research today. It is helpful to liken these different theoretical approaches to the six blind men and the elephant, where each man felt a different body part of the animal and walked away with differing conclusions about what an elephant is like (Berger, 1995). While each theory can explain some form of humor, they are not successful in giving a complete picture of humor and all of its aspects. Thus, to gain the most comprehensive understanding of humor, the theories must be looked at in view of each other.

Psychoanalytic Approach to Humor. Sigmund Freud's psychoanalytic approach dominated humor research in the first half of the twentieth century, mirroring the popularity of psychoanalytic theory in all areas of psychology during that time. During his lifetime, Freud published two works on his theoretical understanding of humor: a book called *Jokes and Their Relation to the Unconscious* (Freud, 1960 [1905]), and a paper entitled *Humour* (Freud, 1928). According to Freud, the main function of laughter is to release excess nervous energy that builds up in the nervous system (Freud 1960 [1905]). He categorizes three different types of laughter-related phenomena: comic, wit, and humor (Freud, 1960 [1905]; Freud, 1928). Each of these phenomena utilizes different mechanisms that allow built up psychic energy to be realized through laughter.

The psychoanalytic phenomena titled as the *comic* refers to nonverbal sources of laughter, often seen in slapstick comedy (Freud, 1960 [1905]). For example, a man walking down the street who then slips on a banana peel would fall into the category of the comic (Freud, 1960 [1905]; Martin, 2007). In this event, one would ordinarily expect for the man to continue walking down the street. According to Freud, this anticipation of future events generates an amount of psychic energy; when the expected future event does not occur and the man slips instead, the built up energy becomes redundant and is then released in the form of laughter (Freud, 1960 [1905]). Freud believed this inversion of expectations was a key component of laughter. Freud describes this ensuing laughter as "the regained lost laughter of childhood (Freud, 1960 [1905], p. 224)."

For Freud, wit specifically refers to jokes. With jokes, the quick and inventive use of words and ideas act as a distraction to the superego, allowing the unconscious sexual and aggressive impulses from the id that are normally repressed to temporarily be enjoyed (Freud, 1960 [1905]). The energy normally used to keep these unconscious impulses suppressed is expelled in the form of laughter. According to psychoanalytic theory, for a joke to be successful, "it must involve a clever use of jokework, and it must allow for the expression of some repressed sexual or aggressive impulse. Either of these elements alone may be pleasurable, but neither is likely to be viewed as truly funny (Martin, 2007, p. 34)." Freud hypothesized that we enjoy jokes because they serve as a vehicle to release some of our primordial sexual and aggressive impulses, and as a result allow us to experience a bit of illicit pleasure (Freud, 1960 [1905]; Freud, 1928). Freud called his third laughter-related phenomena humor. As explained when discussing the etymology of humor, at the time Freud was publishing his work on humor, the word took on a much more specific meaning than the all-encompassing term into which has since evolved.

For Freud, "humor referred specifically to the tension-release function of mirth and laughter, and its use in coping with stress (Martin, 2007)." Humor in this sense applies to the ability to see the misfortunes and setbacks in life with amusement and a sense of irony. For example, an individual who is able to laugh at his own social faux pas would be demonstrating this type of humor. Rather than experiencing a painful emotion as a result of the faux pas, the individual is able to see the humor in the situation and laugh at the mishaps of life. Freud viewed humor as an extremely beneficial defense mechanism that allows us to confront difficult situations while avoiding unpleasant emotions (Freud 1928). According to Freud (1928), humor is positive:

Like jokes and the comic, humour has something liberating about it; but it also has something of grandeur and elevation, which is lacking in the other two ways of obtaining pleasure from intellectual activity. The grandeur in it clearly lies in the triumph of narcissism, the victorious assertion of the ego's invulnerability. The ego refuses to be distressed by the provocations of reality, to let itself be compelled to suffer. It insists that it cannot be affected by the traumas of the external word; it shows, in fact, that such traumas are no more than occasions for it to gain pleasure. This last feature is a quite essential element of humour (p. 162).

In this sense, humor is viewed as an emotion-focused defense mechanism that allows us to remain in strenuous situations without becoming overwhelmed by the emotions elicited by those situations. Unlike Freud's concepts of jokes or the comic, which revolve around external events, humor focuses on how people reconcile with their own internal responses. Freud spoke highly of humor, describing it not only as "a rare and precious gift," but also as "the highest of the defense

mechanisms (Freud, 1928, p. 220)." He was captivated with how the ego was able to assert its own invulnerability toward the outside world through the use of humor. The use of humor is a way to avoid unpleasant emotions while still allowing a realistic view of the situation.

Interestingly, Freud's understanding of humor correlates nicely with more contemporary views of humor, in which it is viewed as a therapeutic way to manage stress and regulate emotions.

The early research on humor remains important not only because it illustrates some of the first work that attempted to test some of Freud's ideas experimentally, but also because it led to the development of the first diagnostic devices that attempted to measure humor scientifically. A review of the humor research focused on testing hypotheses rooted in the psychoanalytic theory of jokes shows limited and inconsistent evidence in support of the theory.

Psychologist Jacob Levine and his colleagues carried out a number of early studies that focused on hypotheses derived from Freudian theory in the 1950s. To assist in their research, Redlich, Levine, and Sohler (1951) created the Mirth Response Test as a way to determine the type of humor an individual prefers, and consequently draw inferences about their basic needs and conflicts. Mirth refers to the pleasant emotion we associate with humor. The test consisted of thirty-six cartoons that presented a variety of aggressive and sexual themes (Redlich et al., 1951). Research participants were shown the collection of cartoons one at a time while researchers recorded both their verbal and nonverbal reactions. Specific inferences were made concerning a participant's reaction to each cartoon. The cartoons that elicited signs of mirth were presumed to contain themes that reflected the participant's needs and conflicts, while the cartoons that elicited no reaction or indifference were presumed to contain themes that were not important to the individual. Participants that responded negatively to a particular cartoon-- for example, if they claimed they did not "get" the joke-- were viewed as having powerful, unresolved conflicts,

repressed impulses, or needs concerning that cartoon's theme. Because not many empirical studies that attempted to apply Freud's theory of humor existed at the time, it was difficult for the researchers to present concrete findings from the study "because the variety of so-called 'normal' responses [had] not as yet been clearly established," clearly suggesting that research in this area was lacking established baselines. Without these established baselines, researchers seeking to investigate Freud's theory were grasping blindly at attempting to confirm the theories of an intellectual giant who generally lacked the scientific techniques to make concrete claims.

In 1955, Levine and Redlich published a paper entitled Failure to Understand Humor, which explored the misperceptions that cause a joke to be misunderstood and also contained their own anxiety-reduction theory of humor. Heavily influenced by Freud's ideas, but serving to update and clarify, they proposed that jokes with libidinal themes initially cause feelings of anxiety, which are then reduced by the punch line of the joke; it is this rapid reduction in anxiety that causes the joke to be enjoyable (Levine & Redlich, 1955). Jokes that contain anxietyprovoking themes that are often repressed, such as sex or aggression, cause this experience of anxiety followed by a sudden reduction to be even more extreme, and are therefore perceived as exceptionally funny (Levine & Redlich, 1955). The popularity and understanding of this particular comic modality, repressive inversion through reductive humor, coincides with the rise of an industrial, globalized world, filled with large, powerful institutions of influence. As such institutions grew in influence throughout the evolution of capitalism and proto-capitalism, arguably so did the zeitgeist's ability to wield humor as a reductive hammer, be it through the press or through another outlet. The reductive humor targeted at forms of oppression brought on by institutions is perceived as amusing precisely because it subverts the influence/oppression with humor, most notably observed today in the form of popular sarcasm, snark, and cynicism.

In another study by Levine and Abelson (1959), the Mirth Response Test was used to observe the contrast between patients with schizophrenia and patients with anxiety disorders against non-patient controls. The researchers hoped they would be able to draw inferences about an individual's needs and conflicts based on the types of humor they preferred. Non-patients were found to prefer the cartoons that were moderately disturbing, disliking cartoons that were either extremely disturbing or extremely benign. The psychiatric patients responded favorably to the most benign, least disturbing cartoons, finding them most humorous and enjoyable. These results appeared to support the unsubstantiated assumption that psychiatric patients had many unresolved conflicts and repressed impulses and were considered to be supportive of psychoanalytic theory.

While psychoanalytic theory may not satisfactorily account for all forms of humor—because, as they say, there's no accounting for taste—it did serve to highlight certain areas that deserved explanation in any later comprehensive theories. Freud brought attention to the aggressive and sexual themes commonly seen in jokes, the emotional enjoyment and feelings of mirth produced as a result of humor, the dynamic range of emotions associated with humor, and mankind's strong desire to engage in it. Freud laid a foundation for humor research that continues to be of interest to the humor theorists of today.

Superiority Theories of Humor. The oldest approach to humor, dating back to the Greek philosophers Plato and Aristotle, supports the idea that aggression is the essential characteristic to all forms of humor (Morreall, 1987). This long-standing theoretical approach has gone by a variety of names throughout the years, including superiority, disparagement, aggression, and degradation theories (Martin, 2007, p. 44). There is extensive evidence that survives to suggest that humor based on aggression and hostility was rife in ancient times;

examples of aggressive forms of laughter are present in many ancient writings. Of the twentynine Old Testament references to laughter in *The Bible*, all but two are accompanied by scorn, derision, mockery, or contempt (Koestler, 1964, p. 53).

One of the earliest to deliberate on the function of humor was Plato (428-348 B.C.). He theorized that we relish in the misfortune of others because it suggests our own superiority (Plato in *Philebus*, reprinted in Morreall, 1987). In other words, ridiculing others makes us feel better about ourselves. Likewise, fellow philosopher Aristotle (348-322 B.C.) agreed with Plato's idea that laughter is accompanied by a sense of superiority stating, "Comedy... is an imitation of people who are worse than the average (in *Poetics*, reprinted in Morreall, 1987, p. 14)." By the seventeenth century, this theory was generally accepted, thanks in large part to the writings of British philosopher Thomas Hobbes. In his works Leviathan and Human Nature, Hobbes introduced the idea that men are constantly competing amongst each other for power, and concluded that laughter is an expression of sudden elation when one realizes he is superior, and therefore more powerful, than someone else (reprinted in Morreall, 1987, p. 19). The German concept of schadenfreude refers to the passive pleasure derived from the misfortune of others (Martin, 2007). Pleasure can be gained from passively watching their misfortune from afar in addition to actively attempting humiliate and embarrass others. Elements of these philosophical ponderings continue to be embraced by contemporary psychological humor theories.

Presently, the staunchest defender of the superiority theory is a speech communication professor at the University of Georgia, Charles Gruner (Gruner, 1978; Gruner 1997). Gruner believes humor is a form of play, specifically "playful aggression." Founded on the evolutionary viewpoint that humans were able to survive and flourish thanks to their proclivity toward competition and aggression, Gruner's theory suggests that modern-day humor and laughter

evolved over time thanks to, "the many generations of men who responded to sudden victories in violent encounters with roars of triumph, over hundreds of thousands of years, [who] wore a groove, a riverbed, into the collective human unconscious (Gruner, 1978, p. 52)." Gruner likens the enjoyment of humor to the feelings one has after a competitive game stating, "successful humor, like enjoying success in sports and games (including the games of life), must include winning ('getting what we want'), and sudden perception of that winning (Gruner, 1997, p. 9, emphasis in original)." Gruner argues that even simple forms of humor, like riddles or puns, where the superiority theory of humor may seem to not apply are rife with aggression. Creating a pun, postulates Gruner, is a way of "beating" others in conversation, a way to highlight one's intellectual superiority. According to Gruner, every joke, even the most seemingly benign, is made up of a contest, resulting in a winner, and a loser.

The Superiority Theory relies largely on two premises about humor: it must involve a comparison with someone else (or a previous version of ourselves) and from this comparison we must consider ourselves superior. However, neither of these suppositions seem to be completely necessary for humor to occur. Many instances of humor involve no person at all, and as result, no comparison is made. Morreall (2009) cites an experiment by Lambert Deckers where participants were asked to pick up a series of weights that looked as if they were identical. While the first several weights in the series weighed the same amount, the participants then picked up a weight that was either much heavier or lighter. Morreall uses the results of this study to illustrate the shortcomings of the theory stating, "Most of [the participants] laughed, but not because they were comparing themselves with anyone." Even when humor does involve someone else, it still does not require that we compare ourselves with that person. We may laugh at an impersonation of someone else, but surely it would be rash to conclude we are amused only because we are

comparing ourselves with the impersonator or the person doing the impersonating. Furthermore, even if we do compare ourselves with whom we are laughing, this does not mean we necessarily deem ourselves superior to them.

