

## The Psychological Benefits of Humor

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In *Men and Their Religion: Honor, Hope, and Humor* (2002), I proposed that men have two primary ways of being religious—the religion of honor and the religion of hope. I also proposed that because these two religions do not always have their desired outcomes, men have developed a third way of being religious, the religion of humor. In *A Time To Laugh* (2005) I have expanded on my claim in *Men and Their Religion* that if men have three religions—honor, hope, and humor—the greatest of these is humor. In the course of doing the necessary research for a book on humor, I acquired and read a few books and a host of articles that explored the psychological benefits of humor. While I did not report on these studies in the book, I believe they are relevant to the assumption that a religion will have psychological benefits for those who embrace it. This article therefore provides a review of empirical studies of the psychological benefits of humor in order to answer the question whether a religion of humor is likely to have psychological benefits and, if so, what these might be.

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The central question that this article addresses is whether humor has psychological benefits and, if so, what are they? While many people assume that humor is beneficial, and that one of its benefits is likely to be its psychological effects, the attempt to demonstrate the truth of this assumption is relatively recent. There are not many empirical studies on the subject of the psychological benefits of humor before 1970. This may be due in part to the very assumption that humor's psychological benefits are obvious to all but a few misguided nay-sayers. Thus, the attempt to prove that it has such benefits was not thought to be necessary. But it may also be due to the fact that the study of the psychological benefits of anything is a fairly recent development, and it may not be a mere coincidence that the study

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of the psychological benefits of humor emerged at roughly the same time that researchers began to investigate the psychological benefits of spirituality.

As we begin our survey of studies on the psychological benefits of humor, I feel I should forewarn readers that these studies are not particularly humorous. I spent hours reading these studies and I rarely found myself laughing or even chuckling. While their subject is humor the research studies mean business. The authors of these studies explain and defend their research methods, puzzle over results that they had not predicted or that even challenged their hypotheses, acknowledge the limitations of their studies, and call for further research. All this is standard fare, typical of psychological research reports, but it may strike the reader—as it has me—that there is some incongruity here between topic and report, and maybe there is some humor in this very incongruity. Incongruity has been the most popular theory of humor and what it is principally about for hundreds of years.

Nonetheless, these psychological studies of humor are well worth reading. In some ways, they confirm what we believe or think we know about humor. In other ways, they teach us some things about humor that we either did not know or did not think to ask about humor. The following review of this literature is necessarily selective, but it should provide the reader with a reasonably accurate picture of what the research studies tell us about the psychological benefits of humor.

## HUMOR AS MODERATOR OF LIFE STRESS

The most extensively researched issue over the past several decades is the role of humor in moderating life stress. The originators of this line of research are Herbert M. Lefcourt, a psychology professor at the University of Waterloo, Ontario, Canada, and Rod A. Martin, a psychology professor at the University of Western Ontario in London, Ontario, Canada. Over a decade prior to the publication of their major monograph, *Humor and Life Stress: Antidote to Adversity* (1986), Lefcourt had directed two doctoral dissertations on the subject of humor. But when the two students who wrote these dissertations graduated, humor research under Lefcourt's direction languished because he was more centrally engaged in research on the locus of control, a topic that has attracted great interest among empirically-oriented psychologists of religion.

A unexpected event occurred, however, that prompted Lefcourt to resume the humor studies. At his father's funeral, instead of the expected solemn occasion, "the reuniting of disparate family members from far and wide proved to be an occasion for both mirth and good will. This was not at all out of disrespect for the deceased, but was almost in his honor. He had always been one ready to make light of the grimmest circumstances, often with a joke or cliché that somehow would fit the occasion and cause others to take the situation less seriously. The humor

displayed at this funeral was very much in character with the way in which the deceased would have jested had he been there to take part" (1986, p. 1).

The authors' book begins with theoretical approaches to the study of the sense of humor, then describes their development of a sense of humor questionnaire called "The Situational Humor Response Questionnaire" (SHRQ). This questionnaire was designed to measure the propensity to smile and laugh in a variety of daily life situations. It is now widely used in humor research. It includes questions like, "If you arrived at a party and found that someone else was wearing a piece of clothing identical to yours" or "If you were eating in a restaurant with some friends and the waiter accidentally spilled a drink on you," followed by these choices:

- a. I would not have found this particularly amusing.
- b. I would have smiled occasionally.
- c. I would have smiled a lot and laughed from time to time.
- d. I would have found quite a lot to laugh about.
- e. I would have laughed heartily much of the time.

The authors also developed a "Coping Humor Scale" that includes the following seven statements to which respondents are asked to rate their degree of agreement or disagreement:

- a. I often lose my sense of humor when I'm having problems.
- b. I have often found that my problems have been greatly reduced when I tried to find something funny in them.
- c. I usually look for something comical to say when I am in tense situations.
- d. I must admit my life would probably be easier if I had more of a sense of humor.
- e. I have often felt that if I am in a situation where I have to either cry or laugh, it's better to laugh.
- f. I can usually find something to laugh or joke about even in trying situations.
- g. It has been my experience that humor is often a very effective way of coping with problems.

