

Theoretical Contributions

Humor and Resiliency: Towards a Process Model of Coping and Growth

Nicholas A. Kuiper*^a

[a] Department of Psychology, University of Western Ontario, London, Canada.

Abstract

This article considers how humor may fit within a resiliency perspective. Following a brief overview of resiliency approaches, including selected work on positive psychology, several lines of research that provide initial support for resiliency effects of humor on stress and trauma are highlighted. This work ranges from anecdotal case report descriptions of facilitative humor use in extremely traumatic situations (e.g., paramedics), to more rigorous studies examining moderator and cognitive appraisal effects of humor on psychological well-being. Although these initial findings are quite promising, it is noted that some resiliency-based approaches to humor are limited by a sole focus on humor as a positive attribute. As such, a humor styles model, which acknowledges both the adaptive and maladaptive aspects of humor, is used to describe broader avenues of research within a resiliency perspective. This process orientation to humor use also highlights the importance of both negative and positive emotion regulation in modulating coping and growth. This model is then used to comment on limitations and potential extensions of current resiliency perspectives on humor, including programs and exercises that attempt to train humor use in a facilitative manner.

Keywords: humor, resiliency, stress, coping, challenge, appraisals, distancing, growth

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*Corresponding author at: Department of Psychology, Room 309E, Westminster Hall, University of Western Ontario, London, Ontario, Canada, N6A 3K7, email: kuiper@uwo.ca.



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A Resiliency Perspective on Humor

Psychological theory and research on well-being and quality of life has traditionally focused on the impact of negative factors. This has included the investigation of both adverse life stressors and dysfunctional personality attributes that may contribute to the deterioration of well-being, or even the development of psychopathology. In contrast to this traditional approach, however, the past twenty years have also witnessed the emergence of an alternative perspective that broadens this focus considerably. This alternative has its roots in development psychology, and studies the personal, environmental and contextual factors that can enhance psychological well-being and quality of life, particularly during times of adversity or stress (Windle, 2011; Zautra, Hall, & Murray, 2008). Known as resiliency, this concept has been applied across the life-span, using a multi-disciplinary perspective, and has recently been defined as the “process of effectively negotiating, adapting to, or managing significant sources of stress or trauma. Assets and resources within the individual, their life and environment facilitate this capacity for adaptation and “bouncing back” in the face of adversity.” (Windle, 2011, p. 153).

When focusing on the individual, one core characteristic of resiliency investigated thus far is the concept of personal hardiness, which is used to cope effectively with life's stresses and strains. Hardiness has since evolved into the

construct of mental toughness, which refers to the ability to maintain the control, commitment and confidence that allows one to view stressful situations as challenges rather than threats (Veselka, Schermer, Martin, & Vernon, 2010). In addition to focusing on these types of positive personality constructs, which facilitate personal growth in the presence of stress or trauma, the resiliency approach has expanded considerably over the past decade to also incorporate certain positive psychology perspectives. As championed by Peterson and Seligman (2004), positive psychology has catalogued additional positive character strengths of the individual, and then determined how these may interact with other environmental, personal and situational variables to facilitate growth, personal enhancement, and psychological well-being.

Over the past decade, positive psychology had guided the development of measures of character strengths and positive intervention exercises that can lead to a healthier life-style and greater psychological well-being (Proctor, Maltby, & Linley, 2011; Schueller, 2010). In this domain of research, 24 positive character strengths are measured via the Values in Action Inventory of Strengths (VIA-IS), with the most commonly endorsed strengths being love, humor, kindness, social intelligence and open-mindedness (Peterson, Park, Pole, D'Andrea, & Seligman, 2008; Proctor et al., 2011). Researchers have found evidence that several of these character strengths are significant predictors of well-being and life satisfaction, including hope, zest, humor, gratitude, love and curiosity (Gillham et al., 2011; Proctor et al., 2011). Humor, which is defined in this domain as a general positive attribute (e.g., like to laugh and joke, bring smiles to other people), is one of the character strengths that contributes most strongly to life satisfaction (Peterson, Ruch, Beermann, Park, & Seligman, 2007). Of particular interest from a resiliency perspective is that several positive character strengths, such as kindness, humor, leadership, love and social intelligence, all showed significant increases in growth following experiences with major traumatic events, such as a life-threatening accident, attack, or illness (Peterson et al., 2008). In addition, some of these positive character strengths are even better predictors of post-treatment recovery from depression than negative dysfunctional attitudes (Huta & Hawley, 2010).

Positive psychology has also contributed to the development of a number of distinct exercises or positive interventions that can foster growth, resiliency, and well-being. This includes such techniques as explicitly savoring and sharing good news, reviewing one's blessings on a daily basis, and expressing gratitude via written testimonials. Meta-analyses have indicated that these techniques are generally quite effective, with each of these exercises typically resulting in higher levels of positive affect, happiness, and life satisfaction; along with lower levels of depressive symptomatology (Sin & Lyubomirsky, 2009; Schueller, 2010).