Because contemporary society tends to hold humor in high regard as a positive and healthy thing, the superiority theory of humor has suffered in popularity over the years because of the negative, cut-throat way it appears to portray humor. Those who interpret the superiority theory of humor from a positive perspective tend to focus on the feelings of freedom, well-being, and self-efficacy that result when one uses a joke to view a normally threatening or constricting situation as humorous. Literary critic Norman Holland reframes the negativity spawned by the superiority theory by pointing out, "we can state the disproportion the other way around, calling the purpose of laughter not so much a glorifying of the self as a minimizing of the distresses menacing the self (Holland, 1982, p. 45)." Psychologist Harvey Mindess elaborated on this view, putting forth the idea that humor serves to allow one to experience a sense of freedom, mastery, and self-respect, while still abiding by the social norms of life (Mindess, 1971). It also can act as an "emotional anesthesia," helping us to create a momentary sense of distance to avoid feeling overwhelmed with sympathy over the distress and problems of others (McDougall, 1922). In this way, when we laugh about problems of our own or of another person, we are temporarily able to separate ourselves from the emotional pain involved.

Although Gruner's position that aggression is present in *every* humorous incident remains highly debatable, it can be said that, indeed, in *many* forms of humor there are aggressive elements at play. In fact, the research conducted by a series of social psychologists in the 1960s and 1970s investigating superiority and disparagement theories of humor found little evidence that *all* humor contains some form of aggression (Cantor, 1976; La Fave, 1972; Middleton, 1959;

Ullmann & Lim, 1962; Zillmann & Cantor, 1976). Superiority theories of humor have fallen into disfavor over the past decades, and contemporary researchers, in line with contemporary culture as a whole, seem to be more interested in discovering positive applications of humor to improve psychological and physical health. For some, the idea that humor is a form of aggression, rooted in feelings of superiority and disparagement, appears to be inconsistent with the idea that humor is a byway to health. However, when one focuses on the sense of freedom, self-respect, and mastery associated with the superiority approach to humor, it appears that the theory may be more synergetic with the idea of humor as a coping mechanism than originally supposed.

While the more extreme view of humor as a form of pure aggression has, for the most part, been discarded, contemporary researchers generally do agree that humor can be used as a way to express and communicate aggression. Together with Freud's understanding of humor as a defense mechanism, the superiority theory of humor works to make up a foundation for more contemporary approaches to humor which view humor as a coping mechanism for the stresses in daily life. Both Freud's ideas and superiority approaches add to our understanding of humor. Not only does humor help shield us from painful, unpleasant emotions, but it also functions as a way to assert our superiority and a refusal to be held captive by circumstances that threaten our well-being.

Arousal Theory of Humor. The Arousal Theory of humor emphasizes the roles of psychological and physiological arousal in humor. While the Freudian theory on humor hypothesized that the function of laughter is to expel excess physiological energy, theorists, both before and after Freud, have conceptualized and expanded upon this energy-release theory of humor. Renowned British philosopher and sociologist Herbert Spencer (1820-1903) attempted to

incorporate the new scientific advances of his day into his philosophical thoughts on laughter (Morreall, 1987). He modeled his ideas to correspond with the then-current "hydraulic" theory of nervous energy, in which nervous energy was thought to build up within the body before being released by muscular movement of the body. According to Spencer, laughter serves as a mechanism for the release of this energy (in *The Physiology of Laughter*, reprinted in Morreall, 1987).

Heavily influenced by the earlier tension-relief theories, psychologist Daniel Berlyne strived to develop a more modern interpretation for his theory of laughter (Berlyne, 1960, 1969, 1972). Berlyne rejected the outdated views of Spencer and instead framed his ideas in the context of Donald Hebb's well-known adaption of the Yerkes-Dodson Law (Hebb, 1955). According to this theory, the highest amount of pleasure is gained from a moderate amount of arousal; too much or too little arousal is not as satisfying. Accordingly, Berlyne (1972) viewed laughter not as a way of releasing excess arousal, but instead as an act of pleasure that results from reaching an optimal level of arousal. Berlyne introduced two arousal-related mechanisms that he believed were central to laughter—arousal boost and arousal jag. The arousal boost mechanism takes effect as the arousal level elevates as a result of the perception of a humorous stimulus. Just as the arousal level crescendos beyond the optimal level, the arousal jag mechanism takes over in tandem with the resolution of the joke resulting in a sudden decrease in arousal level. As a result, the pleasure experienced during this rollercoaster-like increase and decrease in arousal is expressed by laughter. Berlyne placed special emphasis on the brief time scale in which the change in arousal level occurs, suggesting that it was this time component that made humor a unique experience.

Arousal theories of humor sparked great interest during the 1960s and 1970s, a period where the role of arousal in general was actively being studied. A study by Schachter and Wheeler (1962) sought to investigate whether high arousal levels led to greater expressions of mirth and amusement in response to a humorous stimulus. Arousal levels in the sympathetic nervous system were manipulated by injecting participants with either epinephrine (which increased arousal), chlorpromazine (which decreased arousal), or a placebo saline solution. After participants watched a slapstick comedy film, the research found that those injected with epinephrine smiled and laughed more at the film and rated it as funnier than the placebo group. Likewise, the placebo group showed greater expressions of amusement and rated the film funnier than those in the chlorpromazine group. The results of the study suggested that higher levels of autonomic arousal produce greater expressions of mirth and amusement. This supports the notion that a combination of arousal level and cognitive appraisal influence play a part in the interpretation and understanding of humorous experiences.

A number of other studies attempted to test Berlyne's theory of humor by assessing a variety of psychophysiological responses in participants, including heart rate, emotion-related sweating, blood pressure, muscle tension, in addition to subjective arousal ratings (Averill, 1969; Chapman, 1976; Godkewitsch, 1976; Goldstein et al., 1975, Jones & Harris, 1971). Langevin and Day (1972) found no evidence of an inverted-U relationship between arousal and funniness in their study of the relationship between physiological changes (heart rate and skin conductance) in participants and the funniness rating of cartoons. Instead, their findings suggested the relationship between the two was linear. Godkewitsch (1976) found evidence to support Berlyne's arousal boost concept, but none to support the arousal jag mechanism. Rather

than lowering arousal as predicted by Berlyne, the punchlines of jokes were found to increase arousal level even higher than they were during the body of the joke.

The findings from these studies are consistent with the idea that, like other emotional responses, the enjoyment of humor (i.e., feelings of mirth) is associated with increased physiological arousal. The research suggests the relationship between the enjoyment of humor and autonomic arousal is linear; the higher the arousal level, the funnier the humor is perceived to be (McGhee, 1983). With regard to Berlyne's theories about the emotional aspects of humor, there is a good deal of research to support the idea that humor is associated with increased autonomic arousal; however, there is not much evidence to support his theories of an inverted-U relationship between arousal level and enjoyment.

Incongruity Approaches to Humor. The psychological theory of humor that seems to be most prominent in contemporary literature is the Incongruity Theory. Many theorists of today have chosen to focus on the cognitive-perceptual components of humor rather than the social and emotional aspects behind it. The Incongruity Theory begs the question, "Just what *is* it that makes something funny?" By trying to identify the conditions in which humor occurs, researchers attempted to create a theory that successfully explains humor across its different domains.

The theory, promoted by psychologists as well as philosophers including Kant,
Schopenhauer, and Kierkegaard, puts forth the idea that what makes something amusing and
humorous is "the incongruous" (Morreall, 1987). A 1983 article succinctly states, "Despite
numerous differences in focus, nearly all formulations about jokes stress the importance in
humor of incongruity: A feature or features are surprising and unexpected at one level but follow
plausibly when another level or dimension is considered" (Brownell, Michel, & Powelson,

1983). In other words, a thought or perception that clashes with our initial expectations for a particular situation results in amusement. While Plato speculated that ridiculing others makes us feel better about ourselves, the philosopher Immanuel Kant expanded upon this idea, proposing that humor could be seen as a cognitive shift that transforms a serious situation into an amusing one (Morreall, 1987). Arthur Koestler (1964) further elaborated on these notions as he developed his idea of *bisociation* as a way to explain the cognitive components involved in humor, along with those related to artistic creativity and scientific discovery. When two disparate perspectives are simultaneously activated and experienced at once, bisociation occurs and humor results. The incongruity theory is easily demonstrated through linguistic forms of humor such as a pun, in which multiple different interpretations are simultaneously brought together through the use of a word or phrase so that more than one meaning is suggested.

Stanford psychologist Thomas Veatch (1998) also put forth the idea that in order to make something silly, a perceived violation must take place. He summarizes this phenomenon by saying, "humor occurs when it seems that things are normal while at the same time something seems wrong. Or in an only apparent paradox, humor is emotional pain that doesn't hurt (Veatch, 1998, para. 14)." In Veatch's theory, both the violation and the feeling of normality must be present at the same time in the mind of the perceiver. A violation can refer to anything that seems wrong, unsettling, or threatening in some way. Veatch proposes that humor occurs when three conditions are met: (1) a violation occurs, (2) the situation is perceived as normal, (3) both of this perceptions occur simultaneously. This inversion of expectations, where two contradictory perceptions are suddenly brought together simultaneously, is the quintessence of humor.

Researchers McGraw and Warren expanded upon Veatch's work with their benignviolation theory. The theory focuses on the idea that the presence of humor is always accompanied by some violation of expectation that turns out to be benign (McGraw & Warren, 2010). In their 2014 paper, McGraw and Warren presented a series of studies demonstrating that our perception of humor is also affected by both the psychological distance from a humorous stimulus and the extent to which it seems aversive. While McGraw and Warren (2010) originally characterized humor as a "psychological state" in their definition of humor, after the addition of Williams four years later, they fine-tuned their definition of humor by calling humor, "psychological response [emphasis added] characterized by amusement and the tendency to laugh" (McGraw, Warren, & Williams, 2014). This change of word-choice suggests the authors' felt the need to further emphasize humor as a reaction to stimuli. Increasing psychological distance either through the passage of time or physical distance reduces the threat of the negative experience, and allows the perceiver to transform the experience into an amusing one (McGraw & Warren, 2010). Clearly an evolutionary advantage, humor as a defense mechanism preserves positive mental states in the face of negative realities.

The research to date appears to support the idea that incongruity does play a role in the perception of humor, however this role is still somewhat vague and not well-defined (Ritchie, 2004). For example, in some theories incongruity is believed to be "resolved" at the moment the joke as is perceived as funny (Shultz, 1972, 1976; Suls, 1972, 1983) whereas other theories suggest the ongoing incongruity is what makes it funny, not the resolution (Koestler, 1964). A strength of incongruity theories is that, in addition to explain the conditions in which humor occurs, it also explains when things are *not* funny. A situation may not be funny because a violation may occur that does not seem benign at the same time, or because it depicts a normal

situation where no violation occurs. For example, a joke won't be considered funny if it is either too tame or, conversely, too vulgar.

In contrast to its counterparts, the incongruity approach to humor places less emphasis on the social and emotional aspects than other humor theories, instead examining the cognition process behind it. The transition to more focus on the cognition in humor has parallelled the movement towards more cognitive orientations in psychology as a whole. While earlier research placed a large focus on aggression, sexual drives, and arousal, today cognitive aspects of humor seem to dominate research and the emotional underpinnings of humor have appeared to take a back seat. Although incongruity theories of humor undoubtedly have contributed to our understanding of humor, it is important to note that they fail to adequately incorporate the emotional and social aspects of humor. It is only by integrating information from all of the humor theories that we can a multi-faceted understanding of humor.

Humor and Mental Health

In the past twenty years, a large part of humor research has focused on how humor relates to mental health, looking into the role it plays in one's psychological health and well-being. Humor is thought to have a positive impact on the individual, helping a person cope with life's events by increasing positive feelings and emotions while counteracting unpleasant psychological states such as depression and anxiety (Galloway and Cropley, 1999; Kuper and Nicholl, 2004). It also impacts interpersonal relationships (Martin, 2007). While mental health is commonly defined through a negative lens as the absence of psychopathology, R.A. Martin (2007) uses a more positive outlook by "defining it in terms of three general capacities that seem to be essential for an individual to thrive and flourish." For Martin, Mental Health can be defined by:

- "1) The ability to regulate negative emotions and enjoy positive emotions.
- 2) The ability to cope with stress and adapt to change.
- 3) the ability to establish close, meaningful, and enduring relationships with others."

