

Humor, Coping with Stress, Self-Concept, and
Psychological Well-Being

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Abstract

This paper provides an overview of our current research program focusing on the relationships between humor, self-concept, coping with stress, and positive affect. This research builds upon past work demonstrating a moderating effect of humor, wherein high humor individuals display less negative affect for adverse life circumstances than low humor individuals. The three studies described here address several limitations of this moderator research. These include a need to empirically document the precise relationship between humor and self-concept, a need to focus on the cognitive appraisals underlying the moderator effect, and a need to specifically examine the enhancing effects of humor by measuring positive mood states in response to various life events. Overall, the findings from these studies indicate that greater levels of humor are associated with (1) a more positive self-concept when considered in terms of actual-ideal discrepancies, self-esteem, and standards for self-worth evaluation, (2) more positive and self-protective cognitive appraisals in the face of stress, and (3) greater positive affect in response to both positive and negative life events. Taken together, these findings offer empirical support for the proposal that humor, in addition to buffering the effects of stress, may also play an important role in enhancing the enjoyment of positive life experiences. We conclude by briefly describing future research directions in the empirical study of humor.

Ever since Norman Cousins (1979) published an account of his recovery from a serious disease through humor and laughter, much attention has been given in the popular media to the importance of humor for physical and psychological health. Over the years a number of psychological theorists, including Sigmund Freud, Rollo May, Gordon Allport, and Norman Dixon, have also considered the possible relationships between humor, health, and well-being. These writers have suggested that a humorous perspective on one's problems allows one to distance oneself from them, to take them less seriously, and thereby to experience them as less threatening and distressing. In further describing these beneficial effects of humor, Martin (1989) has hypothesized that humor may reduce stress by means of several different processes, including appraisal-focused, emotion-focused, and problem-focused coping.

Until fairly recently, however, little empirical research had been conducted on the relation between humor and well-being. Here, the work by Martin and his colleagues (see Lefcourt & Martin, 1986 and Martin, 1989 for detailed reviews) represents one initial line of investigation. Using a moderator variable paradigm, this research has examined the stress-buffering effects of sense of humor on various adverse outcomes of stress.

As one illustration of this humor moderator research, Lefcourt and Martin (1986) described a series of studies that employed self-reported mood disturbance (depression, anxiety, anger, etc.) as the outcome variable. In this research, sense of humor was assessed in a variety of ways, including self-report measures, peer ratings, and the rated humorousness of impromptu comedy monologues. Findings from these studies generally revealed a significant moderating effect of sense of humor on the relation between stressful life events and mood disturbance. Thus, among subjects with a low sense of humor, greater levels of stressful events were strongly related to increased mood disturbance. In contrast, subjects with a higher sense of humor did not show as great an increase in mood disturbance, even under high levels of stress. Stated differently, those with greater levels of humor displayed significantly less negative affect in response to increasing negative life events, when compared to those with low levels of humor.

A similar research strategy was employed by Martin and Dobbin (1988) to investigate whether sense of humor also moderates the immunosuppressive effects of stress. In this study, humor was assessed by means of four self-report measures, with stress levels determined by the number of daily hassles reported by each participant. Subjects also provided saliva samples, which were assayed for secretory immunoglobulin A (S-IgA), an antibody that is part of the immune system's defense against viral and bacterial infections. The findings for this research again revealed a significant moderating effect of humor – but this time for the relation between daily hassles and S-IgA levels. Individuals with low humor scores showed an immunosuppressive effect of stress, in that higher levels of hassles were related to lower levels of S-IgA. In contrast, for high humor individuals increased stress did not result in suppression of the immune system's defenses. These findings thus suggest that greater levels of humor may benefit the body's capability of warding off possible viral and bacterial infections.

Considered together, the humor moderator studies outlined above provide some empirical support for the hypothesis that humor serves to buffer the adverse effects of stress. Other research, however, has shown that this moderating effect does not always obtain (e.g., Porterfield, 1987; see also Lefcourt & Davidson-Katz, in press, for a detailed review of this moderator literature). Thus, as suggested by Martin (1989) it is clear that further, more detailed, research is necessary to examine the role of humor. As one specific example, the moderator studies do not provide information about the ways in which individuals actually make use of humor in their everyday encounters with stress, or the processes by which a humorous outlook may mitigate the effects of

stress. In addition, past studies have tended to focus on negative emotional and physiological outcomes of stress. Therefore, research is needed to examine the ways in which humor may be related to such factors as positive emotions and positive life events, self-esteem, and psychological well-being.