In summary, a resiliency approach, including the positive psychology work described above, has led to a re-orientation of research on well-being and quality of life to also consider how individuals may grow in a positive manner, and become more resilient when facing life's stress and strains. Rather than just considering how adverse life events and dysfunctional personality characteristics impact negatively on well-being, this resiliency re-orientation has facilitated consideration of the potentially beneficial role of a number of positive personality attributes or characteristics, including humor.

Contemporary Research on Humor, Coping and Psychological Well-Being

It is important to note that a quite different body of psychological literature on the role of humor in coping, quality of life, and psychological well-being has also developed over the past twenty years or so. This research, while often unfolding in parallel with the above cited work on resiliency and humor, has rarely been incorporated within

a resiliency framework. This contemporary renaissance of psychological theory and research on humor has focused extensively on furthering our understanding of the facilitative or positive effects of humor (Kuiper, 2010). Thus, much of this work addresses such issues as how humor can facilitate coping with stress, or how humor can enhance personal and social relationships (Martin, 2007). A variety of mechanism and processes have been advanced to account for these facilitative effects. These include emotion regulation of negative affect by using humor and cognitive re-appraisals to distance one's self from stressful life events and circumstances (Kuiper, Martin, & Olinger, 1993). This body of research, which is substantial, has proceeded in almost complete isolation of theory and research on resiliency, and associated constructs such as happiness (Herzog & Strevey, 2008).

In light of the above, one aim of the present approach was to determine how prior work on the use of humor to cope with stressful situations or life events might also pertain to the personal characteristics aspect of a resiliency framework (Windle, 2011; Zautra et al., 2008). In this approach, sense of humor can be viewed as one of the important facets of personal resiliency that an individual can draw upon, when attempting to deal with high levels of adversity, trauma, or any other extremely stressful circumstance. The following section describes several lines of humor-related evidence relevant to this proposal.

Humor as a Facet of Personal Resiliency

Initial evidence comes from anecdotal or case report studies that have documented the use of humor to cope with the extremely traumatic events typically encountered by emergency service personnel, such as police, firefighters, and those in medical settings. Workers in these highly stressful occupations often employ cynical humor or “gallows humor” to relieve tension, vent their feelings, and cope with stress in settings such as the emergency room (Rowe & Regehr, 2010; van Wormer, & Boes, 1997) or as HIV service providers (Kosenko & Rintamaki, 2010). It has been suggested that humor is used adaptively in these adverse situations to help detach or distance the self and also foster group cohesion and social support, in order to ensure that personnel can act effectively under these traumatic circumstances.

These observational studies are extremely rich in descriptive detail and high on ecological validity (being real-life high stress settings); but they also display little experimental control, thus limiting any firm conclusions. Although many of these reports certainly describe the personal use of humor that would fit well within a resiliency framework, these case studies also refer to other uses of humor that are quite maladaptive for the individual, such as inappropriately masking emotions or pain, or alienating others by using cynical humor (Kosenko & Rintamaki, 2010). Furthermore, longitudinal research with some service providers has found that police officers displaying greater levels of humor were actually at increased risk for cardiovascular disease, greater body mass, and increased smoking (Kerckänen, Kuiper, & Martin, 2004), thus seriously challenging the humor and resiliency link.

Further evidence for viewing humor as a personal resiliency factor emerges from other naturalistic studies in high stress situations. As one illustration, Gavrilovic et al. (2003) found that the use of humor was one of the coping strategies used by civilians subjected to bombing and air raids, and was related to lower levels of post-traumatic stress “intrusions” a year later. However, it was not clear how much of this effect could be attributed to humor use only, as the various coping strategies used by individuals were examined together (rather than separately), with all of these measures obtained retrospectively. In contrast, Ong, Bergeman, and Bisconti (2004) used a more rigorous prospective longitudinal design, along with separate assessments of humor coping, perceived stress, positive affect, and depression, to examine conjugal bereavement in 34 older adult widows. These investigators

found that increased humor use in the period following the death of one's spouse helped promote greater emotional resilience. In particular, those using more humor to cope during conjugal bereavement were better able to keep their positive emotions distinct and separate from their negative emotions, resulting in fewer depressive symptoms.

Other research has examined how the personal use of humor may contribute, in a positive manner, to dealing with a broad variety of life situations across the life span. This work includes the innovative use of daily filming to document at-risk adolescents' use of humor to enhance socio-emotional functioning during typical encounters (Cameron, Fox, Anderson, & Cameron, 2010); the examination of high school students' use of humor to cope with stress during college preparation (Shaunessy & Suldo, 2010); and the use of humor by elderly women when making upsetting and painful self-disclosures (Matsumoto, 2009). Although the stressors in these studies are not always as extreme as those described previously, they are still of sufficient magnitude to demonstrate that the personal use of humor can be quite congruent with a resiliency model. As one example, intellectually gifted high school students used humor more effectively to help feel positive emotions when dealing with the stresses of college preparation, compared to non-gifted students. In a similar fashion, elderly Japanese women conversing with friends about negative changes in their life circumstances, such as severe illness or the death of a spouse, were able to convert painful self-disclosures about these topics to more humorous comments that could then be shared appropriately with friends. Similar humor-related benefits for coping with stressful life events have also been reported by elderly residents in assisted living (Westburg, 2003).