 The following section of this paper will review the empirical research focusing on the impact of humor on these three aspects of mental health.

Humor and Emotional Well-Being. One defining characteristic of humor is its ability to produce the positive emotion of mirth. Those who experience humor and laughter often feel less irritable, anxious, and tense, and more ebullient and exuberant. Therefore one way a sense of humor may benefit mental health is by influencing one's "ability to regulate or manage emotions," an important component of mental health (Martin, Gross and MuNoz, 1995). A number of laboratory studies have produced fairly consistent results demonstrating humor's short term effects of feelings of well-being. Despite this evidence that suggests humor and laughter have short term benefits on one's emotional well-being, there is little evidence of longer-term psychological benefits of repeated exposure to humor and laughter.

A number of studies have looked at the effects of smiling and laughing. Strack, Martin, and Stepper (1988) performed an experiment in which participants rated the funniness of cartoons while holding a pen in their mouth. They found that participants who held the pen in a way which caused the contraction of the same facial muscles used in smiling rated the cartoons as more funny and reported a greater increase in positive mood than those who held the pen in a way which inhibited such muscles contractions. Other studies have found sessions of forced, non-humorous laughter resulted in a significant increase in positive mood in participants (Foley, Matheis, & Schaefer, 2002; Neuhoff & Schaefer, 2002.) These studies suggest the acts of smiling and laughing, even artificially, are able to increase positive moods, at least temporarily.

In addition to increasing positive moods, evidence exists that humor is able to reduce negative moods. A 1996 study by C.C. Moran found that watching a four-minute humorous film led to a significant reduction of anxiety relative to baseline. Two studies conducted tentatively suggest humor is able to produce short term positive emotional changes that "are at least comparable, if not superior to the effects of vigorous physical exercise" (Szabo 2003; Szabo, Ainsworth, & Danks, 2005). In 2003, Szabo compared the mood effects produced by watching a comedy film, running on a treadmill, and watching a non-humorous documentary film; the duration of each activity was twenty minutes long. Both the comedy and the aerobic exercise showed significantly stronger mood effects than the non-humorous control video. When compared with the aerobic exercise, the comedy video produced an increase in positive and decrease in emotional distress similar to aerobic exercise, while producing an even greater reduction in anxiety. In 2005, Szabo and his colleagues were able to replicate the study (Szabo, Ainsworth, & Danks, 2005).

Furthermore, evidence exists suggesting that the mirthful feelings produced by humor not only influence mood, but also affect one's general outlook on life. In one study, feelings of hopefulness were found to be significantly greater in those who watch a comedy film in comparison to those who were shown a non-humorous video (Vilaythong, Arnau, Rosen, & Mascaro, 2003). A 1995 study by Dienstbier indicated humor was able to change one's outlook by turning one's perception of a boring task into an interesting one. Participants were shown either a comedic or non-humorous film before performing several boring and repetitive proofreading tasks. In comparison to the control group who watched the non-humorous film, those who were shown the comedy rated the tasks as being more challenging and invigorating, and reported higher levels of energy and elation, despite not actually performing better on the

tasks. Correspondingly, the positive emotions evoked by humor seem to be able to make a person hopeful, more energetic, and less susceptible to boredom.

Because of these findings on the short term effects of humor on positive and negative moods and feelings of well-being, the assumption could be made that repeated exposure to humorous stimuli overtime should cause an overall improvement on mood; however, research investigating the longer term psychological effects of humorous stimuli has produced generally disappointing results. No significant difference in self-reported mood were found in a study of elderly residents of a senior care facility after six weeks of watching either a humorous or non-humorous movie three days a week (Adams & McGuire, 1986). Both groups showed an equal improvement of mood during the course of the study. Another study looking at patients recovering from orthopedic surgery randomly assigned patients into three groups, one of which watched a series of humorous movies, another which watched a series of non-humorous movies and the third which watched no movies during the two days of recovery post-surgery (Rotton & Shats, 1996). While the results indicated some beneficial effect of watching movies in general, no particular benefit of humor was found.

Although the research in this area is still quite limited, the existing evidence suggests that humor can function as an emotion-regulation mechanism. While studies show that humor is able to increase feelings of happiness and well-being in the short term, the current evidence suggests regular exposure to humor over an extended period of time has little lasting effect on an individual's' overall well-being. This may be due to the fact that the humor introduced during these studies is not integrated into the subjects' everyday experiences. Researchers might find greater benefits if studies were designed to increase the frequency of spontaneous humor and laughter during the day-to-day lives of subjects. Perhaps a study that found a way to integrate

humor into a participant's ongoing life experiences would find humor was able to influence the way they respond, and thus would help contribute to more effective regulation of emotions. This could conceivably involve training participants how to produce humor in their daily experiences and how to take a more humorous perspective on life.

Humor, Stressful Experiences, and Coping. Humor may be advantageous to mental health by helping us to cope with stressful life experiences. Research has shown that experiencing highly stressful events such as financial problems, work pressures, relationship conflicts, and natural disasters, can lead to emotional disturbances, cognitive inefficiency, and behavioral impairments (Sanderson, 2004). However, stressful situations do not always result in these negative effects on one's physical and mental health. How a person frames and copes with a stressful life situation plays a role in determining whether the experience will result in adverse effects both psychologically and physiologically (Lazarus & Folkman, 1984). Throughout the past century, many psychologists have suggested that the ability to utilize humor may be an effective coping strategy when facing times of high stress and adversity (Freud, 1928; Lefcourt, 2001; Lefcourt and Martin, 1986).

Because humor inherently involves incongruity and multiple interpretations, it often can shift how a person is able to perceive a stressful situation, allowing them to reappraise it from a different and less-threatening point of view. This humorous reappraisal causes the situation to be seen as less threatening and more manageable and, in turn, it becomes less likely a person will experience a stress response as a result (Dixon, 1980). Rollo May (1953) describes the function of humor as "preserving the self . . . It is the healthy way of feeling a 'distance' between one's self and the problem, a way of standing off and looking at one's problem with perspective (p. 54)." Similarly, Walter O'Connell (1976) indicated humor is able to reduce paralyzing feelings

of helplessness and anxiety by rapidly switching a person's frame of reference, providing reappraisal of the problem and distancing the perception of its immediate threat. For example, playwright Oscar Wilde chose to distance himself from the dismal reviews of his latest play. When a friend asked, "How did your play go?" Wilde replied, "Oh, the play was a great success, but the audience was a failure (Klein, 1989, p. 76)."

The foundation for the conceptualization of humor as a coping mechanism can be viewed as a derivative of the superiority theory of humor, which regards humor as a playful form of aggression. By making fun of things that would ordinarily be seen as an impediment or threat, a person is able to garner a newfound awareness of freedom from the threat and instead experience positive feelings of liberation and power over the situation. Philosopher Israel Knox noted that humor is able to provide one with a certain sense of mastery and self-respect in the face of adversity (Knox, 1951). By using playful aggression to assert one's superiority, humor can foster a sense of resiliency that allows one to overcome difficult situations. That said, aggressive forms of humor can also foster cynicism and hostility towards others, which could potentially damage social relationships (Martin, 2007). Aside from anecdotal evidence, Martin's point regarding social relationships suggests that judgment and "taste" are inherently important. Comedic timing, a sense of rhythm which dictates when a joke can or should be made, is perhaps as important as the content of the joke itself.

Other situations require tact in which we downplay our successes or wantonly bring up our mistakes in an effort to appear self-deprecating—a form of graciousness and humility that disguises itself with the veneer of comedy. Other theorists emphasize the coping benefits of being able to laugh at oneself, allowing the recognition of one's own faults and failures while still preserving one's self esteem. Psychologist Gordon Allport (1950) succinctly stated, "the

neurotic who learns to laugh at himself may be on the way to self-management, perhaps to cure (p. 280)." Self-deprecating humor helps one let go of unrealistic expectations and ideals, working instead to promote more realistic goals. Of course, a distinction should be made between "self-deprecating humor based on a fundamental sense of self-worth and excessively self-disparaging humor arising from a negative self-concept (Martin, 2007, p. 283)." Regarding this distinction, it seems to serve as evidence that the conceit of jokes as well as their target are both socially relevant in that they offer cues of mood, personal loyalties, and personality insight. In other words, the significance of a joke is not merely its content, but it's also the social implications the content of the joke references.

Most of the available literature suggests that high-humor individuals are more apt to have more flexible and realistic cognitive appraisals of potentially threatening situations, and that they tend to use a diverse assortment of coping strategies to deal with stress (Abel, 2002; Fry, 1995; Kuiper & Martin, 1993; Kuiper. McKenzie, and Belanger, 1995). While these studies do not provide a great deal of insight into the specific processes involved when humor is used to cope, they do suggest that humor does help with cognitive reframing and emotional management. Nick Kuiper and his colleagues conducted a number of studies that made use of the Coping Humor Scale (CHS), which assesses a person's coping styles and types of cognitive appraisals.

In one study, they investigated the relationship between the Coping Humor Scale and college students' cognitive appraisals about their midterm exam in an Introduction to Psychology course (Kuiper & Martin, 1993). The study indicated that before the exam, students with a high CHS score viewed the test more of a positive challenge than a negative threat. After the exam, those with a high CHS score reappraised the exam as being more important and positively challenging if they had performed well on it, or lowered the importance and challenge ratings if

they performed poorly. Alternatively, those who had low CHS scores rated the exam as more important if they did poorly on it and less important if they did well. These findings support the idea that one way humor helps to alleviate stress is by altering the types of cognitive appraisals a person makes about potentially stressful situations. Those who are more likely to use humor to cope with these stressful situations appear more likely to view it as a challenge instead of a threat.

There is also empirical evidence suggesting that humor can be a beneficial way to cope when dealing with extraordinary and uncontrollable stressful situations, such as prisoner of war camps. A study that evaluated 82 men who survived 11 months of imprisonment in a North Korean war camp found that humor was among several coping strategies that were found to significantly correspond with better psychological adjustment (Ford & Spaulding, 1973). The men used humor to cope with the situation by giving funny nicknames to their guards and to each other, joking about attributes and characteristics of their captors, and telling jokes to each other. Psychologist and Holocaust survivor Viktor Frankl called humor "another of the soul's weapons in the fight for self-preservation" when describing his experiences in a Nazi concentration camp during World War II (Frank, 1984, p. 63). Humor's nexus with humanity is universal: it shows up when times are good, but most notably it is all but essential for humans enduring the harshest of circumstances. The survival of the spirit through the camaraderie fostered by engaging in comic play with other prisoners of war (POWs) is a rebellious assertion of the self when their personal agency is arguably at its most limited.

In 2001, Linda Henman conducted a qualitative study based on interviews of over 60 American soldiers who had been POWs during the Vietnam War. Although the soldiers were prisoners for over seven years and endured starvation, torture, isolation, and physical abuse, they

showed a high level of adjustment. When questioned about how they coped, most participants highlighted the important role humor played in helping them maintain their resilience. Humor allowed them to create a sense of command and indestructibility during a situation in which they had no real control (Henman, 2001).

While humor seems to be a healthy coping mechanism when dealing with the savagery of prisoner of war camps, the research exploring the use of humor to cope in less severe stressful situations has not been as black and white. Studies investigating humor as a coping mechanism for those with life-threatening illnesses have found mixed results. In one study, 59 women with breast cancer were assessed using a measure called the Coping Orientations to Problem Experiences (COPE) pre- and post-surgery, and at 3-, 6-, and 12-month follow ups (Carver et al., 1993). Those who used humor in order to cope suffered from less emotional distress, but this finding was significant in only two of the five of the follow-up assessments.

A larger study of 236 women with breast cancer who were given the COPE, as well as other measures of emotional distress, found no significant correlations between humor in coping and any of the emotional distress measures (Culver et al., 2004). Both studies raised questions about the efficacy of humor as a coping mechanism for those with breast cancer; however, a common denominator between both studies that could very well be a limitation is their use of the COPE humor scale. An unrelated study has shown that this measure fails to differentiate between self-enhancing and self-defeating types of humor (Martin, 2003).

