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Personality impressions associated with four distinct humor styles

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This study examined how personality impressions about another person are influenced by the style of humor that person displays. Four distinct styles were examined, with two of these being adaptive (affiliative and self-enhancing humor), and two being maladaptive (aggressive and self-defeating humor). Participants read descriptions of an individual displaying each humor style, and then rated that individual on several other personality attributes (e.g., friendly, complaining). The adaptive humor styles enhanced personality impressions of another individual, whereas the maladaptive styles had strong detrimental effects. Furthermore, participants provided clearly differentiated personality impressions within both the adaptive and maladaptive humor categories. Affiliative humor led to more positive impressions of another than self-enhancing humor; whereas aggressive humor resulted in more negative personality impressions than self-defeating humor. These findings were discussed in terms of approaches to humor that acknowledge the multifaceted nature of this construct and the resulting impact on social relationships.

Key words: Humor styles, impression formation, person perception.

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INTRODUCTION

When considering the various personality characteristics that other people may possess, we generally view humor as being a very positive and desirable attribute. For example, individuals who engage in humorous behaviour at social gatherings are often labelled as being the life of the party. Similarly, when looking for a mate, individuals consistently indicate that they would prefer a partner that displays humor (Bressler, Martin & Balshine, 2006). Both adolescents and young adults rate humor as being among the more important personal characteristics in a date, ideal romantic partner, or a potential long-term mate (Hansen & Hicks, 1980; Regan & Joshi, 2003). This desire for others to be humorous is evident across many different types of relationships, including marriage partners, and same and opposite-sex friends (Sprecher & Regan, 2002).

Interestingly, people are also quite willing to attribute additional positive characteristics to an individual considered to be humorous. This positive attribution is theoretically consistent with the notion that humor is a strong indicator of a healthy personality, and is thus closely tied to other positive personal qualities, such as heightened insight and enhanced interpersonal relationships (Allport, 1961; Maslow, 1954). In this regard, several studies have provided empirical support for a strong association between perceptions of humor in others and more positive evaluations of that individual. As one illustration, work supervisors who were perceived by their employees as being more humorous were also thought to be better leaders; as well as being more pleasant, motivating, intelligent, confident, and friendly (Decker, 1987; Priest & Swain, 2002). Similarly, players

that perceived their coach as being more humorous also liked their coach more (Grisaffe, Blom & Burke, 2003). Finally, Cann and Calhoun (2001) found that a person described as having a “well above average sense of humor” was perceived as having significantly higher levels of extroversion and other socially desirable attributes, compared with a person described as having an “average sense of humor.” This humorous person was also seen as having much lower levels of neuroticism and other socially undesirable attributes than the average person. When taken together, these findings support the conclusion that being humorous is usually thought of as a very positive and desirable personality attribute in others; and one that exerts a very pervasive and positive impact on our subsequent impressions of these individuals.

It should be noted, however, that these conclusions are based on research which has not generally provided much detail regarding exactly what is meant by humor as a personality construct. Instead, the implicit assumption underlying most of this work appears to be that humor is a single positive personality attribute that may yield beneficial effects, but can never be detrimental. Contrary to this position, however, contemporary research on humor has clearly documented the existence of four distinct styles of humor (Kuiper, Grimshaw, Leite & Kirsh, 2004; Martin, 2007; Martin, Puhlik-Doris, Larsen, Gray & Weir, 2003); with two of these being adaptive and two being maladaptive. This humor styles model is described below, followed by a detailed examination of how each of these styles may then result in very different impressions of another person, depending upon which specific humor style is most salient.