Epidemiological research has also provided evidence congruent with the proposal that humor can serve as an important personal facet of resiliency. In one of these studies, Norwegian patients with end-stage renal disease were tracked prospectively for survival rates across a 2 year period (Svebak, Krisoffersen, & Aasord, 2006). Here, those displaying a greater sense of humor also displayed survival rates that were 31% higher, on average, than experienced for those with a lower sense of humor. A more recent study by Svebak, Romundstad, and Holmen (2010) expanded the scope considerably by tracking the links between sense of humor and survival rates for over 50,000 respondents in a county in Norway, across a 7 year prospective time span. This research found that hazard ratios were significantly reduced for those with a greater sense of humor. This benefit of humor use was evident regardless of gender and current health (poor versus good), but became much less pronounced above the age of 65.

Additional evidence for resiliency effects for personal humor comes from moderator research examining stress-buffering effects. Here, Martin and Lefcourt (1983) proposed that individuals with high levels of coping humor would be more resistant to the negative impact of life stressors than individuals with low coping humor. It was predicted that the former would use humor to distance themselves more fully from life stressors, thus reducing their negative personal impact. This interaction effect was evident, as high humor individuals showed little or no increase in negative mood when their number of negative life events increased from low to high. In contrast, those displaying low levels of coping humor showed a marked increase in negative mood, as their negative life events increased. This stress-buffering effect of humor has also been documented in other studies (e.g., Nezu, Nezu, & Blissett, 1988).

Further research has helped clarified the processes involved in this stress-buffering effect, by focusing on cognitive appraisals. In terms of negative events, Kuiper et al. (1993) found that individuals high on the use of coping humor provided more positive challenge appraisals regarding an upcoming examination than those low on coping humor. This finding is consistent with an "event-enhancement" function for humor, with more humorous individuals actively

seeking out life experiences and viewing them in a positive challenging manner, rather than as a negative threat. In further accord with this event enhancement effect, a subsequent study by [Kuiper, McKenzie, and Belanger \(1995\)](#) found that higher levels of coping humor were associated with significantly more positive challenge appraisals for a laboratory-based drawing task (draw a person on a winter day); as well as lower threat appraisals prior to the first attempt on this task. Furthermore, those with higher coping humor also displayed more positive affect, greater motivation, and more effort in completing this task.

The above findings fit quite well into a personal resiliency model by suggesting that high levels of coping humor are associated with more positive challenge appraisals for various life events. In turn, these positive appraisals can also generate greater enthusiasm and enjoyment for dealing with these events, and are thus strongly associated with more positive affect. In further accord with this proposal, [Abel \(2002\)](#) found that those with a high sense of humor reported less stress and current anxiety than those in a low humor group, despite group equivalence in both the number and type of everyday problems they experienced. This pattern was attributed to differences in the cognitive appraisal process, with high humor individuals appraising less stress in their lives and using more positive re-appraisals when encountering stressful life events. Even more recently, [Geisler and Weber \(2010\)](#), found that the use of humor helped individuals cope more positively with poor performance on a self-threatening task (a bogus intelligence test with many unsolvable items), by increasing both external appraisals for failure on this task and subsequent positive affect levels.

Much of the research described thus far has focused primarily on the facilitative or enhancement effects of humor when dealing with stressful events. In addition to coping effectively with stress, however, a resiliency approach would suggest that humor should also contribute significantly to the enhancement of positive life experiences and events. Interestingly, several lines of evidence offer support for this positive enhancement effect of humor ([Kuiper & Olinger, 1998](#)). As one illustration, [Kuiper, Martin, and Dance \(1992\)](#) found that more humorous individuals rated their most important personal roles as significantly more pleasant and satisfying than less humorous individuals. This study also found that as the number of positive life events increased, it was only the more humorous individuals who showed an increase in their positive affect levels. Low humor individuals did not experience this heightened positive affect for more positive life events. Finally, this study also revealed that high-humor individuals were much better able to maintain their positive affect in face of increasingly negative life events, whereas low humor individuals showed a significant drop. These findings, which are quite congruent with the findings of the drawing task study described earlier ([Kuiper et al., 1995](#)), provide further clear support for a positive enhancement effect for sense of humor. Thus, consistent with a resiliency perspective, a good sense of humor can add a degree of richness and fullness to one's life, including enhanced enjoyment of positive life experiences, greater positive emotions, a more positive view of self, and greater psychological well-being and quality of life.