Humor and Interpersonal Relationships. Humor possesses an inherently social nature; however, much of the research on the mental health effects of humor seems to overlook the social context in which it occurs. Many of the early studies on humor studied the reactions of participants to humor (e.g., jokes, cartoons) in a laboratory. These studies did not give attention

to the social aspects of humor experienced in everyday social interactions. More recent research has shifted away from observing reactions to canned jokes, instead focusing on these social aspects, specifically on the function of humor in interpersonal communication and influence. Psychologist Harry Reis summarizes the research exploring the importance of social relationships in relation to mental health by saying, "there is widespread evidence that socially involved persons are happier, healthier, and live longer than socially isolated persons do (Reis, 2001, p. 58)." So while humor is a playful activity we enjoy for its own sake, it also performs a variety of important social functions. Because humor serves a variety of social functions in relationships and the quality of these relationships impact an individual's mental health, it appears a reasonable assumption that humor has the capacity to play a significant role in interpersonal relationships.

In addition to its ability to keep us entertained, humor also functions as a type of interpersonal interaction that has the power to define and strengthen social relationships, which as a result can impact a person's mental health. When shared between two people within a relationship, humor has the capacity to positively impact relationships, functioning to establish and maintain close relationships, regulate emotion, intensify positive experiences, maintain feelings of relationship satisfaction, enhance feelings of attraction and commitment, and reduce feelings of stress within or outside the relationship (Shiota et al., 2004). Likewise, destructive uses of humor, such as name-calling, sarcasm, or aggressive teasing, have the ability to negatively impact relationships.

In a qualitative study looking at dating relationships Amy Bippus (2000) highlighted the differences between positive humor that helps bond couples and more negative forms of humor that may be damaging to a relationship. When used skillfully playful joking and teasing can

facilitate conflict resolution by providing a way for partners in a relationship to address and acknowledge conflict in lieu of an argument. Taking a humorous, playful look at incongruities within the relationship allows couples to share opposing views and address a conflict while also maintaining cohesion. Humor can also be used to create a sense plausible deniability within conversations, leaving room for ambiguity with regard to the intentions of the speaker until more feedback is received.. This is just one example of how humor can be used to communicate attitudes, beliefs, feelings, and needs in an amenable way.

It is important to distinguish that when humor is described as being "used" for certain functions, this does not necessarily imply that individuals are aware of these functions or are using humor in a strategic, manipulative way. In most instances, people experience humor in conversation as nothing more than good fun. Humor most often occurs spontaneously in conversation, and while it may be serving a variety of purposes, individuals may not be fully aware of this. As Martin (2007) states, "Indeed, the ability to deny any serious intentions, even to oneself, is part of what makes humor so effective in many types of social interaction (p. 117)."

Several correlational studies have investigated the relationships between trait measures of humor and variables related to personal relationships. Hampes conducted a number of studies on the subject that found measures of intimacy, empathy, and interpersonal trust positively correlated to self-report humor scales (Hampes, 1992, 1994, 1999, & 2001). Many studies looking at the relationships of dating or married couples have looked at how humor correlates. Couples who perceive their partner to have a good sense of humor have been found to be more satisfied in their relationship than those who consider their partner to be less humorous (Rust & Goldstein, 1989; Ziv & Gadish, 1989). Of course, the fact that the aforementioned studies make use of correlational methodologies can also be viewed as a major limitation of this research, as

they do not determine the direction of causality between humor and satisfaction in relationships; a potential area of future research would be to investigate whether humor has a causal effect on relationship outcomes.

Other research has examined associations between different humor styles and variables related to close relationships by making use of the Humor Styles Questionnaire (HSQ), a selfreport measure designed to distinguish between potentially beneficial and detrimental humor styles (Martin et al., 2003). The measure makes use of four humor styles: affiliative, selfenhancing, aggressive, and self-defeating. Affiliative humor refers to humor used to amuse others and facilitate relationships, while self-enhancing humor refers to the use of humor to cope and maintain a humorous outlook during times of stress. Martin considered both of these to be relatively healthy and adaptive styles of humor. On the other hand, aggressive humor denotes disparaging instances of humor used to criticize and manipulate others and self-defeating humor refers to humor used for self-disparagement, ingratiation with others at one's own expense, and as a form of defensive denial. These two styles were considered to be relatively unhealthy and potentially detrimental. The HSQ contains 32 questions in which participants are asked to rate the degree to which each question describes their use of humor on a scale from 1 (totally disagree) to 7 (totally agree). Scores are then obtained for each of the humor style subscales in order to assess the participant's use of both positive and negative humor styles in their everyday lives.

In the initial study of Martin and his colleagues in 2003, they found that "individuals with higher scores on affiliative humor and lower scores on self-defeating humor tended to report higher levels of intimacy in their close relationships. In addition, self-enhancing humor was positively related to the degree to which participants felt satisfied with the social support

provided by their friends, whereas self-defeating humor was negatively correlated with this variable." A later study (as cited in Martin, 2007) using the HSQ found that those with higher affiliative and self-enhancing humor styles corresponded with lower levels of loneliness and interpersonal anxiety, while self-defeating humor corresponded with higher levels of these feelings (Martin & Dutrizac, 2004). The results of a number of additional studies (as cited in Martin, 2007) also provided evidence that positive humor styles are related to positive relationship indicators, while negative humor styles are associated with more negative experiences of relationships in general (Doris, 2004; Saroglou & Scariot, 2002; Ward, 2004). These studies seem to support the notion that affiliative and self-enhancing humor may enhance relationship satisfaction, whereas the use of aggressive humor by one or both partners seems to be particularly associated with relationship dissatisfaction.

In summary, humor does play a role in interpersonal relationships and can be used to communicate messages to achieve a variety of social goals. Humor can be used in a number of prosocial ways including to strengthen a relationship, ease the way for conflict-resolution, and build a sense of cohesion within a group. On the other hand, humor can also be used to aggressively in order to ostracize, embarrass, or manipulate others. No matter the way in which it is used, it can still evoke feelings of pleasure and mirth. Therefore, perhaps it is most sensible to consider humor as neither good nor bad, but instead as a tool that can be used for both friendly and antagonistic purposes.

The Therapeutic Benefits of Humor

Psychologists interested in humor seek out relevant findings and principles from the research to help solve real-world problems, including those related to emotional and behavioral issues with clients. While many practitioners advocating the potential benefits of humor base

their claims on anecdotal evidence and personal experience, empirical research findings do exist to support the applied use of humor; however, although the amount of research exploring this area is slowly expanding, currently it is quite limited.

Enthusiasm and curiosity has grown over the past thirty years concerning the application and potential role of humor in counseling and healthcare. The growing interest in humor is widespread; researchers from a variety of different theoretical schools are advocating and exploring the use of humor in treating various psychological problems. In a field where skepticism and disagreement are common thanks to an array of theoretical schools, the consensus of therapists on the beneficial therapeutic use of humor should be noted. It appears that interest in the use of humor in therapy seems to transcend theoretical orientation. Therapists adhering to the schools of Adlerian, behavioral, cognitive, psychoanalytic, rational-emotive, and strategic family therapy have all found humor useful (Bergmann, 1999; Borcherdt, 2002; Franzini, 2000; Gelkopf & Kreitler, 1996; Madanes, 1987; Rutherford, 1994.) Studies examining humor-based treatment techniques exist for a wide range of psychological issues, including phobias, obsessive compulsive disorders, stress-related disorders, depression, schizophrenia, intellectual disabilities, and antisocial personality disorder (Davidson & Brown, 1989; Martens, 2004; Prerost, 1988; Surkis, 1993; Ventis, Higbee, & Murdock, 2001; Witztum, Briskin, & Lerner, 1999). Humor has been endorsed as a helpful therapeutic tool when dealing with many different populations and counseling situations including individual therapy, group therapy, family and marital counseling, when treating children and adolescents, as well as when treating elderly patients (Bernet, 1993; Bloch, 1987; Odell, 1996; Prerost, 1993; Rutherford, 1994). Again, the universality across demographics and across circumstances should be noted, furthering the question of "why hasn't

more empirical research been conducted?" Despite the dearth of research, there are health organizations interested in promoting the use of humor in treatments.

Established in 1987, the American Association for Therapeutic Humor (AATH) promotes the use and development of the healing power of humor and laughter. The association is made up of many healthcare practitioners including psychotherapists, marriage and family counselors, doctors, and nurses, along with members from a variety of other disciplines such as business and education (Martin, 2007). Members are interested in how humor and laughter may be best utilized and applied in their respective fields. The AATH defines therapeutic humor as "any intervention that promotes health and wellness by stimulating a playful discovery, expression or appreciation of the absurdity or incongruity of life's situations. This intervention may enhance health or be used as a complementary treatment of illness to facilitate healing or coping, whether physical, emotional, cognitive, social, or spiritual (AATH, 2000)." The all-inclusive nature of AATH's definition aligns with the organization's goal to promote the interdisciplinary use of therapeutic humor across multiple domains. While other definitions of therapeutic humor may not be as comprehensive, most focus on its ability to increase and promote health and wellness.

Louis Franzini's 2001 review of humor in therapy defines therapeutic humor as "the intentional and spontaneous use of humor techniques by therapists and other healthcare professionals, which can lead to improvements in the self-understanding and behavior of clients or patients (p. 171)." Franzini advocates that although therapeutic humor can manifest itself in almost any form of humor, the basis of the humor should clearly relate to a current therapeutic issue in order for it to be beneficial to the client. While the by-product of the humor can vary in intensity from gregarious laughter to quiet amusement, typically the immediate result of

therapeutic humor is a shared positive emotional experience by the therapist and client (Franzini, 2001). When used prudently, the shared experience of humor in session can work to strengthen the psychotherapeutic relationship and increase rapport. Humor can serve to humanize the therapist and challenge preconceived notions of the all-seeing, all-knowing therapist. It can facilitate trust between the client and therapist and skillfully suggest to the client that the the therapist is not overwhelmed by their problems.

The focus of this paper predominantly reviews the use of humor by the therapist, although certainly humor may be initiated by the client as well during therapy. Recent research suggests that self-defeating, maladaptive styles of humor may help create maladaptive schemas early in life, which may lead to emotional and functional disturbances later in life (Dozois, Martin, & Faulkner, 2013). It seems necessary to emphasize that therapists should be mindful of how they react to a patient's humor, as their reactions could be unintentionally counter-therapeutic. Franzini (2001) gives a variety of possible reactions to patient humor, suggesting that a therapist "could laugh genuinely with the patient, laugh falsely out of pity or sympathy, laugh disparagingly, attempt to top the patient with a better story or remark, or instantly attempt to 'use' this humor data to interpret cracks of quirks in the patient's personality structure or to diagnose hidden psychopathological tendencies," along with also nothing all but the first reaction would likely not be therapeutic for the patient.

Martin (2007) identifies three predominate lines of thought in the existing research regarding the potential application of therapeutic humor. Researchers tend to view therapeutic humor in one of three ways: as a communication skill, a specific therapeutic technique, or a system of therapy in itself. While some researchers are interested in pursuing the development of an entire system of therapy based on humor, others see humor as a singular therapeutic

intervention that can be implemented along with other, non-humor-based techniques during the treatment of a client. Another segment of the research views humor as a basic communication skill, considering it a characteristic that augments a therapist's overall effectiveness, similar to the way clinicians view genuineness, warmth, and positive regard. Each of these approaches will be explored.

Humor-Based Theoretical Approaches. Among the vast array of different approaches to therapy, there exists a small number that place an emphasis on cultivating a healthy, humorous perspective on life as one of the primary goals of therapy. These systems of therapy regard a sense of humor as an underlying indicator of psychological health and well-being (Martin, 2007).

Albert Ellis introduced Rational Emotive Behavior Therapy (REBT), a theoretical approach that makes considerable use of humor (Ellis, 1997). First introduced as "Rational Therapy" in the 1950s, today REBT continues to stand out from other contemporary cognitive behavioral approaches because of its use of humor as an efficacious tool to help clients dispute irrational beliefs (Ellis, 1997). Ellis argued, "human disturbance largely consists of exaggerating the significance or seriousness of things, and the ripping up of such exaggerations by humorous counter-exaggeration may well prove one of the main methods of therapeutic attack (Ellis, 1997, p. 4). It is striking that Ellis considered the use of humor to be one of REBT's main therapeutic techniques. Although REBT uses humor most often in challenging the irrational assumptions of clients, Ellis saw other benefits of the presence of humor in therapy. It often provides alternate ways to view and handle problems, encouraging one to look at life from multiple points-of-view (Martin, 2007). Additionally, the use of humor also makes life more enjoyable by eliciting feelings of amusement and mirth (Ellis, 1997). Critics of REBT's liberal use of humor cite that it appears to promote an aggressive and confrontational approach to therapy. Ellis acknowledged

the potential for harm, emphasizing that humor must be cautiously and carefully employed by the therapist, and that "it must be done in a way that communicates acceptance of the clients and encourage them to accept themselves despite their errors and human fallibilities (Martin, 2007, p. 338)."