Our current research program is now examining these further aspects of humor. Accordingly, the major purpose of this paper is to provide an overview of several of our recent studies that focus on the relationships between humor and (1) self-concept and psychological well-being, (2) stressful life events and the cognitive appraisals for these events, and (3) the enhancement of positive emotions for life experiences. After describing these studies, we conclude with some brief comments on future research directions in the study of humor.

Humor and Self-Concept

An initial step in our research program has been to empirically document the proposed link between increased levels of humor and a more positive self-concept. Although this link has often been described in the humor literature, there is actually very little empirical data that speaks to this issue. Thus, we conducted a study with 100 university students (62 females) in which we measured several indicators of self-concept, including the amount of congruence between real and ideal self, levels of self-esteem, and the standards employed for evaluating the self (Kuiper & Martin, in press).

In this research we employed four different self-report scales to assess sense of humor. The first of these was the Coping Humor Scale (CHS: Martin & Lefcourt, 1983, which was designed to assess the degree to which respondents report that they actively use humor as a means of coping with stress in their lives. Example items from this scale are: "I can usually find something to laugh or joke about, even in trying situations," and "I have often found that my problems have been greatly reduced when I tried to find something funny in them." Our second humor measure was the Situational Humor Response Questionnaire (SHRQ: Martin & Lefcourt, 1984). This scale presents brief descriptions of various life situations and asks individuals to indicate the degree to which they respond with smiling and laughter in similar situations. A typical item describes the following situation "You are eating in a restaurant with some friends and the waiter accidentally spills a drink on you." For each item, subjects indicate one of five responses, ranging from "I won't have found it particularly amusing" to "I would have laughed heartily." Participants in this study also completed two subscales of the Sense of Humor Questionnaire (SHQ: Svebek, 1974). The first subscale, Metamessage Sensitivity (SHQ-MS, is designed to assess the degree to which individuals report that they are able to recognize or notice humor in various life situations. An illustrative item from this subscale is "I can usually find something comical, witty, or humorous in most situations." The second SHQ subscale was Liking of Humor (SHQ-LH), which assesses the degree to which individuals report that they value humor and a humorous role. An example item from this subscale is "It is my impression that those who try to be funny really do it to hide their lack of self-confidence" (disagreement with this item results in a higher score on this subscale). These four humor measures each show adequate reliability and validity, are independent of social desirability reporting biases, and have been used in our prior research on humor as a moderator of stress (see Lefcourt & Martin, 1986 for a detailed presentation of psychometric and construct validity issues relating to these humor measures).

Actual versus Ideal Self-Concept Discrepancy. To assess this aspect of self-concept, each participant in the Kuiper & Martin study rated a set of 60 personal adjectives in terms of (1) how self-descriptive each adjective was (actual self-ratings, and (2) the degree to which they would ideally like to be characterized by each adjective (ideal self-ratings). The adjectives were selected to provide a broad assessment of a wide variety of personality dimensions. Example adjectives are: systematic, hopeless, hospitable, assertive, worthless, glum, neighbourly, organized, industrious, neat, weary, and unwanted.

Using these adjectives, we were interested in determining the relationship between sense of humor and the amount of discrepancy between actual and ideal self-ratings. Past research has shown that higher actual-ideal discrepancies are related to greater adjustment problems, lower self-esteem, and heightened negative affect (see Markus & Wurf, 1987 for a detailed review of this work). Thus, in the Kuiper & Martin study, actual-ideal discrepancy scores were obtained for each participant by summing the absolute differences between actual and ideal self-ratings on the 60 adjectives. Preliminary analyses of our data indicated a congruence with past research findings, in that actual-ideal discrepancy scores were positively related to measures of depression ($r = .44$) and perceived stress ($r = .55$), and negatively related to self-esteem ($r = -.58$). Furthermore, and consistent with our expectations, we found that three of the humor measures (CHS, SHRQ, and SHQ-MS) were significantly negatively related to this actual-ideal discrepancy score (r 's = $-.22$, $-.25$, and $-.36$ respectively, $p < .025$). Thus, individuals with a greater sense of humor revealed a greater congruence between the way they actually viewed themselves and the way they would ideally like to be. This obtained pattern is quite consistent with the proposal that more humorous individuals display a more positive self-concept than less humorous individuals.

Self-Esteem and Self-Evaluative Standards. To assess self-esteem, each participant completed the Rosenberg Self-Esteem Inventory (RSEI: Rosenberg, 1979). An example item from this 10-item scale is "On the whole, I am satisfied with myself." Self-evaluative standards were assessed via the Dysfunctional Attitudes Scale (DAS: Kuiper & Olinger, 1989). The DAS taps an individual's tendency to endorse extremely unrealistic and rigid contingencies for determining self-worth. A sample item is: "If I do not do well all of the time \rightarrow people will not respect me". Past research employing this scale demonstrates that individuals endorsing a large number of extreme self-evaluative standards are more vulnerable to depression and anxiety.