Another line of evidence for the proposal that humor can be considered one of the personal facets of resiliency comes from the positive psychology research described earlier. Recall that this work by Peterson and various colleagues identified humor as one of 24 positive character strengths measured by the Values In Action – Inventory of Strength (VIA-IS); and then demonstrated how increased levels of personal humor can also predict greater psychological well-being and life satisfaction ([Peterson et al., 2007](#)). Researchers in this domain have also provided some preliminary evidence that personal humor may “grow” in character strength, following significant personal traumas ([Peterson et al., 2008](#)). As such, this work has made several beneficial contributions to the investigation of how humor may relate to psychological well-being, quality of life, and resiliency. There remains, however, a

fundamental concern with how the construct of humor that has been defined and measured in this domain of research. This issue is highlighted below, followed by several recommendations leading to the presentation of a more comprehensive theoretical model for future work on humor, and its potential linkages with resiliency and psychological well-being.

From a Positive Psychology Perspective to a Humor Styles Approach

In the positive psychology approach, sense of humor is construed as a general positive attribute (e.g., joking and making others laugh). Theoretically, humor was originally conceptualized by [Peterson and Seligman \(2004\)](#) as one of several character strengths (e.g., gratitude, hope) that would fit within one of six broader virtues (e.g., transcendence - the forging of connections to the larger universe and providing meaning). Subsequent factor analytic work, however, has not supported this clear interpretation, with humor displaying considerable variability in its factor loadings. Depending upon the study examined, humor as a positive character strength has loaded on such different virtues as interpersonal, humanity, or transcendence; or even simultaneously on several different virtues, such as leadership, temperance, and transcendence ([Gillham et al., 2011](#); [Peterson & Seligman, 2004](#); [Peterson et al., 2007](#); [Ruch et al., 2010](#)).

Compounding the factorial instability of the humor component of the VIA-IS is the further concern that this measure does not capture the broad spectrum of humor. Specifically, it only assesses the positive aspects of humor (e.g., using humor to enhance social interactions), while ignoring the maladaptive aspects (e.g., using sarcastic or aggressive humor to put down others). In the past decade, the humor literature has provided considerable evidence that the construct of humor is multi-faceted; and that any work on humor and well-being needs to clearly identify and assess both the positive and negative aspects of this construct ([Herzog & Strevey, 2008](#); [Kuiper, Grimshaw, Leite, & Kirsh, 2004](#); [Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003](#)). In this regard, [Beermann and Ruch \(2009\)](#) have provided strong empirical evidence that the VIA-IS only taps into the positive aspects of the humor construct. When combined with factorial instability, this further limitation of VIA-IS humor assessment may account for some of the failures to replicate previous findings in this domain. As one illustration, [Gillham et al. \(2011\)](#) recently reported that VIA-IS humor strength did not predict future subjective well-being in their longitudinal sample of 149 high school adolescent students, although this humor resiliency effect has been found in prior positive psychology research.

In light of the above, it is suggested that any research examining humor from a resiliency or positive psychology perspective should first of all clearly define exactly what is meant by the construct of humor, including consideration of both its positive and negative elements. This work should also consider the possibility that various individuals may differ markedly in terms of the specific style of humor they display. For example, some individuals may typically use aggressive humor, which is generally maladaptive; whereas others may typically use affiliative humor, which is much more beneficial from a resiliency and growth perspective. Thus, by carefully delineating the humor construct being examined, this work can more clearly distinguish facets of humor that might be viewed as positive strengths contributing to resiliency, from the facets of humor that are clearly negative and maladaptive.

To help accomplish this goal, it is proposed here that [Martin et al.'s \(2003\)](#) humor styles model can serve as a useful theoretical-empirical framework for providing a more detailed examination of how humor may (or may not) relate to resiliency. This model has now accumulated considerable empirical support ([Kuiper et al., 2004](#); [Kuiper,](#)

2010; Martin, 2007), and as described below, documents the various functions of both adaptive and maladaptive humor styles in a wide variety of life circumstances.

Overview of the Humor Styles Model

Martin et al. (2003) have conceptualized sense of humor as a multi-faceted individual difference characteristic involving four main styles, namely, affiliative, self-enhancing, aggressive, and self-defeating humor. Both the affiliative and self-enhancing humor styles generally tap the positive or adaptive aspects of sense of humor; whereas the aggressive and self-defeating styles generally tap the negative or maladaptive aspects of this personal characteristic (see Kuiper, Kirsh, & Leite, 2010; Martin, 2007).

In the humor styles approach, affiliative humor is a warm and benevolent style involving funny non-hostile jokes and spontaneous witty banter that serves to amuse others, but in a respectful and accepting way. Affiliative humor is used adaptively to enhance social relationships, reduce conflict, and increase group morale. Light-hearted jokes and funny banter maintain group cohesiveness and decrease interpersonal tensions, thereby facilitating interpersonal relationships in a manner that is accepting and affirming of both self and others.