In addition to REBT, Provocative Therapy also utilizes humor as a tool to actively challenge clients. Developed by Frank Farrelly and colleagues initially with the intent to treat patients with schizophrenia, over time Provocative Therapy eventually broadened its scope of treatment to include a wide array of psychological problems (Farrelly & Lynch, 1987). The premise of the approach is that by taking responsibility for their own actions clients will be able to modify their self-defeating behavior patterns and overcome their psychological issues (Farrelly & Lynch, 1987). The therapist's role is to play the devil's advocate, frequently using humor in order to attack a client's "beliefs, feelings, and behaviors through exaggeration and sarcasm, causing them to fight back against the therapist and eventually gain a detached, humorous perspective on their dysfunctional behavior patterns (Martin, 2007, p. 338)." The goal of Provocative Therapy is to induce an emotional reaction in clients that culminates in changes in their perception and behavior (Farrelly & Lynch, 1987). In this approach, humor is a catalyst more central to the therapist's relationship with the client; humor sets the tone, defines the discussion, and disassociates clients with their negative behaviors over time.

A less contentious humor-based therapy is a humanistic approach developed by Walter O'Connell (2012) called Natural High Therapy. Based on the idea that psychological symptoms result from constrictions of self-esteem and social interest, the aim of therapy is to gain self-actualization (Martin, 2007, p. 339; O'Connell, 2012). The therapist works to help the client obtain a sense of autonomy by developing feelings of self-worth and belonging (O'Connell,

2012). A healthy sense of humor in which a humorous attitude toward life is taken is seen as a defining hallmark of self-actualization. Natural High Therapy uses group and individual treatment modalities to employ a wide-variety of treatment techniques. These include psychodrama, role-playing, meditation, and guided imagery (O'Connell, 2012). Learning to develop a sense of humor is viewed as a highly desired by-product of Natural High Therapy. Although humor is seen as an integral part of all three therapies, Natural High Therapy takes a less direct, less aggressive approach with its use of humor than REBT or Provocative Therapy. Throughout treatment, the therapist subtly highlights the benefits of humor by modeling a humorous approach to, and encouraging, any humor displayed by the client (Martin, 2007). Humor is seen as an essential tool, something that must be developed and then implemented during therapy in order to reach feelings of innate worth, interconnectedness, and the state of "natural high." Unfortunately, little research has been completed evaluating and comparing the effectiveness of these humor-based systems of therapy with other forms of treatment.

Humor as a Therapeutic Technique. In addition to the development of entire systems of therapy which use humor as a central component, there are also specific humor-based therapeutic interventions used to treat particular problems. Two of these techniques include systematic desensitization and paradoxical intention.

Systematic desensitization, also known as graduated exposure therapy, is a behavioral intervention used in the treatment of phobias and other anxiety-related conditions. Traditionally, systematic desensitization makes use of an activity "in which clients vividly imagine themselves experiencing a series of progressively more threatening fear-evoking situations while engaging in muscle relaxation exercises (Martin, 2007, p. 339)." Overtime, pairing the feared stimulus and

the relaxation response works to lessen feelings of anxiety. This intervention has been adapted to include the use of humor during treatment.

Larry Ventis, a clinical psychologist at the College of William and Mary specializing in the therapeutic applications of humor, employed humor in his use of systematic desensitization. Substituting the use of muscle relaxation with humorous imagery, Ventis (1973) found empirical support for the effectiveness of this application of systematic desensitization. Humor-based desensitization was successful in treating women suffering from social anxiety (Ventis, 1973). Additionally, another 1973 case study by Ronald Smith used humorous imagery during nine systematic desensitization sessions with a 22-year-old woman. Smith (1973) found the treatment was effective in reducing her maladaptive anger responses. Furthermore, this humor-based desensitization was found to be successful when traditional systematic desensitization treatment had previously failed with the woman (Smith, 1973).

Subsequently, Ventis and his colleagues (2001) led another, more rigorous study investigating systematic desensitization using humorous imagery for the treatment of 40 undergraduates with spider phobias. The students were randomly assigned to one of three groups: a group who received four weekly sessions of traditional systematic desensitization using muscle relaxation, a group who received four weekly sessions of systematic desensitization using humor, or a no-treatment control group. Those in the humor group were assigned homework each week to create humorous statements and imagery relating to spiders. During therapy sessions, participants were introduced to a hierarchy of mental images which paired anxiety-provoking situations involving spiders with humorous images.

The findings of the study revealed that both systematic desensitization groups showed "significant and equally large reductions in their fear of spiders on self-report and behavioral

outcome measures, whereas those in the no-treatment group did not show any significant improvement (Martin, 2007, p. 340; Ventis, Higbee, & Murdock, 2001)." The reduction of the spider phobia in both treatment groups was compounded by greater feelings of self-efficacy. Ventis and his colleagues (2001) postulated that the positive emotions elicited by the humorous imagery may have worked to change the cognitive appraisals of participants in the humor treatment group, in turn raising their sense of self-efficacy which made them more willing to interact with spiders. The research exploring humor-based systematic desensitization thus far has provided evidence that these humorous interventions may be as effective, but not necessarily more effective, than traditional systematic desensitization using muscle relaxation for the treatment of phobias. In fact, the pattern of using humor to counter negative emotions is a pattern that shows up in other forms of therapy. The approach of paradoxical intention closely identifies with the practice of creating comedic material—subjugating that which is obvious, oppressive, etc.

Paradoxical intention is a therapeutic technique rooted in humor that was developed by the Austrian neurologist, psychiatrist, and Holocaust survivor, Viktor Frankl. The approach is often used in the treatment of clients with anxiety-related disorders, including obsessions, compulsions, and phobias (Frank, 1960). The technique attempts to break what Frankl calls the "self-sustaining vicious circle involving anticipating anxiety" in which "a symptom evokes a phobia and the phobia provokes the symptoms, which reinforces the phobia (Frankl, 1975)." Paradoxical intention is an exercise in which clients are asked to do the things they fear or to wish for them to happen.

In this technique, clients are asked to deliberately practice neurotic behavior or self-talk while exaggerating the severity of the targeted symptom (Frankl, 1960). The hope is that through

this exaggeration, clients will recognize the irrationality and absurdity of their symptoms, develop the ability to laugh at their neurotic behavior, and in turn distance themselves from their symptoms. By participating in this form of thought-checking and reality-testing, clients utilize humor in order to recognize that the catastrophic consequence they expect their symptoms to bring about are not likely to actually occur. Once again, turning neurotic behavior into a positive emotional response sustains that mental association over time. The intentional use of hyperbole has a net-benefit of forcing a mental reality check despite an oncoming, negative physiological and emotional response.

In 1999, Eliezer Witztum and his colleagues made use of paradoxical intention, along with other humor-based techniques, while treating twelve patients with chronic schizophrenia. After unsuccessfully treating the patients with a directive form of psychotherapy, the therapists started to use a humorous approach during individual and group therapy. Therapists encouraged patients not to take themselves so seriously by "making comments in a sympathetic and lighthearted manner to satirize and trivialize the patients' delusion and hallucinations, highlighting the irony and absurdity of these symptoms through playful exaggeration (Martin, 2007, p. 341)." Following three months of this humor treatment, patients were found to have significant improvements in functioning measured by the use of a psychiatric rating scale. In a follow-up assessment after an additional three months, patients were found to have maintained these gains in functioning. Although additional research is needed, this study suggests there may be benefits to using humor-based techniques in the treatment of patients suffering from chronic psychotic symptoms.

Humor as a Therapeutic Communication Skill. A third way to view humor's role in therapy is to view it as a type of social skill that is able to enhance therapists' overall

effectiveness, regardless of their theoretical orientation (Martin, 2007). Put simply, having a "good sense of humor" may be a useful interpersonal communication skill for therapists to develop. The relationship between therapist and client is arguably the main vehicle for therapeutic change and as in most types of relationships, humor often makes an appearance in psychotherapy. A 2004 study found that during individual therapy sessions, laughter occurred on average every three minutes, with clients laughing twice as often as therapists (Marci, Moran, & Orr, 2004). The capability to effectively use humor with clients can be seen as a therapeutic skill that therapists need to cultivate and refine, similar to the need for therapists to develop a variety of other communication skills such as active listening, nonverbal communication, and empathetic understanding. Rather than viewing humor as a specific technique that is intentionally used by the therapist, in this perspective humor is something that occurs spontaneously and naturally in interactions between therapist and client, and is something that can be used with varying degrees of skill. On its own, humor is not inherently therapeutic; however, it can be used in a therapeutic manner.

Instead of partaking in humor blithely, mental health professionals need to take a mindful approach to how and why they use humor in therapy. This includes gaining awareness of the functions of their own use of humor during therapy (and that of their clients) as well as any therapeutic effects. It is commonly recognized within the field as well backed by therapeutic outcome research that effective therapists display empathy, caring, and genuineness towards clients (Martin, 2007). Therefore humor is likely to be more therapeutic if practiced in a genuine, empathetic way. Conversely, humor may be harmful to the client if it leaves them feeling dismissed or misunderstood, if it appears to be dismissive of their feelings and views, or if it is misused by therapists to mask their own feelings of discomfort.

When used in a sensitive and empathetic way, humor can be used as a technique to help further many common therapeutic goals. The importance of establishing a positive rapport with a client is universally acknowledged among practitioners. At the onset of therapy with a new client, humor may be used as a vehicle for helping the therapist establish rapport. Joining together in the shared experience of laughter may lead to feelings of intimacy and friendliness, while also facilitating a client's trust in the therapist. It has been surmised that humor may help "to put the client at ease and reduce tension, to make a therapist seem more human, to increase the attractiveness of the therapist to the client, and to create a traditional 'play space' in which the therapist and client can engage in rewarding interchange and shared reality (Gelkopf & Kreitler, 1996)." Empathetic understanding may be conveyed in a well-timed humorous comment from the therapist, concisely encapsulating irony present in a client's experiences. By occasionally taking a humorous perspective during the course of therapy the therapist can also serve as a role model, demonstrating appropriate use of humor.

Humor generated by the client often provides valuable information about the client's perceptions, feelings, attitudes, and assumptions. By paying close attention to how and when a client uses humor, therapists may be able to gain an accurate understanding of the client (Martin, 2007, p. 342). Client-generated humor can also be used when assessing mental status and level of functioning. For example, the use of humor by the client may indicate how a client is feeling about their problems; a client's laughter may indicate they feel some control over their problems, while the lack thereof could suggest the client is feeling overwhelmed. Laughter can also indicate areas that deserve further investigation by the therapist. Gelkopf and Kreitler warn that therapists should stay alert to possibilities of countertransference if they notice either excessively using humor or avoiding it altogether with particular clients (Gelkopf & Kreitler, 1996). Because

humor inherently involves the perception of seemingly incongruous ideas or perspectives simultaneously, it often can be used in therapy when helping clients gain new insights and alternative perspectives (Martin, 2007, p. 343). As clients gain awareness and new perspectives on their life, they often experience an "aha-moment" that strikes them as humorous and results in laughter.

As the therapist joins in this laughter, the client's new perspective and insight are being reinforced. Shared laughter can also be a form of positive reinforcement after positive behavior change, such as when a therapist and client join together in laughter following a successful role play of a difficult interpersonal situation (Martin, 2007, p. 343). Additionally, therapists can help gently lead their clients to these types of insights by carefully using humor to highlight the irrationality or absurdity of their assumptions or thoughts. This use of humor may help clients gain a new sense of proportion, leading to recognition that their problems are not as large as they currently may seem (Martin, 2007, p. 343). By encouraging a humorous outlook, therapists can help clients learn to better regulate their emotions. The therapeutic use of humor by therapists can help clients learn to accept the limitations and uncertainties of life, encouraging tolerance of the world around them and acceptance of personal limitations (Ellis, 1997). In summary, humor appears to be a valuable communication skill for therapists which, when used carefully, can work to further therapeutic goals.