In our research study, the pattern of correlations for both of the above self-concept related measures (RSEI & DAS) supported the proposal that high humor individuals indicate greater psychological well-being. In particular, higher scores on all four humor measures were significantly related to higher levels of RSEI self-esteem (r 's from $.22$ to $.38$, p 's $< .025$). Similarly, the significant negative relation between humor scores (on all four measures) and DAS scores indicates that high humor individuals endorse more realistic and flexible standards for evaluating their own self-worth than do low humor individuals (r 's from $-.21$ to $-.36$, p 's $< .025$). In general, then, the results of this study provided basic empirical support for the proposal that sense of humor is indeed related to a more positive self-concept (with minimal actual-ideal discrepancies), higher levels of self-esteem, and more realistic standards for evaluation of self-worth.

Humor and Cognitive Appraisals

A second direction of our research program has been to examine more closely the processes by which humor may potentially reduce stress. In particular, we have focused on individuals'

cognitive appraisals over the course of a stressful experience. Cognitive appraisals have to do with the way people perceive and interpret the significance of events. As detailed by Lazarus and Folkman (1984), a cognitive theory of stress proposes that the degree of stress experienced by an individual in response to an event is determined, to a large degree, by the way the individual appraises that event (e.g., as a threat versus a challenge). Thus, we conjectured that some of the stress-buffering effects of humor may be due to differences in the types of appraisals that high and low humor individuals make in response to potentially stressful situations.

To examine this issue empirically, we studied 44 female university students facing a potentially stressful real event, namely an academic examination. One week before the exam, these students completed a questionnaire in which they predicted how well they would do on the exam. In addition, they indicated their cognitive appraisals of the upcoming exam by rating the degree to which they viewed it as a positive challenge. Immediately after completing the exam, participants were again asked to provide cognitive appraisals of challenge. One week later, after they had been informed of their performance on the exam, the students were asked to report the actual mark they had received, and to indicate the grade they expected to achieve on the next upcoming exam in the course. Finally, they were asked to rate how personally important the past exam was for them.

Participants in this study also completed a booklet containing three self-report measures relating to humor, perceived stress, and coping strategies. As described earlier, the Coping Humor Scale (CHS) was also used to assess humor. The Perceived Stress Scale (PSS: Cohen, Kamarck, & Mermelstein, 1983) was employed to measure the extent to which individuals feel their lives are unpredictable, uncontrollable, and overwhelming. An example item on this scale is "In the last month, you often have you felt that you were unable to control the important things in your life?" Finally, the Ways of Coping Scale (WCS: Lazarus & Folkman, 1984) was included to assess the degree to which individuals make use of a variety of different coping strategies when dealing with academic evaluations. Examples of these strategies include emotional distancing (e.g., "Don't let it get to me; refuse to think too much about it"), and problem-focused confronting (e.g., "Stand my ground and fight for what I want.")

A significant negative correlation was found between Coping Humor and PSS scores ($r = -.35, p < .025$). Here, individuals reporting higher levels of coping humour also perceived themselves as having more control over their own lives, felt less overwhelmed and anxious, and less stressed, than those individuals scoring low on the Coping Humour scale. The Coping Humor Scale was also significantly correlated with two of the Ways of Coping subscales. Individuals with higher levels of humor reported greater use of the coping strategies of Confronting ($r = .32, p < .025$) and Emotional Distancing ($r = .27, p < .05$). Thus, high humor individuals dealt with this stressful situation in a more direct problem-focused fashion, while at the same time distancing themselves more emotionally. Higher levels of coping humor were also associated with more positive cognitive appraisals, in that humorous individuals rated the exam as more of a positive challenge, both one week before ($r = .31, p < .025$), and immediately afterwards ($r = .29, p < .025$).