The two authors then used these two instruments to assess sense of humor as a moderator of life stress. They employed a questionnaire designed for college students to establish a life stress score based on the number of stressful events the students had experienced during the preceding year and their assessment of the effect that each of these events had on their lives; and a questionnaire designed to assess each student's current mood levels, with five negative moods of tension, depression, anger, fatigue, and confusion, and one positive mood of vigor.

Their first study supported the hypothesis that humor reduces the impact of stress. Subjects with a high score on the SHRQ measure of sense of humor showed a weaker relationship between negative life events and depressed mood than did

those with a lower sense of humor score (p. 55). No gender differences were found in this initial study.

Because this initial study was based only on self-report measures of sense of humor, a second study involved an effort to obtain a more behavioral assessment of subjects' actual ability to produce humor. They were seated at a table on which a dozen or so miscellaneous objects had been placed—a tennis shoe, a drinking glass, an aspirin bottle, etc.—and were instructed to make up a three-minute comedy routine by describing the objects on the table as humorously as possible. They were rated according to the number of witty remarks they were able to produce and on their overall wittiness on a three-point scale. After analyzing the data, the authors concluded that the results “provide further evidence for the stress moderating role of humor. Individuals who demonstrated an ability to produce humor ‘on demand’ in an impromptu comedy routine showed a lower relationship between life stresses and disturbed mood than did those who were less able to produce humor in this situation” (p. 59). The correlation between humor production scores and scenes in the situational humor response questionnaire (SHRQ) also indicated that “subjects who were able to produce a humorous monologue in the laboratory also tended to report that they exhibit mirth in a wide variety of life situations” (p. 59). The authors hypothesize that the subjects who had been rated as most funny in their monologues were those who had the most practice in creating humor in their everyday lives.

In a third study, the assumption that subjects with high scores on the humor measures would also make particular use of humor as a means of coping with the stressful experiences that they encounter in their everyday lives was directly tested by assessing subjects' ability to produce humor when placed in a stressful situation. To create an experimental analogue of stress, the authors used the film *Subincision*, a film that has been found to be mildly stressful and had previously been used by another researcher in his work on stress. The assumption was that the subjects who were best able to create a witty monologue while watching this film would be those who also tend to make use of humor in real-life stressful situations. This assumption was confirmed both by independent ratings of subjects' tape-recorded monologues and by their own responses to a questionnaire they were asked to fill out after watching the film. This questionnaire included the question, “You have just attempted to make up a humorous narrative while watching what is considered to be a rather stressful film. How likely would it be for you to normally use humor in this kind of situation?” (p. 60).

Lefcourt and Martin conclude that these studies provide considerable support for the belief that humor reduces the impact of stress. They acknowledge that this is only an initial attempt to investigate a hypothesis “that has long been maintained by a large number of humor theorists, psychotherapists, and laypersons alike, namely, that a sense of humor permits one to better cope with the aversive experiences of life” (p. 63). They suggest, however, that further research is needed

“to explore the specific processes involved in the stress-buffering effects of humor, the kinds of stresses with which humor is most effective and those with which it is less appropriate, the particular aspects or types of humor that are most effective in moderating stress, and the ways in which humor of this kind develops in individuals” (p. 63). Answers to each of these questions would not only provide information specific to the stress moderating role of humor, but would also “enlarge our general understanding of the ubiquitous but still largely unexplained human phenomenon called ‘humor’” (p. 63).

In a subsequent study, Lefcourt and Martin took advantage of the fact that a young male student worked for a community service organization that chauffeured severely handicapped persons around their community. It was through his contacts and observations of his clients that they were able to develop a study of the role played by a sense of humor in coping with physical disability. There were thirty disabled persons, 16 women and 14 men ranging in age from 18 to 78, in the study. There were 15 chronic cases whose disabilities were essentially lifelong and 15 acute cases involving disabilities acquired in adolescence or adulthood a minimum of three years prior to the study. The level of disability was severe in all cases, with most subjects being paraplegic, quadriplegic, or, in the case of those with cerebral palsy, noticeably disabled. Potential subjects were asked about their willingness to participate in the study when they were being driven to their destination, and most expressed immediate interest in being involved. The interviews which formed the basis of this study were close to two hours in duration.

The first part of the interview involved orally administered scales and the second part consisted of a more open-ended set of questions. The scales employed in the first part were a locus of control scale and a disability self-concept scale. The first of these scales includes forced choice questions like:

Item 10

- (a) Sometimes I impulsively do things which at other times I definitely would not let myself do.
- (b) I find that I can keep my impulses in control.

Item 38.

- (a) Self-regulation of one's behavior is always possible.
- (b) I frequently find that when certain things happen to me I cannot restrain my reaction.

A high score on this scale indicates a disbelief in one's ability to control one's own behavior. The second scale includes statements to which the respondent indicates agreement or disagreement on a five point scale. Sample items are:

Item 2. People look at me as if I were unusual.

Item 3. People seem to feel sorry for me.

Item 4. There is little future for a person who has been paralyzed.

Item 5. It is unusual for a non-disabled person to be in love with a disabled person.

This scale essentially examines self-concept from two points of view, one's view of one's own personal worth, and one's view of how one's personal worth is perceived by others. In terms of one's own self-perceptions, statements reflect personal self-confidence, the sense of personal adequacy, and beliefs about one's closeness to others. Regarding one's view of how one is perceived by others, the scale explores social acceptance, appearance to others, and relationships with others.