Self-enhancing humor is also described in the humor styles model as being adaptive, self-accepting, and non-detrimental to others. Self-enhancing humor involves the ability to take and maintain a humorous perspective on life, and is used to deal with personal stress by reducing negative emotional and cognitive responses to adverse life circumstances or events. As such, this humor style may be used to boost one's self-esteem and guard against negative emotions. In other words, this humor style is used as a facilitative coping strategy to protect and buffer the self, but not at the expense of self or others.

In contrast to these two adaptive humor styles, the maladaptive humor styles tend to be detrimental to either the self (self-defeating humor) or others (aggressive humor). Individuals with an aggressive humor style employ teasing, sarcasm, ridicule, and disparagement, without consideration of its impact on others. Aggressive humor has a strong negative effect on interpersonal relationships, as it is specifically intended to put down and insult others. Those high on aggressive humor display little regard for others and use this humor style at the expense of others. As such, the consistent use of an aggressive humor style may ultimately serve to alienate other individuals, thus severely impairing one's social and interpersonal relationships.

Finally, self-defeating humor is excessively critical and ridiculing of one's self. Individuals with this humor style often allow themselves to be the "butt" of jokes, and laugh along when they are disparaged by others, in the hopes of gaining others' approval and acceptance. Self-defeating humor is used in a futile attempt to enhance relationships with others, but at the expense of positive feelings about self. Of further concern is that this ingratiating humor style may actually be used to hide negative feelings about the self, and avoid dealing with problems, such as low self-esteem and emotional neediness, in a more appropriate manner.

These four styles of humor are typically assessed via the Humor Styles Questionnaire (HSQ; Kuiper et al., 2004; Martin et al., 2003). The HSQ has now been used in a large number of studies to assess sense of humor in both adults and adolescents (Kuiper, 2010; Martin, 2007). This 32-item self-report scale has 8 items per humor style; with a sample item for each sub-scale being as follows: 1) affiliative humor "I laugh and joke a lot with my close friends," 2) self-enhancing humor "Even when I'm by myself, I am often amused by the absurdities of life," 3) aggressive humor "If someone makes a mistake, I will often tease them about it," and, finally, 4) self-defeating

humor “ I will often get carried away in putting myself down if it makes my family or friends laugh.” Researchers have reported very good psychometric properties for the HSQ, including different forms of reliability and validity. As one example, [Martin et al. \(2003\)](#) found that affiliative humor was related to the tendency to joke with others, and subsequently to constructs such as extraversion, cheerfulness, and psychological well-being. Conversely, aggressive humor was related to the tendency to criticize and manipulate others, and to constructs such as hostility and sarcasm. Evidence is also strong that the four scales of the HSQ are distinct from one another, with intercorrelations being in the low to modest range, and subsequent factor analytic work typically showing the expected four factors. A number of studies now provide evidence for the existence of these four styles across European, North American, Middle Eastern, and Eastern cultures ([Kuiper, 2010](#); [Kuiper, Kazarian, Sine, & Bassil, 2010](#); [Martin, 2007](#)).

There is also a growing body of research demonstrating differential relationships between the adaptive and maladaptive humor styles and psychological well-being ([Martin, 2007](#); [Kuiper, 2010](#)). As one illustration, both [Kuiper et al. \(2004\)](#) and [Martin et al. \(2003\)](#) found that higher levels of affiliative and self-enhancing humor were linked to lower depression and anxiety, higher positive affect, and higher self-esteem; whereas higher levels of maladaptive self-defeating humor were associated with increased depression and anxiety, greater negative affect, and lower self-esteem. [Erickson and Feldstein \(2007\)](#) found similar results when examining adolescent populations, further supporting the idea that the adaptive humor styles facilitate psychological well-being, while self-defeating humor impedes well-being. The important role of humor styles in contributing to these aspects of psychological health has been further confirmed in work documenting various humor styles as significant mediators between both positive and negative self-schema evaluative standards and indices of psychological well-being, such as depression and self-esteem ([Dozois, Martin, & Bieling, 2009](#); [Kuiper & McHale, 2009](#)).

The four humor styles are differentially associated with relationship satisfaction, which can also have a strong impact on well-being. For example, [Campbell, Martin, and Ward \(2008\)](#) found that individuals whose dating partners used more affiliative and less aggressive humor were more satisfied with this relationship. Moreover, these individuals reported increased perceived closeness with their partners, and better problem solving resolutions following a discussion of a conflict. Finally, [Cann and Etzel \(2008\)](#) found that greater use of self-enhancing humor was associated with higher levels of happiness, hope and optimism; whereas greater use of self-defeating humor was related to decreased levels of these positive personal qualities. Of importance here is that these positive personality qualities also explain a significant amount of variability in perceived stress. Overall, these studies offer considerable support for not only the humor styles model, but also its pattern of distinctive relationships with psychological well-being.