Humor styles model

Martin and his colleagues have identified four unique humor styles, two of which are adaptive and two of which are maladaptive (Martin, 2007; Martin *et al.*, 2003). Adaptive humor is playful and accepting, and may be used to enhance relationships with others (affiliative humor), or to help reduce feelings of stress and regulate negative emotions (self-enhancing humor). Affiliative humor is further described as warm, benevolent humor that is used in social situations to facilitate the formation and enhancement of interpersonal relationships in a manner that is accepting and affirming of both self and others. Self-enhancing humor involves the ability to take a humorous perspective on life, and is used to cope with personal stress by reducing negative emotional and cognitive responses to adversity or stressful events. In contrast, maladaptive humor is directed at others to enhance positive feelings about one's self (aggressive humor), or directed towards one's self in order to gain the approval of others (self-defeating humor). Individuals with an aggressive humor style employ sarcasm, ridicule, and teasing, without consideration of its impact on others. As such, aggressive humor has a strong negative effect on interpersonal relationships, as it is specifically intended to put down and insult others. Self-defeating humor involves humor that 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 to enhance relationships with others, but at the expense of positive feelings about self. A large number of studies have now provided strong converging evidence for the existence and well-being impact of these four distinct styles across diverse groups and cultures (Chen & Martin, 2007; Hampes, 2006; Kazarian & Martin, 2004; Kuiper *et al.*, 2004; Kuiper & McHale, in press; Martin, 2007; Saroglou & Scariot, 2002).

Differential effects of humor styles on personality impressions about others

We contend that personality impressions about others may differ quite markedly in terms of their overall positive or negative valence, depending upon the particular humor style that is being observed in that individual. For example, a person who uses adaptive affiliative humor that is warm and accepting is likely to be seen in a more positive light (e.g., as being friendly and pleasant). In contrast, a person that uses aggressive maladaptive humor to ridicule and put-down others may be perceived as being much more negative (e.g., mean-spirited and cold). As such, we predicted that individuals displaying either of the adaptive humor styles (affiliative, self-enhancing) would be attributed with higher levels of socially desirable characteristics (e.g., friendly and pleasant), and lower levels of socially undesirable characteristics (e.g., colder and meaner), compared with individuals displaying either of the maladaptive humor styles (aggressive, self-defeating humor). These predictions were tested

by providing participants with written descriptions of four different individuals, each of whom was described as being high on one of the four humor styles. The participants then rated the extent to which a set of socially desirable and socially undesirable attributes were also characteristic of each of these described individuals.

In addition to examining the overall differential impact of adaptive and maladaptive humor styles on personality impressions of others, our design also allowed us to test the extent to which a further degree of specificity may be evident. In other words, we could also determine whether the obtained personality impressions differed *within* each of the two main categories of adaptive and maladaptive humor. In particular, we examined whether the personality impressions regarding an individual displaying affiliative humor were distinct from the impressions formed for an individual displaying self-enhancing humor. Similarly, we also examined whether the impressions associated with an individual displaying self-defeating humor were distinct from those formed for an individual displaying aggressive humor.

Based upon theory and research associated with the humor styles model, we predicted that specificity would emerge within both the adaptive and maladaptive categories, as the humor styles are conceptually and empirically distinct from one another (Kuiper *et al.*, 2004; Martin, 2007; Martin *et al.*, 2003). Considering first the adaptive category, the humor styles model would predict that affiliative humor is associated with significantly more socially desirable attributes than self-enhancing humor. Such a pattern would reflect the very positive interpersonal focus of warm and benevolent affiliative humor, compared to the intrapsychic coping (and thus much less sociable) focus of self-enhancing humor (Martin, 2007). In addition, the model would predict that aggressive humor would be associated with more socially undesirable characteristics than self-defeating humor. This pattern would be consistent with the fundamentally negative interpersonal focus of aggressive humor, compared to a less aversive, yet still ingratiating, self-defeating humor style (Martin, 2007).

Enhancement and detrimental effects of humor styles on impressions of others

The above comparisons directly address the issue of how the four humor styles may differ from one another, in terms of their impact on personality impressions about others. They do not indicate, however, how each humor style might also yield more general enhancement or detrimental effects on personality impressions about others. In order to examine this issue, it is necessary to compare ratings obtained for each humor style with those obtained for a further condition in which humor was not included. This was done by having some of the participants in this study provide extroversion and neuroticism ratings for a "typical university student," but with no mention being made of humor. By comparing these "non-humorous" ratings with the extroversion and neuroticism ratings associated with each

humor style, we were then able to determine if the presence of a given humor style had either an enhancing or detrimental effect on the personality impressions of others.