The second part of the interview involved a series of open-ended questions, and the responses were tape-recorded. In this segment of the interview, subjects were provided with the opportunity to discuss their feelings about their disabilities, about how they deal with "normal" persons, about their everyday activities, and about how they are perceived by others. These questions were designed to reveal how subjects view themselves in comparison to nondisabled persons (the issue of equality), their possible feelings of bitterness about being disabled, their feelings of vulnerability about their disability and openness to discussing them, their involvement in the community or in activities, their vigor and vitality, and their awareness and understanding of nondisabled persons' views concerning disabled persons. Their answers to these questions were rated by the interviewer and one of his coworkers in the community service organization. The six factors (sense of equality, bitterness, openness, involvement, vigor, and awareness) were rated on scales of 1 to 10 and the total score was the sum of the five positive factors minus the one negative factor (bitterness).

Prior to setting up the tape recorder for the interview, the investigator showed the subjects two disability-related cartoons (for example, a gallows outfitted with a ramp) and asked them what they thought of them. Their responses to each cartoon were recorded and rated on a scale of 1 to 10, with 1 indicating a complete absence of humor and 10 indicating a hearty humorous response. The scale was as follows:

1. No facial response, body rigid, verbal responses—if any—are negative.
- 2/3. Minimal smiling, no noticeable body response, no comments.
- 4/5. Soft chuckles, open smile, possible head shaking or verbal comments.
- 6/7. Soft laughter, chuckling, minimal body motions, verbal comments indicating approval.
- 8/9. Strong laughter and body motion, affirmative verbal comments.
10. Prolonged hearty laughter, marked by body movement and strong verbal affirmative statements.

The two cartoons comprised the humor-eliciting aspect of the study.

On the assumption that there is a greater chance of coming to terms with disability over time, it was hypothesized that humor, as well as self-concept, vitality, and sense of control would be associated positively with the length of

time that the disability had been endured. Persons whose disabilities occurred more recently would be expected to exhibit more distress reflected in lower self-concept, humor, etc.

The results were consistent with the earlier studies of humor and life stress. Humor was positively correlated with the disability self-concept scale and the disability self-concept interview. The relationship between humor and duration of disability was also positive, indicating that extended experience with disability is associated with more positive well-being on each measure. The one exception to these positive findings was the locus of control scale, as there were no relationships, positive or negative, between this scale and the other scales employed in the study. The research team had expected that this variable, the sense that one is able to direct one's own self, would be positively related to higher scores on the disability self-concept scale and interviews, and on the humor scores derived from the two cartoons. But they acknowledge that they were wrong in this regard, and suggest that what is more likely the case is that disabled persons have to come to terms with the very fact that they are *unable* to exercise control over themselves and their lives. Thus, their higher self-concept and humor scores are a reflection of their having accepted this fact or truth about themselves.

The authors conclude: "Humor was associated with greater vitality and positive self-concept, suggesting that there is greater acceptance and/or transcendence of their disabilities by those subjects who are able to express humor about the very state of being handicapped" (p. 119). Furthermore, the subjects who could laugh at cartoons that depicted their need for special facilities were clearly better-functioning individuals. The very fact that these persons "have impressed others as being more vital and vigorous and that they respond to questions about their own circumstances in such a manner that they are viewed as being more confident, involved, and thriving indicates that there is something very meaningful about this display of humor in response to stimuli that are so relevant to their everyday difficulties" (p. 119).

The authors conclude this study with brief anecdotal comments on two of the subjects in this study who received ratings of 10 on their humor responses to the two cartoons. One was a man who was born without arms or legs, the other was a man with a moderate case of cerebral palsy since childhood. The first man had been reared in such a way that he seemed to accept dependency without bitterness or self-denigration in those situations where help from others was necessary and unavoidable: "As an adult, he retained a live-in nursing helper who carried him through all of those everyday routines that most of us regard as private, self-regulated, and automatic. This man, therefore, experienced what to a non-crippled person would seem to be a daily round of humiliations. To him, however, being aroused, bathed, toileted, fed, etc. had become automatic, semi-private events of little immediate significance" (p. 120). What did matter to him "were his jobs, his avocations, and the fact that, in his words, 'there just aren't enough hours in a

day.' Aside from being the executive director of an important community service organization, he regularly holds forth on a local television program concerned with the ramifications of being physically handicapped." An accomplished mouth artist, he also teaches art to nondisabled as well as disabled persons: "When this highly articulate, intelligent man looked at the cartoons related to physical handicaps, he laughed heartily and rejoined with his own jokes about handicaps" (p. 121).

The other man, who could often be seen throughout his childhood riding a bicycle around the neighborhood, was difficult to understand and twisted in posture, the very epitome of victims of cerebral palsy. And yet, "as one came to know him, it was evident that he did not view himself as a pitiable victim . . . and it was evident that he had a highly developed sense of humor" (p. 121). While laughing, he would often lose some control of his body, but what was most interesting "was his lack of self-consciousness or embarrassment about his features during a conversation, an indication perhaps of his positive self-concept. In the study this young man laughed heartily, scored highly on vitality and well-being (both self-concept measures), and admitted to externality with regard to self-control" (p. 121).