Incorporating the Humor Styles Model in a Resiliency Approach to Humor

As described above, a major concern with some of the positive psychology work on humor and resiliency is the exclusive focus on a singular positive construct of humor. In contrast, the humor styles model bring with it considerable conceptual clarity by recognizing not only the positive or adaptive aspects of humor, but also the maladaptive or negative aspects. Furthermore, in addition to its strong theoretical foundation, this model now has a considerable amount of empirical support, including strong psychometric evidence for the applicability and utility of the HSQ.

Accordingly, it would be useful to integrate this humor styles model (and its accompanying measure, the HSQ) into a resiliency approach to humor. This integration could be helpful in several ways. First, consideration of both positive and negative humor styles might help clarify some of the past work on humor and resiliency that has yielded conflicting or unexpected findings. As one illustration, Gillham et al. (2011) did *not* find that increased levels of humor predicted future well-being or life satisfaction, in their adolescent sample. Perhaps this failure to replicate the expected resiliency finding may pertain to how humor was defined and measured in their research. Not acknowledging that sense of humor is a multifaceted construct, with both positive and negative elements, may have blurred any distinctive findings that may have been evident for each separate humor style. In particular, self-enhancing or affiliative humor may have yielded the expected resiliency effects, whereas self-defeating or aggressive humor may not. Such a pattern would have shown how specific facets of sense of humor may have very different relationships with resiliency outcomes such as well-being or life satisfaction.

The above concern is also applicable to any other resiliency studies that have yielded null or inconsistent findings for humor. The inclusion of the humor styles model in this domain would allow for a much more precise and detailed examination of the exact role of sense of humor. This inclusion could clearly separate out effects pertaining to positive psychology (i.e., adaptive humor styles), from the negative impact of the maladaptive humor styles. Furthermore, there is a real need to combine such work with longitudinal research containing multiple testing points, as much previous work has been cross-sectional, limiting the inferences that can be drawn. This longitudinal work could be diary-based, for example, and include records of daily affect (both positive and negative), an assessment of the four humor styles, the daily use of each humor style, and the life experiences dealt with by the individual.

Research on humor and resiliency that incorporates the humor styles model should also keep in mind that individuals may differ in their typical use of the humor styles. As just one set of documented profiles, some individuals may consistently use self-enhancing and affiliative humor; whereas others may typically engage in self-defeating and aggressive humor (Galloway, 2010). The humor styles model would generally expect that enhancement or facilitative effects would be associated with the former profile; but maladaptive effects with the latter.

Future research on humor and resiliency should also note that contemporary humor literature has shown that some of the detrimental effects of humor might emerge in different (and sometimes more subtle), manifestations that are linked to specific patterns of humor styles. One example is work by Hodson, MacInnis, and Rush (2010) showing that individuals with higher reported use of both affiliative and aggressive humor also scored higher on measures of racial prejudice and social dominance. These individuals also showed a more cavalier and nonchalant approach to humor that minimized its potential harm to others, and also helped to mask the biases that were evident in their more favorable responses to disparaging jokes about Mexicans (Hodson, Rush, & MacInnis, 2010).

Perhaps the fundamental message evident in all of the above is that future humor research on resiliency needs to be much more cognizant of the fact that humor can also have negative or detrimental effects, in addition to positive. Recall that some of these detrimental effects are described quite well in the case study reports included earlier in this article. Kosenko and Rintamaki (2010), for example, reported that HIV service providers also used humor in a maladaptive manner to mask emotions or pain, with the result being less effective working relationships. The major problem with this prior descriptive work is that these negative effects were often not given much further consideration, as most of these case reports emphasized how humor can benefit the individual in a resiliency-like

manner. In short, these case reports did not have a theoretical model that could readily fit all of their descriptive data points for the effects of humor (i.e., both negative and positive). The humor styles model, however, provides a rigorous theoretical-empirical model that can easily incorporate all of these data points. In particular, the humor styles model would expect that detrimental effects would emerge when using negative humor styles. To illustrate, several studies have shown that individuals are less likely to want to engage in future interactions with a person displaying higher levels of self-defeating or aggressive humor, compared to a person displaying more self-enhancing or affiliative humor (Kuiper, Kirsh, & Leite, 2010). Interesting, these adaptive humor comments also made the *recipient* of this humor feel significantly more positive and less negative about themselves. Further research has shown that some of these interpersonal effects of humor (but not all), are evident cross-culturally (Kuiper, Kazarian, Sine, & Bassil, 2010); and that affiliative humor use can also diminish some of the negative interaction affects associated with depression (Ibarra-Rovillard & Kuiper, 2011). Taken together, this work shows that the use of the humor styles model could also help guide cross-cultural research on humor and resiliency issues, as well as further work on the impact of humor on the relationships between various forms of psychopathology and reduced resiliency.