Drawing upon findings showing that a “well above average sense of humor” is associated with greater extroversion and less neuroticism than an “average other,” Cann and Calhoun (2001) came to the conclusion that higher levels of humor greatly enhance the impressions formed of an individual. Although this may certainly be the case for the two adaptive humor styles (affiliative, self-enhancing), we would suggest that this is probably not the case when other individuals exhibit maladaptive humor. Here, we propose that any displays of aggressive or self-defeating humor by another person may actually have quite a detrimental effect on the subsequent impressions we form about that individual. Overall, then, we predicted that portrayals of adaptive humor (either affiliative or self-enhancing) would significantly enhance impressions of another individual, leading to higher levels of extroversion than found for the typical other, along with lower levels of neuroticism. In contrast, we predicted that the detrimental effects of maladaptive humor (either aggressive or self-defeating) would be evident in terms of lower levels of extroversion than found for the typical other, along with higher levels of neuroticism.

Finally, we also considered the possible effects of *low* levels of humor on the subsequent personality impressions we form about others. Here, we were interested in how diagnostic or informative it may be to know that someone does *not* display the humor-related behaviors associated with a given humor style. This was done by creating a brief description of an individual that was low on each humor style, and then having participants make subsequent ratings about extroversion and neuroticism levels for that individual. These ratings were then compared with the same ratings for the typical other.

Cann and Calhoun (2001) also examined a low level of humor, and reported a detrimental effect, with lower ratings of extroversion relative to their average other condition. These findings suggest that low levels of adaptive humor (self-enhancing and affiliative) may also lead to lower ratings of extroversion and higher ratings of neuroticism, when compared with the same ratings for a typical other. Conversely, low levels of maladaptive humor (aggressive and self-defeating) may have an enhancing effect on these personality ratings, leading to higher perceived levels of extroversion and lower levels of neuroticism. It still remains possible, however, that low levels of humor (be they adaptive or maladaptive) may be minimally diagnostic. If so, this would result in no differences between the typical other and low humor style conditions.

METHOD

Participants

A total of 166 students in introductory psychology classes at the University of Western Ontario participated in partial fulfillment of course requirements. There were 102 females and 64 males, with a mean age of 19.50 and a range from 18 to 33.

Materials and measures

Descriptors of high and low humor styles. For each of the four humor styles, a short descriptor was constructed to exemplify the main humor-relevant behaviours and motivations characteristic of an individual high on that particular style of humor (Kuiper *et al.*, 2004; Martin, 2007; Martin *et al.*, 2003). Examples of the descriptors for an adaptive and maladaptive humor style, respectively, are provided below.

- “Imagine a person who is very *high* on *affiliative* humor. This means that this person says funny things to amuse others and to put others at ease. Also, this person often makes others laugh by joking and finding witty things to say. Finally, this person’s friendly humor helps to create good relationships with others and to decrease tension in a group.”
- “Imagine a person who is very *high* on *self-defeating* humor. This means that this person allows themselves to be the ‘butt’ of jokes and laughs along when others ridicule them, in order to gain others’ approval. Also, this person lets others laugh at them and make fun at their expense. Finally, this person says funny things about their own weaknesses and faults in order to get people to like and accept them.”

Four further descriptors were then constructed to represent a person who is very low on a given humor style. Each of these descriptors indicated that the person did *not* exhibit any of the main humor-relevant behaviours and motivations associated with that particular humor style. Examples of the descriptors for a person low on an adaptive and maladaptive humor style, respectively, are provided below.

- “Imagine a person who is very *low* on *self-enhancing* humor. This means that this person is not often amused by the absurdities of life. Also, when feeling upset or depressed, this person cannot think of something funny to cheer him/herself up. Finally, this person does not have a humorous outlook on life, especially in the face of stress and adversity.”
- “Imagine a person who is very *low* on *aggressive* humor. This means that this person is not sarcastic and does not use humor to ridicule and ‘put-down’ others. Also, this person does not say funny things that may be offensive and hurtful to others. Finally, this person does not use humor to criticize or tease other individuals, and, thus, expresses humor only after considering its impact.”