To assess the potential role of humor in cognitive appraisals relating to the personal importance of the test, we also took into account the relationship between actual and expected performance on the exam. Thus, for each student, an actual-expected performance discrepancy score was first calculated by subtracting their expected from actual mark on the test. A hierarchical multiple regression analysis was then performed, using the personal importance ratings obtained one week after the exam as the predicted measure. As shown in Figure 1a, the results of this analysis revealed a significant interaction between performance discrepancy scores and Coping Humor ($p < .05$). When actual exam performance was below initial expectations, low humor

individuals provided high personal importance ratings. Conversely, when actual performance exceeded initial expectations, low humor individuals provided low personal importance ratings. Thus, low humor individuals appear to emphasize the personal importance of poor performance and de-emphasize the personal importance of unexpectedly good performance. Such a pattern appears to be quite self-defeating. In contrast, Figure 1a shows that high humor individuals appear to be more even-handed in their self-relevant appraisals across different levels of performance. These individuals indicated generally moderate degrees of personal importance that did not change substantially as a function of poor or good performance. In turn, this more balanced and stable pattern may serve a self-protective function for more humorous individuals by limiting excessive personal importance appraisals (either high or low) in response to varying situational outcomes.

insert Figure 1 about here

In order to examine the effects of humor on expectations for future performance, another hierarchical multiple regression analysis was computed, this time predicting the students' ratings of how well they expected to do on the next exam in the course. Here, we were particularly interested in how high and low humor individuals may differentially adjust their expectations of future performance, based on their past performance. As shown in Figure 1b, the results of this analysis revealed a significant interaction between humor level and actual-expected performance discrepancy scores for exam one ($p = .05$). High humor individuals raised their future expectations when past performance exceeded initial expectations, but lowered their expectations when past performance was worse than expected. For high humor individuals, this pattern is quite congruent with a realistic approach to adjusting personal expectations in accordance with past performance. Low humor individuals, on the other hand, did not adjust their future expectations to past performance. If anything, they raised their expectations with poor performance and lowered them with better performance. Clearly, for low humor individuals such a strategy might lead to increased stress by placing unrealistic expectations on oneself.

In summary, the results of this study suggest that individuals with a greater sense of humor appraise and cope with a stressful event in a manner that is both event-enhancing and self-protective. Event-enhancement refers to the way in which high humor individuals tend to view potentially stressful events in more positive and challenging terms, rather than focusing on their negative aspects. The self-protective aspect refers to the tendency of high humor individuals to use emotional distancing and also provide personal importance and future expectation appraisals that are of a more realistic nature.

Humor and Positive Affect

Past research examining the stress-moderating effects of humor has focused on negative life events and the negative consequences of these events, particularly mood disturbance. As a result, very little is known about how sense of humor may relate to positive affect, and thus contribute to the enhanced enjoyment of positive life experiences. To address this issue we recently completed a study that examined the relation between positive affect and both positive and negative life events for high and low humor individuals. Additionally, this study looked at the relation between sense of humor and the degree of satisfaction that individuals experience in their primary social roles. Thus, the focus of this study was again on aspects of psychological well-being in relation to humor.

This study took place over a two-week period. On the first day of testing the 39 participants (29 female) completed the four sense of humor measures described earlier (CHS, SHRQ, SHQ-MS, & SHQ-LH). They also indicated all of the positive and negative life events they had experienced in the past month. In addition, subjects completed the Positive and Negative Affect Scale (PANAS: Watson, Clark, & Tellegen, 1988, which provides separate scores for daily pleasant and unpleasant moods. Positive mood items include "enthusiastic", "interested", and "active", whereas negative mood items include "distressed", "irritable", and "afraid". Finally, participants were administered a role evaluation questionnaire which presented a list of 22 social roles (e.g., student, roommate, boyfriend/girlfriend). On this questionnaire, participants indicated which roles were self-relevant and then rated these selected roles for personal satisfaction and degree of pleasantness. For the remaining 13 days of the study, participants completed the PANAS each evening (in terms of how they had generally felt that day).

Multiple regression analyses were computed to examine the relation between humor scores and positive life events in predicting mean positive affect (PANAS positive mood ratings averaged over the 14 days). Our findings revealed significant interactions between positive life events and the two subscales of the Sense of Humor Questionnaire (Metamessage Sensitivity and Liking of Humor). Figure 2a shows the pattern of this interaction for the Metamessage Sensitivity scale (the results for Liking of Humor were very similar). As can be seen from this figure, high humor individuals show a substantial increase in positive affect as positive life events increase in number. In contrast, the positive affect levels of low humor individuals remained much the same, regardless of the number of positive life events recently experienced. Overall, these findings are consistent with the proposal that greater levels of humor also function to enhance positive life experiences by leading to higher levels of positive affect. For low humor individuals, however, it appears that they are unable to benefit from an increasing number of pleasant events with greater levels of positive affect. Importantly, these findings support the notion that the facilitative effects of humor are not just limited to attenuating negative affect in response to negative events. Instead, this work indicates that humor appears to have a much broader impact, leading to greater positive affect as positive experiences increase.