How have these two men, and so many others like them, come to seem so confident and humorous in the face of such severe disabilities? The authors speculate that a possible response to the hurts and humiliations they suffered as children would have been to have become retiring and withdrawn, thus enabling them to "avoid the stares and not so subtle censure and revulsion seen in the faces of others" (p. 121). But another response, "which probably characterized both of these men, was to accept the fact that in the eyes of others, they might be odd-looking; but in their own minds, they knew that they were the equals of others, even if they suffered limitations to their autonomy. Both men had become relatively well-educated, had hopes for their futures, and seemed buoyantly optimistic, reflecting their choice to be active in the pursuit of whatever opportunities that they felt were available to them" (p. 121).

To those who might see in these descriptions of the two men "clear evidence of denial, an assumedly unhealthy defense mechanism," the authors counter that "what we most readily perceive in these cases are examples of what Freud described as humor, the highest defense mechanism. By accepting limitations as a given and thereby regarding their life ambitions as being contingent upon others' help, and not solely in their own hands, it would be hard for these handicapped persons to become overly driven or too serious and proud. To be trapped in a non-functioning body should, on the other hand, provide one with a ready access to a 'cosmic view' from which to look out upon one's own struggles and problems" (pp. 121–122). The authors are referring here to Freud's essay on humor (Freud, 1928/1963), in which he emphasized that, through humor, the ego demonstrates its refusal "to be hurt by the arrows of reality or to be compelled to suffer" (p. 265). By repudiating the possibility of suffering, humor "takes its place in the great series



of methods devised by the mind of man for evading the compulsion to suffer,” but unlike so many of these methods, humor achieves this evasion “without quitting the ground of mental sanity, as happens when other means to the same end are adopted” (p. 266).

Lefcourt and Martin suggest that how one finds humor in a predicament where the object of humor is oneself is itself a subject for further investigation. Meanwhile, they suspect, and perhaps this would be their guiding hypothesis for such future research, “that this humorous vantage point requires what Freud felt was the primary source of humor, the internalization of our parents’ encouragement of our efforts as well as gentle tolerance of our failures. Freud judged this to be one of the wisest of legacies bestowable by parents upon their children . . . . Likewise, handicapped individuals who aspire to lead something like a normal existence must be ready to forgive themselves for their failures to achieve many of their goals because their handicaps do in fact make accomplishments very difficult” (p. 122). Thus, persons who are not physically disabled and “who often forget that they are but mortal and heir to all the limitations associated with that condition, have much to learn about humor and grace from handicapped persons” (p. 122). The authors posit, in other words, a positive relationship between a humorous sense of oneself and acceptance of the limitations that are inherent in the human condition itself.

## HUMOR’S EFFECT ON DEPRESSION

The studies that Lefcourt and Martin report in their book on humor and life stress were originally published in 1983. Several studies based on their research by other researchers appeared in the late 1980s and there have been sporadic studies ever since. In an article published in 1987, Albert Porterfield (Porterfield, 1987) reported that he was unable to replicate Lefcourt and Martin’s finding that humor has a moderating effect on life stress, but he did find that humor mitigates depression. Thus, subjects with higher humor scores reported significantly less depression than did those with lower scores regardless of their life stress levels. According to Porterfield, this finding indicates “that sense of humor mitigates depression *directly*, rather than by assisting individuals to cope with stressful life events” (p. 314). The earlier finding that humor is a buffer against stressful life events cannot be dismissed, but in Porterfield’s view, his own finding, based on a much larger sample, suggests that humor is less a means of moderating stressful life-experiences and more a means of moderating depression, which itself is often caused by stressful life-experiences.

In an attempt to replicate Porterfield’s findings, however, Stephanie L. Deaner and Jasmin T. McConatha (1993) found only weak support for the idea that humor has an effect on depression and stronger support for the view that humor helps

persons cope with stressful situations. Comparison of the depression scores of the subjects of the two studies may help to explain why they found only weak and statistically insignificant support for Porterfield's finding. Porterfield's study, based on students at Oberlin College, reported very high depression scores, whereas Deaner and McConatha's study, based on students at West Chester University, reported unexpectedly low depression scores. (Parents who are reading this article may want to keep this fact in mind as they assist their teenage sons and daughters in selecting a university or college). Thus, Deaner and McConatha suggest that even though the results of their study were in the hypothesized direction, their failure to reach acceptable levels of statistical significance may have been related "to the low mean score on the depression questionnaire. Perhaps a wider range of depression scores would have yielded significant results. Researchers should focus on a wider range of depression, from nondepressed individuals to a clinically depressed population" (p. 761). For his part, Porterfield expresses some puzzlement over "the elevated depression scores" in his sample "other than to say that they are not unprecedented in the population with which I work" (p. 309).