Typical university student. A final descriptor was used to assess the personality attributes believed to be characteristic of a typical university student, in the absence of any further information about any of the four humor styles. In this condition, participants were simply instructed to imagine the typical university student, when completing their ratings of the attributes described below.

Personality attributes. A set of personality attributes was listed beneath each of the nine different descriptors (four humor styles by high/low levels; plus the typical university student). Instructions were provided to rate the extent to which each attribute was believed to be characteristic of the person portrayed in that particular descriptor. All ratings were made on a seven-point scale with anchors of (1) “*Not at all characteristic*” to (7) “*Highly characteristic*”. Six of the personality attributes pertained to a wide range of socially desirable characteristics (*friendly, pleasant, imaginative, considerate, interesting, and creative*); whereas a further six pertained to a wide range of socially undesirable characteristics (*cold, mean, complaining, spiteful, passive, and restless*). These 12 attributes were selected based upon prior work by Cann and Calhoun (2001) indicating that all these attributes significantly differentiated a highly humorous individual from an individual with an average sense of humor. The remaining attributes were selected to assess several

Table 1. *Socially desirable and undesirable attributes associated with each high humor style*

	High humor style			
	Affiliative	Self-Enhancing	Aggressive	Self-Defeating
Socially desirable				
Mean	36.04 ^a	34.20 ^b	19.30 ^c	25.29 ^d
SD	3.72	4.00	5.62	4.98
Socially undesirable				
Mean	12.09 ^a	14.27 ^b	28.38 ^c	19.93 ^d
SD	3.66	4.74	4.89	5.05

Note: Means in each row with the same superscript are not significantly different.

personality dimensions, including extroversion (*sociable, talkative, fun-loving*) and neuroticism (*worrying, nervous, insecure*).¹ The personality attributes were presented in various random orders for each of the target descriptors.

Procedure

Participants were tested in groups of 15 to 30 people. After reading and signing an informed consent form, participants were randomly given one of three types of booklets. In the high humor style condition, 56 participants completed booklets that assessed how the personality attributes were associated with persons displaying a high level of each of the four humor styles. In the low humor style condition, 54 participants completed booklets that assessed how the personality attributes were associated with persons low on each of the four humor styles. Finally, in the typical university student condition, a further 56 participants completed booklets that assessed how the personality attributes were associated with the typical university student (in the absence of any humor information). After completion of the booklet, participants were given a debriefing form explaining the purpose of the study.

RESULTS

Differential effects of humor styles on personality impressions about others

To address this issue, we focused on the seven-point *characteristic* ratings for the socially desirable and undesirable personal attributes (e.g., friendly vs. complaining). The means and standard deviations for these ratings are shown in Table 1 for each of the four high humor style descriptions (affiliative, self-enhancing, aggressive, and self-defeating). A one-way multivariate analysis of variance (MANOVA) on these ratings revealed a significant multivariate main effect for humor style, $F(6, 50) = 82.01$, $p < 0.001$. This expected main effect of humor style was also evident in the analyses of variance (ANOVAs) for both the socially desirable, $F(3, 165) = 169.83$, $p < 0.001$, and socially undesirable attributes $F(3, 165) = 180.97$, $p < 0.001$. Differences between the four means associated with each ANOVA were tested using a Bonferroni adjustment for the number of comparisons, and are reported below.

Socially desirable attributes. Inspection of the four means in the top row of Table 1 indicated that, as predicted, the high

affiliative humor style description resulted in the most positive impressions of another individual (i.e., the highest ratings for socially desirable attributes, such as being more *pleasant* or more *considerate*; all p 's < 0.001). In contrast, and also as predicted, the high aggressive humor style resulted in the least positive impressions, with the lowest ratings, all p 's < 0.001 . Further comparisons revealed that, as predicted, a high adaptive humor style (either affiliative or self-enhancing) resulted in significantly more positive ratings on these socially desirable attributes than was evident for either of the high maladaptive humor styles (aggressive or self-defeating), all p 's < 0.001 .