Insert Figure 2 about here

In this study we were also interested in the possible role of humor with regards to moderating the degree of positive affect in response to negative life events. Again, this is an issue that has not received attention in past moderator research. Here, we were interested in determining if higher levels of humor allow an individual to maintain higher levels of positive affect, even in the face of stressful situations. To explore this issue empirically, we computed multiple regression analyses predicting mean positive affect scores from negative life events and each of the four humor scales. A significant interaction between negative life events and humor was found with three of the four humor scales (the Liking of Humor scale was the only exception). Figure 2â shows the pattern of relationships obtained with the Metamessage Sensitivity scale (the results are very similar for the other two humor scales). This figure shows that, among low humor individuals, there was a decrease in positive moods as negative life events increased. In contrast, those with high humor scores did not show this decrease, but, in fact, showed an increase in positive mood as negative life events increased. Overall, this pattern again shows a strong facilitative effect for humor. In particular, it appears that a greater sense of humor yields an enhancement of positive affect, even in the face of adverse circumstances. It should be noted that

this finding complements our other research indicating that humorous individuals engage in cognitive appraisals that promote reasonable distancing from adverse circumstances. As evident in the present research, one implication of this distancing may be the capability to express greater levels of positive affect in negative situations.

Finally, the results pertaining to social roles also revealed further beneficial aspects of humor. Increasing scores on three of the four humor scales (CHS, SHRQ and SHQ-MS) were significantly related to higher levels of role satisfaction (r 's from .30 to .41, p 's < .05). In addition, two of the humor scales were significantly related to ratings of pleasantness of the activities associated with the social roles (CHS $r = .29$; SHQ-MS $r = .35$; both p 's < .05). Thus, high humor individuals are more satisfied with their social roles and find role activities more pleasant, as compared to low humor individuals. This finding offers further empirical support for a more positive self-concept in individuals with a greater sense of humor, and extends this research to include social roles as well as personality traits or characteristics.

Concluding Comments and Further Research Directions

This brief overview highlights several major themes evident in our recent empirical research on humor. To start, we have documented basic relationships between sense of humor and various aspects of the self-concept, including actual-ideal discrepancy, self-esteem, and self-evaluative standards. In following up on earlier moderator research, we have also begun to examine processes by which high humor individuals may appraise and cope with life events differently from those with less of a sense of humor. Finally, we have focused on the enhancing aspects of humor by also exploring sense of humor as a moderator of the pleasant moods experienced by individuals in response to both positive and negative life events. This positive orientation was also evident in our examination of the relation between sense of humor and satisfaction with social roles.

At a more general level, the findings from this research begin to empirically demonstrate the involvement of humor in a broad range of human activities and functioning. Not only does humor appear to be an effective means of mitigating stress, but it also appears to be linked with the greater enjoyment of positive life experiences and a more positive orientation towards self. The means whereby this is accomplished include cognitive appraisals that provide the humorous individual with a more positive focus towards a variety of life events, while at the same time offering a more optimal degree of self-protection.

It should be noted that in most of the research described here, sense of humor was assessed as a trait-like individual difference variable using several self-report scales. This research needs to be complemented by approaches that use other means of assessing humor, such as laboratory manipulations and behavioral observations. In addition, more research is needed to determine the exact processes by which humor may be used in coping with stress and enhancing well-being. In one such study now underway, we are having participants complete humor diaries over the course of several days, tracking their stress and mood levels as well. We are also seeking to extend some of our findings to other populations besides university students. Current research projects involve a broad-based adult community sample, a sample of inpatients in a psychiatric hospital, and a sample of elderly people in a retirement community.

Finally, the direction of causality in the relation between humor and well-being also needs to be explored. In other words, it is not clear from correlational research such as this, whether a strong sense of humor leads to better coping and enhanced psychological well-being, or whether a good sense of humor is the result of a healthy self concept and effective coping. The need for such

research is particularly urgent in view of the widespread claims in the media of beneficial effects of humor, and the increasing use of humor by clinicians in therapeutic interventions, workshops, and seminars, with only limited empirical support for these applications.

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Figure Captions

Figure 1: (a) Relation between actual-expected performance discrepancy and rating of importance of the test at Time 3 for subjects with high versus low Coping Humor scores. (b) Relation between actual-expected performance discrepancy and expected mark on next text for subjects with high versus low Coping Humor scores.

Figure 2: (a) Relation between positive life events and positive affect scores on the PANAS for subjects with high versus low scores on the Sense of Humor Questionnaire Metamessage Sensitivity Scale (SHQ-MS). (b) Relation between negative life events and positive affect scores on the PANAS for subjects with high versus low scores on the SHQ-MS.