On the other hand, Deaner and McConatha found one statistically significant correlation, and this was that an individual who was less depressed tended to use humor as a coping mechanism more than did persons who were more depressed. This may explain why Porterfield did not find support for the idea that humor helps persons cope with life stresses. That is, there may be a point where the depression is so marked that humor is unable to mediate the stresses of life. What these two studies seem to indicate, therefore, is that the relationship between humor, depression, and coping with life stresses is quite complex. In this sense, Lefcourt and Martin were on the right track when they included a questionnaire designed to assess their subjects' current mood levels. But Porterfield and Deaner and McConatha limited their studies to depression and did not explore the other negative moods of tension, anger, fatigue, and confusion.

## **MORE STUDIES ON HUMOR AS MODERATOR OF LIFE STRESS**

Since Lefcourt and Martin's groundbreaking research, others have studied the relation between humor and coping with stress. Three researchers at Tel Aviv University and the University of Haifa (Bizi, Keinan & Beit-Hallahmi, 1988) focused on 159 Israeli soldiers, aged 19–20, who were taking part in a training course for combat and defense forces. In addition to a self-report questionnaire, there was a questionnaire in which crew members evaluated one another on two kinds of humor, *productive* humor where one tells jokes and makes humorous comments and descriptions in a way that elicits smiling or laughter in others, and *reactive* humor where one mainly enjoys the jokes and humorous comments of others. There was also a company-wide peer-rating questionnaire in which each

respondent was asked to name five soldiers in his company (numbering 48–52 trainees) whom he regarded as high in humor and five whom he regarded as low in humor. The coping under stress factor was also measured by means of peer-ratings and ratings by company commanders.

The self-rating questionnaire did not support the prediction that persons higher in humor would also score higher in terms of coping under stress. The authors think this may have been due, at least in part, to the fact that there is “interpersonal variance in the degree of self-awareness which is a precondition for a valid self-report in general and concerning humor in particular” (p. 955). Also, subjects might knowingly distort their own report for various reasons, such as the desire to present themselves in a positive light, which in this case would mean presenting oneself as more humorous than one actually is.

On the other hand, the main positive result of the study was that humor, as rated by peers, was positively related to performance under stress, and this was especially true for productive, as opposed to reactive, humor. Thus, the authors conclude that “there is a positive relationship between the degree of humor behavior, specifically active humor (production), and the quality of functioning under stress” (p. 956). They suggest that further research is needed to establish the validity of theories that attempt to explain why humor may reduce stress, help personal relationships, facilitate the release of problematic feelings and thoughts, and serve as a cognitive active coping method (p. 956). In other words, they have demonstrated that a positive relationship between humor and coping under stress exists, but why it exists is not self-evident.

In an attempt to provide a more rigorous test of the hypothesis that sense of humor moderates psychological distress symptoms, especially the depression and anxiety that occur as a function of major negative life stresses, a team of researchers (Nezu, Nezu, & Blissett, 1988) studied 87 students at Fairleigh Dickinson University, using Martin and Lefcourt’s questionnaires, a life experiences survey, a depression inventory, and the trait-scale of an anxiety inventory. The prediction that humor would moderate depression scores of persons currently experiencing a major negative life stress was supported, but the results for the same prediction relating to anxiety were not supported (i.e., were statistically insignificant). These authors conclude that their study is supportive of the overall findings of the Lefcourt and Martin studies. However, the positive results relating to depression but not to anxiety require explanation. They suggest several explanations, including the possibility that people have an easier time differentiating a humor response from a depressive response than a humor response from an anxiety response. This is because humor is more easily thought of as being counter to the “sad mood” that occurs in depression. Another possibility, however, is that anxiety reactions represent *anticipatory* concerns regarding the negative consequences or outcome of a stressful event whereas a depressive mood represents the emotional response occurring *subsequent* to the experience of a negative event. This would mean

that humor is a good coping strategy when a person attempts to deal with the *actual occurrence* of a stressful experience but not with its anticipated negative consequences.

The authors of this study recommend further research geared to replicating these specific findings, and then directly testing the theories they have offered as to why depression but not anxiety was lower among those who scored higher in sense of humor. They also suggest that if humor is a moderator of stress, it should be possible to study the relationships between humor and the various psychosocial variables that have been identified as important moderators of stress. These include personal control beliefs, problem-solving ability, cognitive appraisal, and alternative perspectives. They guess that persons who use humor to cope with stress may do so as a function of their positive evaluations concerning their own self-efficacy and personal control over the outcome of consequences of the stressful experience. That is, humor may contribute to the perception of the experience as more a “challenge” than a “threat.” Or, it may be that humor produces the same or similar sorts of cognitive shifts that occur in problem-solving. And, finally, there is the likelihood that using humor in a stressful situation will attract social support whereas depressive responses, or even cathartic complaining, result in rejection by others.

This study by Nezu et al. supports Porterfield’s finding that humor has a moderating effect on the depression that may result as a consequence of a negative life experience, but finds no such benefits of humor with regard to anxiety. However, there are a couple of research studies that suggest that humor may, in some instances, reduce anxiety as well. One of these studies, carried out several years before the Lefcourt and Martin studies, is Ronald E. Smith et al.’s “Humor, Anxiety, and Task Performance” (1971). The subjects were 215 students at Purdue University. Half were given a form of the examination in a psychology course that contained one-third humorously worded test items, and the other half received a nonhumorously worded form of the examination. Here is an example of one of the matched items:

(Nonhumorous version). Over the past six years Tom’s behavior has become increasingly disturbed. He has developed a delusion that somebody is controlling his mind, and he is also having bizarre visual and auditory hallucinations. Which other member of Tom’s family is most likely to exhibit bizarre behavior?