Of further interest is that even *within* the adaptive humor styles, participants differentiated between the affiliative and self-enhancing humor descriptions, with the most positive socially desirable attributes being associated with high affiliative humor, $p < 0.001$. Similarly, participants also distinguished between the two maladaptive humor styles, with the least positive socially desirable ratings being associated with the aggressive style, compared to self-defeating humor, $p < 0.001$. Overall, these findings clearly support the proposal that the humor styles, particularly when considering the adaptive versus maladaptive distinction, are associated with very distinct impressions of the degree to which another individual may possess further desirable attributes.²

Socially undesirable attributes. The pattern for these ratings also revealed that the four humor styles have a very differential impact on our impressions of others. As predicted, the most negative impression, with the highest ratings of socially undesirable attributes (e.g., being *cold* or *mean*), was associated with the high aggressive humor style; whereas the least negative impression was associated with affiliative humor, all p 's < 0.001 . As predicted, both maladaptive humor styles (aggressive and self-defeating) were associated with significantly more socially undesirable attributes than either of the adaptive styles (affiliative and self-enhancing humor), all p 's < 0.001 . Finally, participants once again distinguished *within* both the adaptive and maladaptive humor styles, thus supporting both facets of the specificity effect. In particular, high affiliative humor was associated with significantly less socially undesirable attributes than high self-enhancing humor, $p < 0.001$; and high self-defeating humor

Table 2. Extroversion and neuroticism levels for the typical student and high/low levels for each humor style

	Extroversion		Neuroticism	
	Mean	SD	Mean	SD
Typical student	16.54	2.54	12.27	3.65
Affiliative humor				
High	19.07	1.71	7.32	3.73
Low	7.56	3.09	15.28	3.22
Self-enhancing humor				
High	17.20	2.00	8.23	3.52
Low	9.13	3.16	16.15	3.81
Aggressive humor				
High	12.70	2.56	14.59	3.67
Low	14.93	3.44	10.96	4.12
Self-defeating humor				
High	11.70	2.89	17.95	2.90
Low	10.17	4.42	14.41	4.52

was associated with significantly less socially undesirable attributes than high aggressive humor, $p < 0.001$.

Overall, these findings once again serve to highlight the distinct personality impressions associated with each of the humor styles.³

Enhancement and detrimental effects of humor styles on impressions of others

To address this issue, we focused on the seven-point *characteristic* ratings for the personality attributes of extroversion and neuroticism. The means and standard deviations for these two ratings are shown in Table 2 for the typical university student, as well as for the high and low levels of each humor style. For each of the four humor styles (affiliative, self-enhancing, aggressive, and self-defeating), a separate one-way MANOVA was conducted on the dependent variables of extroversion and neuroticism. The independent variable for each between-subjects MANOVA consisted of a target person (high humor for that particular humor style, low humor for that style, and the typical university student). Any significant multivariate main effects were followed up with the corresponding one-way ANOVAs for extroversion and neuroticism. Finally, any significant univariate main effects of target person were followed up with a Bonferroni test that adjusted for the number of mean comparisons.

Affiliative humor. The one-way MANOVA revealed a significant multivariate main effect for target person, $F(4, 326) = 73.29$, $p < 0.001$. This expected main effect of target person was also evident in the corresponding ANOVAs for both extroversion, $F(2, 163) = 319.19$, $p < 0.001$; and neuroticism $F(2, 163) = 70.99$, $p < 0.001$. As predicted, compared with the typical university student, the high affiliative humor style resulted in a significantly heightened level of extroversion, $p < 0.001$; whereas a low affiliative humor style resulted in a significant decrease, $p < 0.001$ (see Table 2). The predicted pattern was also evident

for neuroticism, with high affiliative humor associated with significantly less neuroticism than the typical student, $p < 0.001$; and low affiliative humor associated with significantly higher neuroticism, $p < 0.001$.