Humor's Impact on Resiliency: Clarifying the Processes Involved

It is important that future research provides greater theoretical clarification and empirical testing of the processes or mechanisms that may underlie the obtained effects of humor on resiliency. When considering positive effects, one of the more common proposals is that humor use can promote distancing from the sources of stress (Kuiper & Olinger, 1998). This distancing stems from a cognitive shift that provides an alternate and less threatening perspective on the situation (Geisler & Weber, 2010; Kidd, Miller, Boyd, & Cardena, 2009; Kuiper et al., 1993). This shift and subsequent increased detachment has been shown in several of the cognitive appraisal studies described previously, as participants who used coping humor were better able to distance themselves from stressful events, such as academic exams or drawing tasks (Abel, 2002; Geisler & Weber, 2010; Kuiper et al., 1993; Kuiper et al., 1995).

Based upon this prior work, it would be worthwhile to continue with the theoretical elaboration and empirical testing of how and why humor use is linked to cognitive appraisals that may either facilitate or deter resiliency. Some of this work might consider how the four humor styles may interact with the use of either challenge or threat appraisals for various life situations encountered by individuals. Furthermore, at least some of this work should incorporate a process orientation across time, as various important processes may unfold quite differently over even short periods of time. To illustrate, the study by Geisler and Weber (2010), as described previously, found that greater humor use was associated with more external attributions for failure on a bogus intelligence test, and less negative and more positive affect. These effects obtained immediately after completing the task, and strongly supported a resiliency interpretation for humor use. Of note, however, is that this same study also had further findings that were quite contrary to a resiliency model. In particular, those that used humor also spent less time and performed poorer on a subsequent test, thus demonstrating behaviors directly opposite to the notions of growth and bounce-back from adversity that would be predicted by a resiliency model (Windle, 2011; Zautra et al., 2008). As such, these negative findings illustrate quite clearly that, even in a very short time frame, the processes relating humor use to cognitive appraisals, affect, and actual performance may vary dramatically, supporting some aspects of a resiliency model, but not others.

An additional important avenue for resiliency research is to consider how humor use may relate to cognitive appraisals that *enhance* positive thoughts and emotions. This proposal maps onto both the savoring and gratitude aspects of positive psychology (Schueller, 2010; Sin & Lyubomirsky, 2009); and has been discussed previously in the humor literature in terms of positive event enhancement (Kuiper & Olinger, 1998). As such, there is now considerable evidence that humor is linked to positive thoughts and feelings, as demonstrated by prior research in our lab (Kuiper et al., 1992; Kuiper et al., 1995), and elsewhere (e.g., Aldridge & Roesch, 2008; Geisler & Weber, 2010; Herzog & Strevey, 2008; Ong et al., 2004; Shaunessy & Suldo, 2010).

Emotional Regulation in a Humor and Resiliency Model

In exploring the links between humor, cognitive appraisals, and emotions, it would be useful to more fully integrate existing emotional regulation models into a humor and resiliency framework. Geisler and Weber (2010) have already begun to do so by incorporating an existing model of emotional regulation into their research on humor as a cognitive-change strategy that individuals can use to regulate or alleviate negative emotions. Consistent with the processes described in previous humor research (e.g., Kuiper et al., 1995), humor use is considered to be an antecedent-focused cognitive-change strategy that leads to more positive re-appraisals of a negative experience or situation; thus putting it in perspective, and helping the individual to distance themselves from the trauma or stressor.

Geisler and Weber (2010) further suggest that humor differs from other cognitive-based emotional regulation strategies in that it does not deny the negative experience, but helps construe it as less threatening. In emotion regulation theory, these effects are termed down-regulating, as they help reduce the expression and repercussions associated with negative emotions. Interestingly, Geisler and Weber (2010) have also proposed that some of the emotion regulation effects of humor, even when dealing with negative situations, may be up-regulating by introducing positive emotions to the situation. In particular, they suggest that the mirth associated with the humor used in a stressful context can also elicit positive emotions, which then have their own salutary effects (see also Martin 2007). These include an overall reduction of the gravity of the upsetting situation, as well as a broadening of attention to also include more positive aspects of one's environment, in addition to the stressful event.

These types of up-regulating effects are considered in greater detail in an emotion regulation model that focuses exclusively on positive affect regulation (Tugade & Fredrickson, 2007). Of particular interest here are the active and positive coping strategies (such as savoring and gratitude), that can maintain or increase the experience of positive emotions. Other strategies, such as watching a comedy film, or smiling when feeling upset or sad, are also described in this model as positive strategies that elicit positive affect. According to the broaden-and-build theory of positive emotions (Fredrickson, 2006), this positive affect then provides the psychological "lift" and flexibility that allows the individual to engage in a broader range of life activities that are more inspiring, pleasant, and creative, thus building resilience to future negative or stressful events.

Humor use can clearly be thought of as one of these positive emotional regulation strategies, as it provides the basis for generating positive affect, either as part of a humorous re-interpretation of a traumatic event, or as part of the humorous savoring and enjoyment of a positive event. As such, future research should test the degree to which humor use in both of these types of situations is actually associated with the various processes described in emotional regulation and broaden-and-build theories. This hypothesized causal sequence would suggest that greater humor use would lead to greater mirth or positive affect, which, in turn, would lead to greater flexibility and

broadening of life experiences, and, ultimately, greater resiliency. This proposed sequence could also be assessed separately for each of the four humor styles, as this would give an indication of how these four trait aspects of humor resiliency may differ.