(Humorous version). Claiming to be a slot machine, Julius has been standing against a wall in a Las Vegas casino for six years making bell-like sounds and occasionally complaining that he is being tilted. Which other member of Julius’ family is most likely to exhibit bizarre behavior?

The same possible answers are presented for both versions: (a) his mother; (b) his sister; (c) his identical twin; (d) it is impossible to make a probability statement.

Several weeks prior to the examination, the students were administered a test anxiety scale and, on the basis of their scores, were divided into low, moderate, and high test-anxiety groups. For the examination itself, half of each of these three groups received the humorously worded exam, the other half the nonhumorously worded exam. The test scores of the students in the high anxiety/nonhumorous exam group were significantly *lower* than the scores of the low or moderate test anxiety groups, while the test scores of the high anxiety/humorous test group were much higher, equaling the performance level of the other two anxiety groups. The prediction that humor would moderate anxiety was supported.

An unexpected result, however, was that the moderate anxiety/humorous exam group performed at a relatively low level on the test. If the high anxiety/humorous test group did better than the high anxiety/nonhumorous test group, why did the moderate anxiety/humorous test group do significantly less well than the moderate anxiety/nonhumorous test group and half of the low anxiety groups? Smith et al. say that they can only speculate as to the reasons for this, but that several of the students in this group later commented that while the humorous items served to “loosen them up” somewhat, they also had a distracting effect on them. Clearly, the high anxiety students were more helped by the humor than were the moderate anxiety students. Incidentally, the researchers found that there was no difference in the actual difficulty level of the humorous and nonhumorous test items, as the raw scores of the whole student sample on these items were virtually identical. Thus, there was nothing in the humorous wording as such that would create greater likelihood of answering the question correctly.

In a study published after the original Lefcourt and Martin research, Yovetich, Dale and Hudak (1990) of Allegheny College found that subjects presented with humorous material, a composite of comedy routines by Bill Cosby, Steve Martin, Robin Williams, and George Carlin, had less anxiety than those presented with a geological documentary as they awaited an anticipated application of an electric shock. However, and against expectations, it was not the case that students with a high sense of humor (as derived from scores on the Lefcourt and Martin situational humor response questionnaire) benefitted the most from the humor condition. Instead, those who benefitted most from the humor condition were students with a low sense of humor. Yovetich et al. speculate that the reason for this may have been the artificial conditions for humor in the lab, where humor is provided rather than contrived by the subject. They also suggest that in the experimental conditions of the study, humor served more of a distractive function, whereas in reality-occurring situations humor involves “cognitive restructuring which takes the ‘sting’ out of otherwise stressful events” (p. 57).

Older readers of this article for whom test-anxiety is a distant memory may be saying to themselves at this point, “Why don’t these psychologists study the effect of humor on something that is really worth being anxious about?” James Thorson, a gerontologist at the University of Nebraska, and his coauthor, F. C.

Powell, did just that in their study of the relationship between sense of humor and death anxiety (1993). Employing a death anxiety scale, a 25 item questionnaire that gives an overall fear of death score, and their own multidimensional sense of humor scale, Thorson and Powell studied a sample consisting of 290 women and 136 men ranging in age from 18 to 90 years (with a mean age of 37.9 years). They found negative relationships, albeit rather slight ones, between sense of humor and death anxiety. The strongest association was with death anxiety and coping humor, one of four humor factors in their sense of humor scale, the others being humor generation or creativity, humor appreciation, and appreciation of humorous people. Those who used coping humor less scored somewhat higher on death anxiety.

Other findings of the study, also very modest ones, were that while women and men did not differ on their overall sense of humor scores, women were slightly lower in humor productivity and slightly higher in their use of coping humor. Age also played a role in that coping humor increased slightly as the age of the respondents increased. Also, older subjects showed a bit less appreciation of humor itself and a bit more appreciation of humorous people. It is perhaps worth noting that the study did not include exposure to humor, such as jokes and cartoons, relating to death, a procedure that, analogously, paid significant dividends in the Lefcourt and Martin study of physically disabled persons.

Finally, William E. Kelly, a member of the counseling department at the University of Nevada at Las Vegas, conducted an investigation of worry and sense of humor (Kelly, 2002). He used a worry questionnaire that assesses five worry areas or domains, including relationships, lack of confidence, aimless future, work concerns, and financial concerns. He also used the sense of humor scale developed by Thorson and Powell to determine whether humor has a relationship to worry, and, if so, in what ways. As noted above, the Thorson and Powell scale has four dimensions, including humor production, humor as a means of coping, humor appreciation, and appreciation of humorous persons. Because this was an exploratory study and no previous studies had been undertaken on humor in relation to worry, Kelly made no predictions as to what he would find. But the use of these two instruments enabled him to try to identify any relationships that might exist between humor and worry.