Self-enhancing humor. This MANOVA revealed a significant multivariate main effect for target person, $F(4, 326) = 56.74$, $p < 0.001$; with the expected main effect of target also evident in the ANOVAs for both extroversion, $F(2, 163) = 161.47$, $p < 0.001$; and neuroticism $F(2, 163) = 64.32$, $p < 0.001$. As shown in Table 2, low self-enhancing humor resulted in significantly reduced levels of extroversion, compared with the typical student, $p < 0.001$. In contrast, high self-enhancing humor did not significantly increase the perceptions of extroversion above and beyond that observed for the typical student. For neuroticism, Table 2 shows that, as predicted, high self-enhancing humor significantly reduced perceptions of neuroticism compared with the typical student, $p < 0.001$; whereas low self-enhancing humor resulted in a significant increase above the level associated with a typical student, $p < 0.001$.

Aggressive humor. This one-way MANOVA revealed a significant multivariate main effect for target person, $F(4, 326) = 15.67$, $p < 0.001$; which was also found in the ANOVAs for both extroversion, $F(2, 163) = 25.50$, $p < 0.001$; and neuroticism $F(2, 163) = 12.81$, $p < 0.001$. As shown in Table 2, high aggressive humor, as predicted, was associated with significantly less perceived extroversion than the typical student, $p < 0.001$. Interestingly, low aggressive humor was also associated with less perceived extroversion than the typical student, $p < 0.025$; but showed a significantly higher extroversion level than the high aggressive humor target, $p < 0.001$. Turning to neuroticism, Table 2 shows that high aggressive humor led to the predicted significant increase in perceived level of neuroticism, relative to the typical student, $p < 0.01$; whereas low aggressive humor was associated with a perceived neuroticism level significantly less than the typical student, $p < 0.001$.

Self-defeating humor. The one-way MANOVA on these ratings revealed a significant multivariate main effect for target person, $F(4, 326) = 36.08$, $p < 0.001$. This significant target effect was also evident in the separate ANOVAs for extroversion, $F(2, 163) = 53.94$, $p < 0.001$; and neuroticism $F(2, 163) = 32.99$, $p < 0.001$. For perceived extroversion levels (see Table 2), high self-defeating humor led to the predicted reduction in extroversion, compared with the typical student, $p < 0.001$. Interestingly, low self-defeating humor also led to a significant reduction in extroversion, when compared with the typical student, $p < 0.001$; but was not significantly different from the extroversion level for high self-defeating humor. Table 2 also shows that both high and low levels of self-defeating humor displayed significantly higher levels of perceived neuroticism than the typical student, p 's < 0.01 ; with high self-defeating humor being even significantly higher on perceived neuroticism than low self-defeating humor, $p < 0.001$.

DISCUSSION

Both common folklore and previous research suggests that humor is often thought of as a positive personality attribute that serves to enhance our impressions of others (Cann & Calhoun, 2001; Decker, 1987; Grisaffe *et al.*, 2003; Sprecher & Regan, 2002). Although informative, this prior work has not considered the potential impact of certain humor styles that may be less benevolent and more maladaptive in nature. This issue was examined in the present study by using a contemporary multifaceted model of humor that includes both adaptive and maladaptive styles (Kuiper & McHale, *in press*; Martin, 2007; Martin *et al.*, 2003). Adaptive humor is used in a beneficial manner to either help maintain social relationships (affiliative humor) or cope with stressful events and adverse life circumstances (self-enhancing humor). In contrast, maladaptive humor is used in a much more harmful manner to either put down others (aggressive humor) or put down one's self (self-defeating humor).

In this study we explored how these four humor styles may have a differential impact on our subsequent personality impressions about another person, depending upon the particular humor style that is being displayed by that person. In general, our findings revealed substantial distinctions between the adaptive and maladaptive humor styles, with some further evidence of *specificity* effects within each of these main humor categories. These findings are discussed below.