Can Effective Humor Use Be Trained?

The notion that humor may function as one means of regulating both negative and positive emotions immediately begs the question of whether effective humor use can be trained (Kuiper & Olinger, 1998; Tugade & Fredrickson, 2007). Over the years, much has been written about how humor can be used (and possibly trained) in a variety of domains, such as psychotherapy, education, work, and social settings. However, the majority of this work has been anecdotal, descriptive, and highly speculative; with a virtual lack of experimental control and rigor being the norm (for reviews and commentaries see both Kuiper & Olinger, 1998 and Martin, 2007).

Of encouragement for a humor and resiliency perspective is that more sophisticated and rigorous evaluative studies are now beginning to emerge. One example is recent work by Crawford and Caltabiano (2011) that tested whether effective humor skills can be taught to community volunteers randomly assigned to one of three different experimental groups (i.e., a humor training group, a social control group, and a non-intervention group). Using the broaden-and-build theoretical framework described previously, this longitudinal study found that humor skills could be enhanced across eight training sessions, so that individuals had more control over regulating daily positive affect, thus increasing emotional well-being. This pattern was evident in higher ratings of positive affect, self-efficacy, optimism, and control for the humor group alone; with these increases being maintained at a three month follow-up. Furthermore this group also displayed decreases in perceived stress levels, depression, and anxiety. Similar findings have been reported in a previous pilot study that trained humor skills use in a small group of clinically depressed individuals (Falkenberg, Buchkremer, Bartels, & Wild, 2011). This finding suggests that even those displaying psychopathology can benefit from both the down-regulating and up-regulating effects of effective humor use.

Considerable work is still required, however, to thoroughly investigate the role of humor use in resiliency, as many other parameters remain unexplored. One possible avenue of research could compare humor use training with training in the use of other positive psychology techniques that also promote increased positive affect, such as savoring or gratitude expression (Sin & Lyubomirsky, 2009). Another extension could investigate how the four humor styles may differentially relate to the effective training of humor use. There may be considerable variation across and within individuals, in the degree to which humor is part of the arsenal for dealing with stress and trauma (Aldridge & Roesch, 2008). Recall that some individuals may characteristically display maladaptive styles, whereas others may use more adaptive styles (Galloway, 2010). However, it is unknown if those displaying aggressive and self-defeating humor can be taught not only to decrease the use of these maladaptive styles, but also replace these styles with the increased use of affiliative or self-enhancing humor. It is also unknown whether those characterized by a general lack of humor (i.e., those low on all four humor styles; Galloway, 2010) would be good candidates for humor training.

Concluding Comments

The evidence reviewed here clearly suggests that there is an important role for humor in a resiliency approach to stress and trauma. Case studies, moderator research, and cognitive appraisal work on humor all converge on the

notion that increased humor can often help an individual cope more successfully with traumatic situations. In further support of a resiliency approach, there is also considerable evidence that increased humor can contribute to the enhancement of positive life experiences, and lead to greater positive affect and psychological well-being. There is very limited empirical support, however, for the notion that greater humor use results in positive personal growth and a “bounce-back from adversity,” as would be predicted by resiliency models (e.g., Windle, 2011). Overall, however, these findings certainly encourage further research in this domain, as they suggest that humor may play a role in resiliency, but with some important limitations and associated boundary conditions. As such, further research efforts aimed at clarifying the effects of various styles of humor on resiliency to stress and trauma are clearly warranted.

Accordingly, any future work should be cognizant of the need to move beyond the single positive notion of sense of humor that has been so prominent in this domain, and instead adopt models which clearly acknowledge both adaptive and maladaptive styles of humor. Further research using this multi-faceted model of sense of humor could then help disentangle any positive psychology effects of adaptive humor from the generally detrimental effects of maladaptive humor. Furthermore, this work might also draw from other individual difference models of sense of humor (e.g., Herzog & Strevey 2008; Svebak et al. 2010) to considerably expand the scope of humor attributes that might fall under a trait resiliency approach. Finally, any extensions of this work will also need to account for the well-established pattern that increased humor use appears to be much more beneficial for psychological well-being than for improvements in physical health (Kerkkänen et al., 2004; Martin, 2007). This distinction presents a particular challenge to resiliency models, and needs to be addressed with clarifying research and compelling theoretical models (Kuiper & Nicholl, 2004).

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About the Author

Professor **Nicholas A. Kuiper** has been a faculty member in the Department of Psychology at the University of Western Ontario since 1978. During this time he has published extensively on topics such as self-schemata and information processing, social-cognitive aspects of depression, and social and personality aspects of humor. He has also been involved in a wide range of administrative duties, including a stint as Associate Dean of Graduate Studies and many years as the Director of the Clinical Psychology Graduate program at Western.