The major finding of the study was a negative relationship between worry and sense of humor, leading to the conclusion that persons with a high sense of humor are less likely to worry. The primary reason that worry was negatively related to humor, however, was the fact that worry had a strong negative effect on humor production. Because there was a strong association between humor production and the confidence domain of the worry scale, Kelly guesses that worries about confidence hinder persons from producing humor. In his view, this may be because "worriers would question their ability to produce humor in such a way that others would find favorable" (p. 662). A similar explanation might be made for the

relationship that was found between worries about personal relationships and humor: “That is, individuals who worry about disrupting, or losing, relationships might be less inclined to use humor for fear that others will not approve of their humor” (p. 663).

An unexpected finding of this study was that worry was *positively* related to one of the dimensions of humor, that of coping humor. It may seem surprising that worry and coping by means of humor would be positively related to one another, but Kelly cites another study that demonstrated that worry is itself an active cognitive coping mechanism. Thus, “if worry and humor both serve as coping mechanisms, it is less surprising that worry and coping with humor are positively related” (p. 663). These findings suggest that worriers are less likely to deal with negative life experiences by thinking of something humorous to say, and more likely to employ humor as a way to mitigate the negative consequences or outcomes of these experiences. In this sense, worry is both a way to reduce anxiety and also avoid depression. A fairly popular song of the 1980s advised, “Don’t worry, be happy.” Kelly’s findings suggest, instead, that worry may contribute indirectly to happiness by forestalling anxiety and depression. As humor also has these effects, worry and humor have much more in common than we would have guessed. If anxiety relates to situations one cannot control, worry and humor may be ways to forestall or inhibit anxiety. The worrier does this by anticipating all the things that *could* possibly go wrong, while the humorist does this by minimizing the importance or significance of what may *in fact* go wrong.

This conclusion is supported by Julie K. Norem’s *The Positive Power of Negative Thinking* (2001). Norem contends that negative thinking—what is sometimes called “catastrophizing” (see Beck & Emery, 1985, p. 33)—is actually a positive coping mechanism for some individuals. Where others tend to minimize what might go wrong when they invite a group of friends over for dinner or organize a business conference, negative thinkers (what Kelly would call “worriers”) think of all the things that might go awry and plan for these exigencies. If “non-worriers” suggest to them that their fears are groundless or that many of the things they worry might happen are only remotely possible, the worrier may not disagree, but still maintain that it is best to anticipate *all* the things that might go wrong than be taken by surprise. Kelly’s study suggests that worrying about these exigencies and remote possibilities has the positive effect of reducing anxiety. Thus, worry and anxiety are two very different psychological phenomena.

## WHAT ABOUT GENDER DIFFERENCES?

In all of the psychological studies of humor reported here, few gender differences were found or reported. As indicated, Thorson and Powell found slight

evidence that women use humor production less than men do, but use humor as a coping mechanism more than men do. But, time and again, the research studies on humor state that “no gender differences were found.” This was certainly surprising to me, and I assume it is also surprising to readers of this article, as I had assumed that men go in for humor more than women do, and that men, especially, use humor as a coping mechanism. Another surprising finding was Robert Provine’s discovery that women laugh more than men do, on a roughly 5 to 4 ratio (Provine, 2000, pp. 27–28). He explains this unexpected finding as due to the fact that men feel good when they elicit the laughter of women, so they work hard to make women laugh, which leads women to laugh more. But a woman colleague of his suggested a simpler explanation, namely, that in “dealing with men, there is so much more to laugh at” (p. 28).

In a study of the interaction of humor and gender resulting in moderating relationships between stress and physical symptoms resulting from stress, Millicent Abel (1998) tested the gender issue directly. The subjects in this case were 131 undergraduate students (70 men, 61 women) in an introductory psychology course at Western Carolina University. The humor scale developed by Thorson and Powell, a perceived stress scale, and the anxiety and somatization scales from a symptom checklist were used in the study. The somatization scale measures distress associated with common physical symptoms such as headache, loss of energy, and muscle aches.

Abel found no significant gender differences on the measures of perceived stress, distress from anxiety, and sense of humor, a finding that was consistent with the studies we have already reviewed. She did find a gender difference, however, on the measure of distress from physical symptoms, with women reporting more physical distress than the men reported. As for the effect of humor on anxiety, stress, and distress relating to physical symptoms, she found that humor had a “buffering effect” against anxiety for men only, and had a buffering effect on stress for both genders. She also found that for both genders, humor moderated the relationship between stress and physical symptoms. Since the major difference between men and women related to the buffering role of humor with respect to anxiety in men, Abel concludes that “a good sense of humor may assist men in successfully anticipating a threat and, hence, reducing their distress from anxiety, but for women, a good sense of humor may not buffer them from the distress of an anxiety-provoking threat” (p. 274). Put another way, “Men and women with a greater sense of humor may exhibit similar adaptive coping strategies against distress caused by physical symptoms and yet show different strategies in response to distress caused by anxiety . . . . Men may prefer humor as a more appropriate expression of emotions such as anxiety, whereas self-disclosure may be the preferred and more acceptable mode of expression for women” (p. 274). The contrast that Abel draws between humor and self-disclosure, however, is itself reflective of the popular view that humor is a mask—in this case, a means



of masking one's anxiety—and is not itself self-disclosive. Perhaps we need a further study along the very lines that Abel has set forth that addresses this very question, namely, do men use humor as a means of disclosing to others that they are experiencing anxiety?