Empirical Evidence on Humor in the Therapeutic Process

Research looking at the effects of humor as a therapist communication skill is extremely limited and has produced mixed results. While some studies have suggested some therapeutic benefits of humor, others have shown no difference in effectiveness between humorous and non-

humorous interventions, and still others have indicated that humorous interventions may be *less* helpful.

One method used to approach this type of research has been to use a rating system in order to measure perceptions of therapy sessions containing both humorous and non-humorous interventions. A study in 1986 gave participants a series of audio recordings of simulated therapy sessions to listen to in which the therapists either did or did not use humor when responding to clients. The participants, currently in outpatient therapy themselves, were then asked to rate the helpfulness, level of understanding, and degree to which they themselves would be willing to receive treatment from each therapist (Rosenheim & Golan, 1986). Despite predictions to the contrary, the research revealed that the non-humorous sessions were rated as being significantly more effective and were more strongly preferred than the sessions in which humorous interventions were used.

Additionally, another study using the same methodology and participants with schizophrenia in the early stages of remission from an acute psychotic episode found similar results (Rosenheim, Tecucianu, & Dimitrovsky, 1989). The findings reported a consistent preference for non-humorous interventions than humorous interventions among all patients, regardless of age, gender, education, and diagnosis (paranoid or non-paranoid). Specifically, the non-humorous interactions were rated as being more helpful, more likely to strengthen the therapeutic relationship, and displaying more empathy and understanding. These two studies illustrate the risk of humorous interventions not being well received by clients, once more highlighting the need for therapists to be judicious in their use of humor.

Another study asked college students to rate one of three visual recordings of simulated counseling sessions containing a therapist using either no humor, empathic and supportive

(facilitative) humor, or mildly derisive or distracting (nonfacilitative) humor (Foster & Reid, 1983). The results revealed the therapists using either facilitative humor or no humor were rated as more approachable and better able to create a positive relationship than the therapists using nonfacilitative humor; however, no difference was found between the facilitative humor and no humor therapist in these areas. Additionally, no differences were found in the ratings of all three therapists when it came to the counselor's ability to help the client achieve greater self-understanding. These findings indicate that while nonfacilitative humor may have an adverse effect on some areas of treatment, facilitative humor does not appear to show any greater therapeutic benefits when compared to no humor at all.

Other research has taken the approach of analyzing recordings of genuine therapy sessions to study the effects of humorous interventions made by the therapist during the therapy process. Clinical psychologist Barbara Killinger (1987) examined audio recordings of 85 counseling sessions involving various clients and therapists from counseling centers at two universities. Remarkably, Killinger found no differences in how often humor was used by beginning versus more experienced therapists or during early versus later therapy sessions. Specially trained judges rated the degree to which therapist statements facilitated client exploration and understanding and the degree to which the statement led to a more positive appraisal of the therapist by the client. The statements from the counseling sessions included both those in which the therapist made a humorous comment and randomly selected control interactions where the therapist made a non-humorous comment. Collectively, the results revealed that the humorous statements did not appear to result in any greater therapeutic benefits than the non-humorous control statements. In fact, humorous statements made by the therapist

that elicited laughter from the client were actually found by the judges to produce significantly *less* client exploration and understanding than the non-humorous statements.

Also of note from this study is that upon further analyses of the humorous therapist statements, Killinger found that about 20 percent of the statements could be categorized as an aggressive form of humor, utilizing superiority or ridicule. However, even if the client responded somewhat negatively to the aggressive type of humor, the judges noted that the therapists were usually able to mitigate any lasting negative consequences in the session through the immediate use of a "recovery statement," which appeared to soften the impact of the humor in some way. Nevertheless, these incidents typically interrupted the current topic of discussion and led to a shift away from client self-exploration. This study serves to further emphasize the potential risks with the use of humor by therapists and the importance of mindfully assessing the usefulness of a humorous comment.

There are a number of possible reasons for the contradictory findings of the research. The results may be influenced by the fact that they fail to differentiate the different forms and uses of humor, which, as we have previously seen, can produce different effects in therapy. While some researchers made attempts to distinguish positive and negative types of humor, it is quite possible that they did not succeed in identifying the critical differences between therapeutic and nontherapeutic forms of humor (Martin, 2007). Clearly, more detailed research is needed to identify the potential benefits and risks of different types of humor in therapy. Despite any failings, the available research does point to the frequent use of humor in therapy, and therefore further research concerning the potential benefits (and risks) of humor in therapy is warranted.

CHAPTER THREE

Discussion

Recommendation of Therapeutic Humor

Why therapeutic humor?

The surge of humor research that has emerged over the past twenty-five years indicates a growing interest in the psychology of humor, as well as its therapeutic applications. Because humor is universally experienced, research examining the methods, theories, and empirical findings exploring the implications of humor for mental health is particularly important.

Kuhlman (1984) advocates for the use of therapeutic humor stating, "Humor can serve as a potent force in change processes and has a place within the psychotherapeutic relationship as it does in all other forms of human relationships (p. 2)." Fundamentally, humor can be viewed as a type of interpersonal communication that can be used for a variety of purposes, including enhancing not only social relationships but therapeutic ones as well.

Humor often makes an appearance during psychotherapy. Franzini (2000) found that 98% of the practicing behavior therapists in his study endorsed the use of humor in therapy, usually in order to establish rapport, to highlight a client's illogical thinking patterns, and to share an emotional experience with the client. Franzini credits Larry Ventis (1987) for identifying additional functions humor can play in therapy summarizing, "It can be used to compensate for inadequate levels of relaxation within systematic desensitization, it can promote self-efficacy in aiding the client in coping with previously difficult situations, and it can facilitate assertion training by reducing clients' fears while also teaching appropriate expressions of feelings in angry individuals (p.173)." In these instances, humor is not used simply for a laugh, but instead for facilitating therapy. Given the potential therapeutic benefits of humor, it seems sensible to

shed light on the existing research, as well as to advocate for more empirical research investigating the therapeutic benefits of humor in the future.

As previously mentioned, humor can be used to establish rapport with clients. It can work to reduce tension and help to put an anxious or excessively nervous client at ease. Furthermore, humor can humanize the therapist and challenge the stereotype of the therapist as an omniscient figure. Laughing together may increase a sense of cohesion and help promote intimacy within the relationship. A skillfully timed humorous comment by the therapist may often be a way to express empathic understanding to the client while also concisely capturing ironic aspects of their experience.

Research suggests that clients are much more likely to instigate humor than therapists, and that laughter is more likely to result in both the therapist and client in response to client humor (Marci et al., 2004). Humor may also serve as an indicator for the therapist that leads to a more accurate understanding of the client. By taking note of a client's use of humor, therapists may be able to gain valuable insight into a client's perceptions, thoughts, assumptions, and feelings (Martin, 2007). Client humor may also serve as a barometer, allowing therapists to gauge a client's mental status, level of functioning, and progress in therapy. For example, if a client has been chronically depressed, the emergence of client humor in session may indicate a shift in the client's way of thinking. Furthermore, the presence or absence of client humor may allude to how a client is feeling. For instance, a client that uses extremely excessive humor or no humor at all may be feeling overwhelmed. Humor can also lead to a more accurate understanding of a therapist's own feelings about the client. If therapists find themselves using humor excessively or avoiding it completely with a client, they should consider the possibility of

countertransference feelings (Gelkopf & Kreitler, 1996). Perhaps it is indicative of feelings about the client of which they are unaware.

Humor may also act therapeutically to help clients gain new insights and explore new points of view. The incongruous nature of humor, which allows for seemingly incompatible ideas to be perceived at once, seems to be the perfect underpinning for helping a client develop new ways of thinking. When used appropriately by the therapist, humor may also help clients gain perspective and proportion. For example, by gently highlighting distorted thoughts and assumptions of the client with humor, perhaps the therapist can help the client in recognizing problems in their life as not as bad as they seem. As work in therapy advances and clients become more aware of their automatic assumptions and attitudes, clients may view these experiences as humorous. The spontaneous laughter that results, especially when the therapist joins in, may serve to positively reinforce and strengthen their new outlook on life.

As previously discussed, the existing literature suggests humor may also serve as a way to reduce emotional distress. Certainly, humor can also serve this function during therapy. By modeling a healthy sense of humor, as well as encouraging a humorous outlook in the client, therapists can help clients regulate their emotions and, in turn, reduce feelings of distress and increase feelings of well-being. This may also lead to the modification of dysfunctional behavior within the client. Albert Ellis (1977) also asserted that humor can be used therapeutically to help clients accept their own imperfections, adopt a more tolerant view of life, and learn to endure the limitations and uncertainties that are inevitably part of living. To summarize, humor appears to be an important and effective communication skill, one which can be used to facilitate the goals of therapy when used judiciously by the therapist.

Caveats of Therapeutic Humor. Even the strongest advocates of therapeutic humor are willing to concede that it must be used judiciously and cautiously. For instance, Fry (2001), one of the most ardent advocates of humor as a therapeutic intervention, conceded that in some instances it has the potential to be detrimental. Salameh (1987), who has written extensively to promote the use of humor in therapy, also wrote of instances in which therapeutic humor can be harmful. Certainly all therapists would agree with Saper's assertion that any humor which "humiliates, deprecates, or undermines the self-esteem, intelligence, or well-being of a client" is improper (Saper, 1987, p. 366).

Clearly, the literature indicates that the use of humor in therapy is fraught with potential difficulties, and needs to be approached and used with great sensitivity. Like any other form of communication, humor can be used either effectively or ineffectively in a therapeutic setting. In some instances, it can be used in an empathetic, caring, and genuine manner as a way to further the therapeutic relationship while encouraging client insight and exploration. In other instances, it can be used improperly in either a mild way that distracts and interferes with the therapeutic process or a more reprehensible way that belittles the client in order to meet the therapist's own needs at the client's expense. Because of this, perhaps it is best to view the ability to use humor in an appropriate and effective way as a "type of social competence that novice therapists naturally possess to varying degrees (Martin, 2007, p.349)." The ability to use humor therapeutically is a competency that must be carefully developed and cultivated by beginning therapists, just as they learn other clinical skills while in training.

Before implementing the strategic use humor in session, the therapist should consider whether it has an appropriate place in the therapy. There is always a risk that humor will not be well-received and a client will interpret humor as the therapist making fun of them. Patients who

have often felt misunderstood or dismissed by authority figures may be particularly sensitive to any humor that could be seen as criticism. Practitioners who use humor to identify or highlight thought distortions risk the possibility that clients may feel personally attacked instead of perceiving the use of humor as an attack on their irrational beliefs. Some clients may find it difficult to accept the therapist in a humorous role, and this should be considered as well (Saper, 1987). Humor has the potential to create an imbalance in the therapeutic relationship, obstruct effective communication, and create negative feelings in clients.

Humor should be carefully introduced to clients, with the therapist paying close attention to how it is received. Therapists should attempt to assess the personality of the client and gauge their preferences for humor. Dewane (1978) specifically cautions that paranoid or psychotic patients may find humor threatening. Additionally, patients with cognitive deficits may misinterpret humor or fail to grasp the greater meaning of it. Therapists must also tread lightly around clients who use humor excessively to devalue and avoid their problems, being careful not to reinforce this humor and, in turn, reinforce the avoidant behavior. Although establishing a strong relationship with a client is paramount regardless of whether or not humor is used, it should be noted that good rapport is important for humor as well. The effects of humor on the client can be unpredictable, so practitioners should use it with specific intention and caution.

Therapists should never make use of humor for their own personal gratification. Making use of humor solely with the purpose of adding comic relief may not serve to facilitate the therapeutic process. When used incorrectly, humor can be used as a thinly veiled means to criticize or even tyrannize the client. Caution must be taken when using humor to avoid scapegoating the client. Practitioners should be careful their use of humor does not mask any hostility or anger towards the client.

Conclusion

Rather than contradict each other, when taken as a whole the traditional theoretical approaches to humor seem to supplement each other nicely to enhance our understanding of humor. From the established theories some basic conclusions can be drawn. Morreall (2009) derives four insights about humor from these theories:

First, humor is a cognitive phenomenon-- it involves perceptions, thoughts, mental patterns, and expectations. Secondly, humor involves a change of cognitive state. Thirdly, that cognitive change is sudden. And fourthly, amusement is pleasurable.

Humor is a playful act in which we suspend our belief in practicalities, conventions, and logic. Primarily, it is social activity that has the power to influence our relationships. Humor typically involves a sudden cognitive shift, and enjoyment of this reversal of expectations is often accompanied and expressed by laughter. The laughter that accompanies this playful disengagement also serves to signal to others that they can relax and enjoy the humor too.