Differential effects of humor styles on personality impressions about others

In clear support of our hypotheses, high levels of adaptive humor (affiliative and self-enhancing) were associated with higher ratings for socially desirable attributes and lower ratings for socially undesirable attributes, compared with high levels of maladaptive humor (aggressive and self-defeating). Furthermore, a certain degree of *specificity* was also evident within each humor category. For the adaptive humor category, affiliative humor led to a more positive overall social desirability rating than self-enhancing humor. For maladaptive humor, the aggressive humor style resulted in a more negative overall social desirability rating than the self-defeating style. When taken together, these findings indicate that the different humor styles have a distinct influence on the extent to which we perceive that other individuals also possess additional desirable or undesirable personality characteristics. It was not simply the case that having a high level of humor automatically resulted in a general endorsement of further positive personality attributes. Rather, these findings show that people clearly distinguished between the various humor styles when forming impressions about others; with these resulting impressions then ranging from quite positive to quite negative, depending upon the particular humor style involved.

These findings bear closely on the generalizability of previous work which has implicitly assumed that humor is a single positive construct, and then concluded that humor has only positive effects on our further impressions of others (Cann &

Calhoun, 2001; Decker, 1987; Grisaffe *et al.*, 2003). Since these prior studies did not typically distinguish between adaptive and maladaptive humor styles, their conclusions may be limited. In particular, when both adaptive and maladaptive humor styles were taken into account, the results were much more complex, with the maladaptive humor styles actually having a negative impact on the subsequent impressions formed about others.

Similar interpretative constraints apply to other studies that have also conceptualized humor as a single positive construct. For example, Hansen and Hicks (1980) found that humor was rated as a highly desirable trait in a partner, while Graham (1995) found that humor was associated with reduced social distance among acquaintances. While these patterns may well hold for the adaptive humor styles (particularly affiliative humor), they may not apply to the maladaptive humor styles. To elaborate, individuals may desire their partners to have high levels of affiliative humor, but not aggressive humor. Also, it is possible that social distance may be reduced by expressions of affiliative humor, but not by self-defeating humor. Future research examining the use of all four humor styles in actual interactions would be necessary to determine the exact boundary conditions associated with these various effects (e.g., Campbell, Martin & Ward, 2008).

Enhancement and detrimental effects of humor styles on impressions of others

Overall, our findings clearly indicated that providing specific information about humor styles (either high or low) had a pronounced impact on the impressions that were formed about others. As predicted, the portrayal of a high adaptive humor style resulted in subsequent enhancement effects. This was particularly evident for high affiliative humor, which resulted in higher extroversion and lower neuroticism levels than found for the typical student. Similarly, an individual with high self-enhancing humor was perceived to be less neurotic than the typical student; but not more extroverted. This lack of an enhancement effect for extroversion likely reflects the fact that this attribute is more closely tied to the fundamentally social focus of affiliative humor, rather than to the intrapsychic coping focus of self-enhancing humor (Kuiper *et al.*, 2004; Martin *et al.*, 2003). With respect to the maladaptive humor styles, both high aggressive and high self-defeating humor were found to have the expected strong detrimental effects on the impressions formed about others. Thus, relative to the typical student, an individual with either high aggressive or self-defeating humor was attributed with less extroversion and more neuroticism. When taken together, these findings demonstrate that enhancing and detrimental effects differ markedly across the humor styles. Whereas high adaptive humor styles, particularly affiliative humor, significantly enhanced impressions of an individual, the high maladaptive humor styles, especially aggressive humor, were quite detrimental to how an individual was then perceived.

Of further interest was that knowledge about low levels of humor was also quite diagnostic. Knowing that an individual is

low on affiliative or self-enhancing humor, resulted in greatly reduced ratings of extroversion and greatly increased ratings of neuroticism. As such, knowledge that an individual is lacking in adaptive humor significantly detracts from subsequent impressions of that person. Individuals may value and appreciate adaptive humor so strongly that they implicitly evaluate other personality characteristics through the "lens" of the adaptive humor level. Thus, a lack of affiliative or self-enhancing humor in a person signals the absence of a highly valued attribute. In turn, this leads to further perceptions of low levels of other positive traits and high levels of negative traits, resulting in a more negative overall impression of the person. The detrimental outcome of this impression formation process may then constrain further social interactions with that person, and also reduce the desirability of forming new friendships. As a result, individuals with low adaptive humor styles may have a more limited number of positive interpersonal relationships, and may have less social support available in times of stress.