## CONCLUSION

What are we to make of these psychological studies of humor? Because most of the studies (with the exception of Lefcourt and Martin's study of physically disabled persons and Thorson and Powell's study of death anxiety) were based on subjects in their late teens and early twenties, we need to be cautious in generalizing their findings to other age groups. Also, the results of these studies are not uniform. Some are even contradictory. Still, taken together, they support the idea that humor may help a person cope with negative life experiences and that humor may counter the tendency to become depressed when one is in the throes of a painful life experience. Whether humor helps relieve the anxiety that occurs when one anticipates a negative life experience and its consequences is less clear, but it seems to mitigate anxieties relating to one's loss of control or inability to determine what happens. The research also seems to suggest that other people are likely to take notice of those who "produce" humor and to assign them a higher "sense of humor" score, but individuals tend to rate themselves as having a good sense of humor on the basis of their ability both to react to or appreciate the humor that others produce, and to perceive the humor in a negative life experience. Thus, there are various ways in which persons use humor as a coping method, some of which are overt and easy to recognize—such as cracking jokes in dire situations—while others are more covert and harder to detect—such as laughing to oneself.

In a general sort of way, the psychological studies reported here confirm much of what we already knew, or thought we knew, about humor. To be sure, there are some surprises in the research literature. But, by and large, these studies confirm the popular opinion that humor can be beneficial for moderating the effects of negative life experiences and that, even if it is not a panacea, it has minimal negative side-effects when used or resorted to in this regard. (This is not to say that humor has no negative side-effects whatsoever; this would be to disregard the whole issue of offensive humor.) If they *do* confirm popular opinion about humor, this gives the research studies greater rather than lesser credibility, as we would tend to distrust studies that run counter to everything that we know about humor from personal experience.

Interestingly enough, one of the studies reported here quotes the first half of Proverbs 17:22, "A merry heart doeth good like a medicine" (KJV), thus implicitly linking its investigation to the biblical tradition itself. Unfortunately, the second

half of this proverb was omitted and the proverb's suggestion that humor and depression are negatively related was therefore lost: "A cheerful heart is a good medicine, but a downcast spirit dries up the bones" (NRSV). Nor has the research tradition taken up the whole question of when humor is appropriate and when it is not, a topic that Proverbs 26:18 suggests: "Like a madman who throws firebrands, arrows, and death, is the man who deceives his neighbor and says, 'I am only joking.'" Even so, the citation of Proverbs 17:32a in a scientific research study on humor suggests that contemporary researchers on the psychological benefits of humor are in good company.

As this article is written with readers with pastoral or caregiving responsibilities in mind, I will conclude with one more research study, one that points to the practical uses of humor for those who engage in the care of others. In their article, "Laughter in a Psychiatric Ward," Marc Gelkopf, Shulamith Kreitler, and Micea Sigal report on their study of the potential therapeutic effects of humor on hospitalized schizophrenics (1993). They carried out an experiment involving 34 resident patients in two chronic schizophrenic wards. Over a three month period, the patients in Ward A were exposed to seventy humorous movies while patients in Ward B were exposed to seventy different kinds of movies (action, romance, drama, and some comedies). The main positive effect of exposure to a barrage of humorous movies was that patients in Ward A experienced a slight but statistically significant decrease in verbal hostility as perceived by members of the nursing staff. But there was also an unexpected result. The authors found that patients who "had been exposed to humor experienced a higher level of social support from the staff. . . . This increased experienced support from the staff may have been initiated either by some humor-induced change in the patients or by some humor-induced change in the staff" (p. 288).

The authors conclude that "the humorous films affected the staff to a larger extent than the patients," and, therefore, "It may be advisable to consider the possibility of affecting the patients by projecting humorous films *with the staff as the target population*" (p. 288, my italics). If one of the features of professional burnout is *depersonalization*, or "a negative, cynical and impersonal attitude towards the people one works with" (Tomic, Tomic & Evers, 2004, p. 226), this unexpected finding of the Gelkopf et al. study suggests that caregiving persons may find in humor a valuable resource for maintaining a positive, hopeful, and personal attitude towards the people (parishioners, patients, students, etc.) they work with. Thus, even though nothing overtly funny or amusing occurs in the interaction between the professional and those for whom the professional is expected to care about, the care recipients may, nonetheless, be the beneficiaries of humor. This effect of humor on the unknowing recipient suggests that the psychological benefits of humor are often indirect and therefore are not always easy to detect or demonstrate empirically. This does not mean, however, that they are any less real or any less powerful than, say, being whacked on the head with a brickbat,

plummeting into an uncovered manhole, or suffering the effects of a gunpowder blast:

Ole and Lena had the Torkelsons over for Lutefisk and lefse. Torkelson liked it with plenty of melted butter and pepper. Lena couldn't find the pepper, so she rummaged through the cupboard and found a container she thought was pepper. The next day Ole and Lena discovered it actually was gunpowder. So, Ole called Torkelson on the phone and told him of the mistake. "Vell, I'm glad to find out what happened, becoss when ve got home last night, I leaned over to tie my shoe and I accidentally shot da cat" (Stangland, 1979, p. 291).

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