Generally speaking, humor does not appear to be strictly healthy or unhealthy. While some forms of humor enhance psychological well-being, others have the power to diminish it. Whether or not humor has a positive impact on mental health seems to depend largely on the way humor is used in a person's daily life. When used as a coping mechanism, humor can enhance feelings of self-esteem and emotional well-being. Humor can also be used to initiate and maintain satisfying relationships with others; however, if humor is used to temporarily boost one's emotions at the expense of others through the use of sarcasm, teasing, or other forms of destructive humor, it can lead to interpersonal difficulties and feelings of alienation from others. Likewise, if humor is used at one's own expense in order to fit in with a group, it may result in

temporary feelings of well-being despite leading to less healthy emotional functioning in the long term.

Overall, a sense of humor appears to be yet another component of mental health. Those who are psychologically well-adjusted with meaningful relationships are more apt to engage in humor that serves to enhance their relationships and their own sense of well-being. On the other hand, individuals who are less well-adjusted with an aggressive personality and lower self-esteem are prone to express their aggression and pessimism by using humor to manipulate, humiliate, or control others, or in an attempt to shield their true feelings from others. Of course, as no one is entirely psychologically healthy nor entirely unhealthy, it seems safe to assume that most people utilize humor in all of these ways to some degree or another, depending on the situation and context. Perhaps, at this point, humor is best viewed as a social skill that has the power to be used for both positive and negative purposes.

CHAPTER FOUR

Suggestions for Future Research

Any new therapeutic treatment or procedure must be verified empirically, and its efficacy must be measured by controlled research; the therapeutic use of humor is no exception. Because many potential positive uses of humor have been proposed, as seen in the review of the literature, there is now a legion of empirical questions available for investigation by controlled research. The existing research on the topic suggests there is still a gap between the enthusiasm of humor advocates and the scientific evidence to back it up. The spontaneous and creative nature of humor makes it an extremely hard topic to measure with objectified research or questionnaires. Author E.B. White encapsulated this idea by saying, "Explaining humor is a lot like dissecting a frog. You learn a lot in the process, but in the end you kill it (Morreall, 2009)."

Only a limited number of studies have explored the interpersonal context in which humor is used as a coping mechanism. Future investigations could research the benefits of different styles of humor with different types of stressors. Are certain kinds of humor more effective in dealing with certain situations? Additionally, future research could study the effects of humor when it is initiated in conversation by the person who is in distress versus when it is introduced by the person giving social support. In this scenario, when is humor more effective in stress reduction?

Another question about the interpersonal aspects of humor that deserves further attention is whether a person is able to change or modify their sense of humor. While existing studies describe facilitative and nonfacilitative humor styles, it would be interesting to investigate whether a person can change their dominant style of humor. Although humor organizations encourage people to increase the amount of their humor interactions, there seems to be little

research looking at just how to go about this. Future research could examine the degree to which increasing humor use is possible, as well as the degree to which it is possible to improve the quality of a person's humor style. After this is determined, perhaps research should attempt to determine what type of therapeutic intervention is most effective in bringing about these changes.

A small number of published articles explicitly address humor as it relates to therapy.

Undoubtedly, more empirical research is warranted to investigate the potential risks and benefits of humor in therapy in more detail. In the existing literature, whether humor is helpful or harmful (or a bit of both) is simply not clear. Additionally, further research is needed to determine which uses of humor are beneficial or detrimental with which types of clients and for what kinds of problems. For example, it is commonly thought that humor can help a client realize their own thought distortions, but research that demonstrated this claim would be beneficial. A shortcoming of many of the studies looking at humor in therapy is that they do not make a distinction between facilitative and nonfacilitative uses of humor before they draw conclusions.

Salameh (1987) created a rating scale for evaluating the appropriateness of the use of humor used by the therapist in therapy sessions. He uses a five-point rating scale ranging from "destructive uses of humor" (Level 1), which includes sarcastic, vindictive humor that results in hurt and distrust in the client, to "outstandingly helpful humor" (Level 5), which describes humor that is used spontaneously, communicates understanding of the client, and facilitates growth and change processes within the client. This rating scale has not yet been evaluated for reliability and validity; subsequent research could test this scale. It is possible that after such research occurs, the scale could be helpful in investigating therapeutic humor in future research.

Humor appears to be relevant and applicable within nearly all theoretical approaches to therapy, ranging from analytically-oriented practitioners to those who are cognitive behaviorally based. Franzini (2001) advocates for the development of a formal humor training course that would be open to all therapists, regardless of their theoretical orientation. Once research has learned more about how humor works and the cognitive, emotional, and social functions that it serves, it would be beneficial to develop a standardized training program, which would insure that practitioners are properly trained in the use of humor in therapy. More empirical research should be conducted on both the basic processes and functions of humor, as well as its therapeutic applications, likely leading to interesting and helpful discoveries.

References

- Abel, M.H. (2002). Humor, stress, and coping strategies. *Humor: International Journal of Humor Research*, 15(4), 365-381.
- Adams, E.R., & McGuire, F.A. (1986). Is laughter the best medicine? A study of the effects of humor on perceived pain and affect. *Activities, Adaptation, & Aging*, 8(3-4), 157-175.
- Allport, G.W. (1950). The individual and his religion. New York: Macmillan.
- Association for Applied and Therapeutic Humor. (2000). Retrieved July 04, 2016, from http://www.aath.org/general-information
- Averill, J.R. (1969). Autonomic response patterns during sadness and mirth. *Psychophysiology*, 5, 399-414.
- Berger, A.A. (1995). *Blind men and elephants: Perspectives on humor*. New Brunswick, NG: Transaction Publishers.
- Bergmann, M.S. (1999). The psychoanalysis of humor and humor in psychoanalysis. In J.W. Barron (Ed.), *Humor and psyche: Psychoanalytic perspectives* (pp. 11-30). Hillsdale, NJ: The Analytic Press.
- Berlyne, D.E. (1960). Conflict, arousal, and curiosity. New York: NY: McGraw-Hill.
- Berlyne, D.E. (1969). Laughter, humor, and play. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (2nd ed., Vol. 3, pp. 795-852). Reading, MA: Addison-Wesley.
- Berlyne, D.E. (1972). Humor and its kin. In J.H. Goldstein & P.E. McGhee (Eds.), *The psychology of humor: Theoretical perspectives and empirical issues* (pp. 43-60). New York: Academic Press.

- Bippus, A.M. (2000). Making sense of humor in young romantic relationships: Understanding partners' perceptions. *Humor: International Journal of Humor Research*, *13*(4), 395-417.
- Borcherdt, B. (2002). Humor and its contributions to mental health. *Journal of Rational- Emotive & Cognitive Behavior Therapy*, 20(3-4), 247-257.
- Brownell, H. H., Michel, D., Powelson, J., & Gardner, H. (1983). Surprise but not coherence: Sensitivity to verbal humor in right-hemisphere patients. *Brain and Language*, 18(1), 20-27.
- Cantor, J.R. (1976). What is funny to whom? The role of gender. *Journal of Communication*, 26(3), 164-172.
- Carstensen, L.L., Gottman, J.M., & Levenson, R.W. (1995). Emotional behavior in long term marriage. *Psychology and Aging*, *10*(1), 140-149.
- Carver, C.S., Pozo, C., Harris, S.D., Noriega, V., Scheier, M.F., Robinson, D.S., et al. (1993).

 How coping mediates the effect of optimism on distress: A study of women with early stage breast cancer. *Journal of Personality & Social Psychology*, 65(2), 375-390.
- Casadonte, D. (2003). A note on the neuro-mathematics of laughter. *Humor: International Journal of Humor Research*, 16(2), 133-156.
- Chapman, A.J. (1976). Social aspect of humorous laughter. In A.J. Chapman & H.C. Foot (Eds.),

 *Humour and laughter: Theory, research, and applications (pp. 155-185). London: John

 Wiley & Sons.
- Culver, J.L., Arena, P.L., Wimberly, S.R., Antoni, M.H., & Carver, C.S. (2004). Coping among African-American, Hispanic, and non-Hispanic White women recently treated for early stage breast cancer. *Psychology & Health*, *19*(2), 157-166.
- Davidson, I.F., & Brown, W.I. (1989). Using humour in counselling mentally retarded

- clients: A preliminary study. *International Journal for the Advancement of Counselling*, 12, 93-104.
- Dewane, C.M. (1978). Humor in therapy. *Social Work*, 23, 508-509.
- Dienstbier, R.A. (1995). The impact of humor on energy, tension, task choices, and attributions: Exploring hypotheses from toughness theory. *Motivation & Emotion*, 19(4), 255-267.
- Dixon, N. F. (1980). Humor: A cognitive alternative to stress? (I. G. Sarason & C. D. Spielberger, Eds.). *Stress and Anxiety*, 7, 281-289.
- Doris, P. (2004). The humor styles questionnaire: Investigating the role of humor in psychological well-being. Unpublished doctoral dissertation, University of Western Ontario, London, Ontario.
- Dozois, D. A., Martin, R. A., & Faulkner, B. (2013). Early maladaptive schemas, styles of humor and aggression. *Humor: International Journal Of Humor Research*, 26(1), 97-116. doi:10.1515/humor-2013-0006
- Dziegielewski, S. F., Jacinto, G. A., Laudadio, A., & Legg-Rodriguez, L.. (2003).

 Humor: An Essential Communication Tool in Therapy. *International Journal of Mental Health*, 32(3), 74–90. Retrieved from http://www.jstor.org/stable/41345062
- Ellis, A. (1977). Fun as psychotherapy. *Rational Living*. 12(1), 2-6.
- Farrelly, F., & Brandsma, J. (1974). *Provocative therapy*. Cupertino, CA: Meta Publications.
- Farrelly, F., & Lynch, M. (1987). Humor in provocative therapy. In W.F. Fry & W.A.

 Salameh (Eds.), *Handbook of humor and psychotherapy: Advances in the clinical use of humor* (pp. 81-106). Sarasota, FL: Professional Resource Exchange.

- Foley, E., Matheis, R., & Schaefer, C. (2002). Effect of forced laughter on mood.

 *Psychological Reports, 90(1), 184.
- Ford, C.V., & Spaulding, R.C. (1973). The Pueblo incident: A comparison of factors related to coping with extreme stress. *Archives of General Psychiatry*. 29(3), 340-343.
- Foster, J.A., & Reid, J. (1983). Humor and its relationship to students' assessments of the counsellor. *Canadian Counsellor*, *17*(3), 124-129.
- Frankl, V.E. (1960). Paradoxical intention: A logotherapeutic technique. *American Journal of Psychotherapy*, *14*, 520-535.
- Frankl, V. E. (1975). Paradoxical intention and dereflection. *Psychotherapy: Theory, Research, & Practice, 12*(3), 226-237. http://dx.doi.org/10.1037/h0086434
- Frankl, V.E. (1984). Man's search for meaning. New York: Washington Square Press.
- Franzini, L.R. (2000). Humor in behavior therapy. Behavior Therapist, 23(2), 25-29, 41.
- Franzini, L.R. (2001). Humor in therapy: The case for training therapists in its uses and risks. *Journal of General Psychology*, *128*(2), 170-193.
- Freud, S. (1928). Humour. *International Journal of Psychoanalysis*, 9, 1-6. Retrieved April 15, 2015, from http://www.scribd.com/doc/34515345/Sigmund-Freud-Humor-1927#scribd
- Freud, S. (1960 [1905]). *Jokes and their relation to the unconscious*. New York City, New York: W. W. Norton & Company.
- Fry, P.S. (1995). Perfectionism, humor, and optimism as moderators of health outcomes and determinants of coping styles of women executives. *Genetic, Social, & General Psychology Monographs*, 121(2), 211-245.
- Fry. W.F. (2001). Preface. In W.A. Salameh & W.F. Fry, Jr. (Eds), Humor and wellness in

- clinical intervention. Westport, CT: Praeger.
- Gelkopf, M., & Kreitler, S. (1996). Is humor only fun, an alternative cure or magic: The cognitive therapeutic potential of humor. *Journal of Cognitive Psychotherapy*, *10*(4), 235-254.
- Godkewitsch, M. (1976). Physiological and verbal indices of arousal in rated humour. In A.J.