Limitations and future research directions

Although the present paradigm was quite useful in terms of identifying distinct personality impressions associated with each of the four humor styles, there are several methodological limitations that should be addressed. First, it should be noted that a portion of the findings may be due to the particular set of personal adjectives employed. The adjectives were selected from prior research by Cann and Calhoun (2001) indicating that these personality attributes clearly distinguished between a high versus average humor individual. This selection procedure, however, may have introduced some degree of bias. For example, several of the socially undesirable adjectives appear to be more closely aligned to the aggressive humor style than to the self-defeating style (e.g., cold, mean, spiteful). As such, future work should expand the list of adjectives to include a much broader range of attributes that would also relate to the other humor styles, such as self-defeating humor (e.g., submissive, passive, fearful). The use of a broader set of attributes would then help clarify the precise degree of specificity evident in the personality impressions formed across the four humor styles.

A second limitation of the present study pertains to the use of written descriptors to convey information about each humor style. Although this technique provides for a clear presentation of each style, followed by the personality ratings, it does not capture the more complicated processing of personal information that can occur in real life. For example, in a given social encounter it is possible that an individual may use several of the humor styles, varying from affiliative to self-enhancing to aggressive humor. One means of addressing this issue would be to use presentation formats in which participants observe recorded social interactions that systematically vary the use of the different humor styles (and various combinations of styles), prior to making inferences about personality attributes. This research could also vary the types of situations involved, and might ultimately move towards event-based recording of

interpersonal inferences in a variety of real-life situations (Moskowitz, 2009).

A third limitation of the present paradigm is that it provided only a cross-sectional examination of the potential effects of humor styles on subsequent personality impressions. This limitation means that extreme caution should be used when making any causal inferences. It is quite likely, for example, that the reverse sequence of impression formation is also possible, with major personality characteristics shaping our impressions of humor styles. To illustrate, if we consider someone to be highly extroverted, we may then interpret their subsequent humorous comments in a somewhat different manner from an individual we consider to be quite neurotic. This distinction may be particularly evident for the more ambiguous instances of humor which do not readily fit within a given humor style. For the extroverted individual, a certain display of humor may be considered to be more affiliative, whereas for the neurotic individual the same display of humor may be labeled as being more aggressive in nature. This issue could be explored in future work by using recorded social interactions of humorous behaviors which are preceded by different personality descriptors, and then determining how a given behavioral instance of humor may (or may not) fit into the humor style categories.

A final limitation of the present work is that we employed a North American university sample, which places restrictions on the external validity of the findings. The associations we demonstrated between the various humor styles and subsequent personality impressions may reflect, to a certain degree, North American values and expectations regarding both humor use and links with other personality characteristics. Although a number of studies now provide strong converging evidence for the existence and stability of the four distinct humor styles across diverse groups and cultures (Chen & Martin, 2007; Kuiper *et al.*, 2004; Martin, 2007), no research to date has explored how these styles may pertain to personality impressions in other cultures. Thus, further research in this area would help determine the extent to which the present findings may be specific to the selected sample, or may reflect more universal patterns of associations between personality and humor.

NOTES

¹ The personality dimensions of openness to experience, agreeableness, and conscientiousness were also assessed. Both agreeableness and openness to experience showed patterns of association with the humor styles that were quite similar to those reported for extroversion. Conscientiousness, however, was less relevant to the humor styles.

² We further explored the extent to which these findings were also evident for each of the six socially desirable attributes. Separate ANOVAs (one for each attribute) were all significant (all p 's < 0.001); with both adaptive humor styles always being associated with significantly more desirable attributes than the two maladaptive styles. Furthermore, the means for the specificity effects were generally in the expected directions (e.g., affiliative humor being linked with more desirable attributes than self-enhancing humor), but in some instances, these individual attribute differences were not significant.

³ The reported patterns were also evident in six separate ANOVAs (one for each socially undesirable attribute, all p 's < 0.01). For each attribute, the two maladaptive styles were always associated with significantly more undesirable attributes than the two adaptive styles. Furthermore, significant specificity effects were always evident between the two maladaptive humor styles, but were not as consistently evident for the two adaptive styles.

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