 Chapman & H.C. Foot (Eds.), *Humour and laughter: Theory, research, and applications*(pp.117-138). London: John Wiley & Sons.
- Goldstein, J.H., Harman, J., McGhee, P.E., & Karasik, R. (1975). Test of an information-processing model of humor: Physiological response changes during problem-and riddle-solving. *Journal of General Psychology*, 92(1), 59-68.
- Gottman, J.M. (1994). What predicts divorce?: The relationship between marital processes and marital outcomes. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gruner, C.R. (1978). *Understanding laughter: The workings of wit and humor*. Chicago: Nelson-Hall.
- Gruner, C.R. (1997). *The game of humor: A comprehensive theory of why we laugh.* New Brunswick, NJ: Transaction Publishers.
- Hampes, W.P. (1992). Relation between intimacy and humor. *Psychological Reports*, 71(1), 127-130.
- Hampes, W.P. (1994). Relation between intimacy and the Multidimensional Sense of Humor Scale. *Psychological Reports*, 74(3), 1360-1362.
- Hampes, W.P. (1999). The relationship between humor and trust. *Humor: International Journal of Humor Research*, 12(3), 253-259.
- Hampes, W.P. (2001). Relation between humor and empathic concern. *Psychological Reports*,

- 88(1), 241-244.
- Hebb, D.O. (1955). Drives and the C.N.S. (Conceptual Nervous System). *Psychological Review*, 62, 243-254.
- Henman, L.D. (2001). Humor as a coping mechanism: Lessons from POWs. *Humor: International Journal of Humor Research*, 14(1), 83-94.
- Holland, N.N. (1982). Laughing: A psychology of humor. Ithaca, NY: Cornell University Press.
- Jones, J.M., & Harris, P.E. (1971). Psychophysiological correlates of cartoon humor appreciation. *Proceedings of the Annual Convention of the American Psychological Association*, 6, 381-382.
- Killinger, B. (1987). Humor in psychotherapy: A shift to a new perspective. In W.F. Fry & W.A. Salameh (Eds.), *Handbook of humor and psychotherapy: Advances in the clinical use of humor* (pp. 21-40). Sarasota, FL: Professional Resource Exchange.
- Knox, I. (1951). Towards a philosophy of humor. *Journal of Philosophy*, 48, 541-548.
- Koestler, A. (1964). The act of creation. London: Hutchinson.
- Kuhlman, T.L. (1984). *Humor and psychotherapy*. Homewood, IL: Dow Jones-Irwin Dorsey Professional Books.
- Kuiper, N.A. & Martin, R.A. (1993). Humor and self-concept. *Humor: International Journal of Humor Research*, 6(3), 251-270.
- Kuiper, N.A., McKenzie, S.D. & Belanger, K.A. (1995). Cognitive appraisals and individual differences in sense of humor: Motivational and affective implications.
 Personality & Individual Differences. 19(3). 359-372.
- La Fave, L. (1972). Humor judgments as a function of reference groups and identification classes. In J.H. Goldstein & P.E. McGhee (Eds.), *The psychology of humor: Theoretical*

- perspectives and empirical issues (pp.195-210). New York: Academic Press.
- Langevin, R. & Day, H.I. (1972). Physiological correlates of humor. In J.H. Goldstein & P.E. McGhee (Eds.), *The psychology of humor: Theoretical perspectives and empirical issues* (pp. 129-142). New York: Academic Press.
- Lazarus, R.S., & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer.
- Lefcourt, H.M. (2001). *Humor: The psychology of living buoyantly*. New York: Kluwer Academic.
- Lefcourt, H.M., & Martin, R.A. (1986). *Humor and life stress: Antidote to adversity*. New York: Springer-Verlag.
- Madanes, C. (1987). Humor in strategic family therapy. In W.F. Fry & W.A. Salameh (Eds.), *Handbook of humor and psychotherapy: Advances in the clinical use of humor* (pp. 241-264). Sarasota, FL: Professional Resource Exchange.
- Marci, C.D., Moran, E.K., & Orr, S.P. (2004). Physiologic evidence for the interpersonal role of laughter during psychotherapy. *Journal of Nervous & Mental Disease*, 192(10), 689-695.
- Martens, W.H. (2004). Therapeutic use of humor in antisocial personalities. *Journal of Contemporary Psychotherapy*, *34*(4), 351-361.
- Martin, R.A. (2003). Sense of humor. In S.J. Lopez & C.R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 313-326). Washington, DC:

 American Psychological Association.
- Martin, R. A. (2007). *The Psychology of Humor: An Integrative Approach*. Burlington, MA: Elsevier Academic Press.
- Martin, R.A., & Dutrizac, G. (2004). Humor styles, social skills, and quality of interactions with

- close others: A prospective daily diary study. Paper presented at the Annual Conference of the International Society for Humor Studies, Dijon, France.
- Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal of Research in Personality*, *37*, 48-75.
- McDougall, W. (1922). Why do we laugh? Scribners, 71, 359-363.
- McGhee, P.E. (1983). The role of arousal and hemispheric lateralization in humor. In P.E. McGhee & J.H. Goldstein (Eds.), *Handbook of humor research*, *Vol. 1: Basic issues* (pp.13-37). New York: Springer-Verlag.
- Middleton, R. (1959). Negro and white reactions to racial humor. Sociometry, 22, 175-183.
- Mindess, H. (1971). Laughter and liberation. Los Angeles: Nash Publishing.
- Moran, C.C. (1996). Short-term mood change, perceived funniness, and the effect of humor stimuli. *Behavioral Medicine*, 22(1), 32-38.
- Morreall, J. (Ed.). (1987). *The philosophy of laughter and humor*. Albany, NY: State University of New York Press.
- Morreall, J. (2009). Humor as cognitive play [Abstract]. *Journal of Literary Theory*, *3*(2), 393-395. doi:10.1515/JLT.2009.014
- Neuhoff, C.C., & Schaefer, C. (2002). Effects of laughing, smiling, and howling on mood. *Psychological Reports*, *91*(3, Pt 2), 1079-1080.
- O'Connell, W. E. (2012). Natural high therapy. In R. Herink & P. R. Herink (Eds.), *The Psychotherapy Guidebook*. Martinsville, IN: Fideli Publishing. Retrieved May 1, 2016, from http://freepsychotherapybooks.org/all-books/product/881-Natural_High_Therapy
- Prerost, F.J. (1988). Use of humor and guided imagery in therapy to alleviate stress.

- Journal of Mental Health Counseling, 10(1), 16-22.
- Raskin, V. (1985). Semantic mechanisms of humor. Dordrecht: D. Reidel.
- Redlich, F.C., Levine, J., & Sohler, T.P. (1951). A Mirth Response Test: preliminary report on a psychodiagnostic technique utilizing dynamics of humor. *American Journal of Orthopsychiatry*, 21. 717-734.
- Reis, H.T. (2001). Relationship experiences and emotional well-being. In C.D. Ryff & B.H. Singer (Eds.), *Emotion, social relationships, and health* (pp. 57-86). New York: Oxford University Press.
- Ritchie, G. (2004). The linguistic analysis of jokes. London: Routledge.
- Roeckelein, J.E. (2002). *The psychology of humor: A reference guide and annotated bibliography*. Westport, CT: Greenwood Press.
- Rosenheim, E., & Golan, G. (1986). Patients' reactions to humorous interventions in psychotherapy. *American Journal of Psychotherapy*, 40(1), 110-124.
- Rosenheim, E., Tecucianu, F., & Dimitrovsky, L. (1989). Schizophrenics' appreciation of humorous therapeutic interventions. *Humor: International Journal of Humor Research*, 2(2), 141-152.
- Rotton, J. & Shats, M. (1996). Effects of state humor, expectancies, and choice on postsurgical mood and self-medication: A field experiment. *Journal of Applied Social Psychology*, 26(20), 1775-1794.
- Rust, J., & Goldstein, J. (1989). Humor in marital adjustment. *Humor: International Journal of Humor Research*, 2(3), 217-223.
- Rutherford, K. (1994). Humor in psychotherapy. *Individual Psychology*, 50(2), 207-222.
- Sanderson, C.A. (2004). *Health psychology*. Hoboken, NJ: Wiley.

- Saper, B. (1987). Humor in psychotherapy: Is it good or bad for client? *Professional Psychology:* Research & Practice, 18(4), 360-367.
- Saroglou, V. & Scariot, C. (2002). Humor Styles Questionnaire: Personality and educational correlates in Belgian high school and college students. *European Journal of Personality*, *16*(1), 43-54.
- Shiota, M.N., Campos, B., Keltner, D., & Hertenstein, M.J. (2004). Positive emotion and the regulation of interpersonal relationships. In P. Philippot & R.S. Feldman (Eds.), *The regulation of emotion* (pp. 127-155). Mahwah, NJ: Lawrence Erlbaum Associates.
- Shultz, T.R. (1972). The role of incongruity and resolution in children's appreciation of cartoon humor. *Journal of Experimental Child Psychology*, *13*(3), 456-477.
- Shultz, T.R. (1976). A cognitive-developmental analysis of humour. In A.J. Chapman & H.C. Foot (Eds.), *Humor and laughter: Theory, research, and applications* (pp.11-36). London: John Wiley & Sons.
- Smith, R.E. (1973). The use of humor in the counterconditioning of anger responses: A case study. *Behavior Therapy*, *4*(4), 576-580.
- Strack, F., Martin, L.L., & Stepper, S. (1988). Inhibiting and facilitating conditions of the human smile: A nonobtrusive test of the facial feedback hypothesis. *Journal of Personality & Social Psychology*, *54*(5), 768-777.
- Suls, J.M. (1972). A two-stage model for the appreciation of jokes and cartoons: An information-processing analysis. In J.H. Goldstein & P.E. McGhee (Eds.), *The psychology of humor:Theoretical perspectives and empirical issues* (pp. 81-100). New York: Academic Press.
- Suls, J.M. (1983). Cognitive processes in humor appreciation. In P.E. McGhee & J.H. Goldstein

- (Eds.), *Handbook of humor research, Vol. 1:Basic issues* (pp.39-57). New York: Springer-Verlag.
- Surkis, A.A. (1993). Humor in relation to obsessive-compulsive processes. In W.F. Fry & W.A. Salameh (Eds.), *Advances in humor and psychotherapy* (pp. 121-141). Sarasota, FL: Professional Resource Press.
- Szabo, A. (2003). The acute effects of humor and exercise on mood and anxiety. *Journal of Leisure Research*, 35(2), 152-162.
- Szabo, A., Ainsworth, S.E., & Danks, P.K. (2005). Experimental comparison of the psychological benefits of aerobic exercise, humor, and music. *Humor: International Journal of Humor Research*, 18(3), 235-246.
- Ullmann, L.P., & Lim, D.T. (1962). Case history material as a source of the identification of patterns of response to emotional stimuli in a study of humor. *Journal of Consulting Psychology*, 26(3), 221-225.
- Veatch, T.C. (1998). A theory of humor. *Humor: International Journal of Humor Research*, 11, 161-215.
- Ventis, W.L. (1973). Case history: The use of laughter as an alternative response in systematic desensitization. *Behavior Therapy*, 4(1), 120-122.
- Ventis, W.L., Higbee, G., & Murdock, S.A. (2001). Using humor in systematic desensitization to reduce fear. *Journal of General Psychology*, 128(2), 241-253.
- Vilaythong, A.P., Arnau, R.C., Rosen, D.H., & Mascaro, N. (2003). Humor and hope:

 Can humor increase hope? *Humor: International Journal of Humor Research*, 16(1), 79-89.
- Ward, J.R. (2004). Humor and its association with friendship quality. Unpublished Masters

- thesis, University of Western Ontario, London, Ontario.
- Wickberg, D. (1998). *The senses of humor: Self and laughter in modern America*. Ithaca, New York: Cornell University Press.
- Witztum, E., Briskin, S., & Lerner, V. (1999). The use of humor with chronic schizophrenic patients. *Journal of Contemporary Psychotherapy*, 29(3), 223-234.
- Zillmann, D., & Cantor, J.R. (1976). A disposition theory of humour and mirth. In A.J. Chapman & H.C. Foot (Eds.), *Humor and laughter: Theory, research and applications* (pp. 93-115). London: John Wiley & Sons.
- Ziv, A. (1988). Humor's role in married life. *Humor: International Journal of Humor Research*, 1(3), 223-229.
- Ziv, A., & Gadish, O. (1989). Humor and marital satisfaction. *Journal of Social Psychology*, 129(6), 759-768.

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Clinical Experience

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2015-2016	Pate Rehabilitation for Stroke and Traumatic Brain Injury
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