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Reactions to Humorous Comments and Implicit Theories of Humor Styles

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Abstract
The first two studies investigated reactions to several different types of humorous comments. Participants indicated they would be significantly more likely to continue interacting with a friend who used adaptive self-enhancing or affiliative humor rather than maladaptive aggressive or self-defeating humor; with the most detrimental effects being evident for aggressive humor. Adaptive humorous comments also made recipients feel significantly more positive and less negative about themselves. Humor styles were further investigated in terms of implicit theories about humor. Study 2 indicated that for the self, humor was perceived as being used most often with close friends, followed by family members, romantic partners, casual acquaintances, and least often with teachers. Participants also indicated that affiliative humor was used most frequently for each relationship, followed by self-enhancing humor, self-defeating humor, and then aggressive humor. Study 3 examined the perceived frequency of use for each humor style by others. Participants indicated affiliative humor to be the most frequently used humor style, regardless of the group being rated (people in general, people one knows, family and friends), self-enhancing humor to be the second most frequently used, and the two maladaptive humor styles as being used the least often. Different co-variation patterns for the four humor styles were also found. These findings were then discussed in terms of the strong differential impact of humor styles on the recipients of humorous comments; as well as the implicit theories of humor styles that are evident for self or others.
Key words: Humor styles, humor impact, humor use, implicit theories of humor, self, other

It has often been suggested that humor plays an integral role in a wide variety of social interactions and interpersonal relationships (Butzer & Kuiper, 2008; Klein & Kuiper, 2006; Martin, 2007). For example, in reviewing the social psychological aspects of humor, Martin (2007) has pointed out that humor is fundamentally a social phenomenon that is involved in numerous aspects of interpersonal communication. These functions include using humor to save face and relieve tensions in potentially embarrassing situations, as well as the use of humor to self-disclose and determine the beliefs and attitudes of others. Furthermore, humor can also be used by a high status individual to maintain dominance over others, and by a low-status individual to gain the approval of those thought to be important (Klein & Kuiper, 2006). In a group context, humor can be used to highlight and enhance group identity and cohesion; or manage discourse by shifting conversations away from threatening to more light-hearted topics (Martin, 2007). Interpersonally, humor is rated as being among the most important personal characteristics we seek in others; with this desire for humor evident in many different types of relationships, including dating, marriage, and friendships (Butzer & Kuiper, 2008).

Much of the theorizing and work on the role of humor in social interactions and interpersonal relationships has rested on the implicit assumption that humor is primarily a positive attribute. As such, this work has often focused on the beneficial contributions made by humor's involvement in social domains, leading to the more general notion that humor provides a social facilitative effect. This effect is undoubtedly a very important function of humor use in both social interactions and interpersonal relationships. However, other contemporary research suggests that it is equally important to consider the possible detrimental impact of humor. This personality research on humor, which forms the theoretical and empirical keystone for the present set of studies, is described in more detail below.

Over the past several years, a number of research studies have clearly delineated the existence of both facilitative and detrimental humor styles (Kuiper, Grimshaw, Leite, & Kirsh, 2004; Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003; Martin, 2007; Saroglou & Scariot, 2002). In this personality-based approach to humor, the two adaptive styles are affiliative and self-enhancing humor; whereas the two maladaptive styles are aggressive and self-defeating humor. Affiliative humor involves funny, non-hostile jokes, and spontaneous witty banter to amuse others in a respectful way. It is aimed at others and used in an adaptive manner to facilitate relationships and reduce interpersonal conflict. Aggressive humor, on the other hand, is intended to put others down by using sarcasm, teasing and ridicule. As such, the use of this maladaptive humor style may hurt or alienate others. In

contrast, self-enhancing humor is often used as an adaptive coping mechanism, allowing the individual to adopt a humorous outlook on life and maintain a realistic perspective in stressful situations. Finally, self-defeating maladaptive humor involves self-disparagement and allowing oneself to be the 'butt' of the joke, in order to gain the approval of others.

The four humor styles, as described in the above model, have typically been assessed via the Humor Styles Questionnaire (HSQ). Using this measure, a number of studies now provide evidence for the existence of these four styles across European (Saraglou & Scariot, 2002; Vernon, Martin, Schermer & Mackie, 2008), North American (Kuiper et al, 2004: Martin et al., 2003), Middle Eastern (Kalliny, Cruthirds & Minor, 2006; Taher, Kazarian & Martin, 2008) and Eastern cultures (Chen & Martin, 2007). Furthermore, these studies also support the distinction between adaptive and maladaptive humor styles, as higher levels of adaptive humor are usually associated with lower depression and higher self-esteem. In contrast, higher levels of maladaptive humor are typically associated with increased depression and lower self-esteem. The important role of several of the humor styles in contributing to these aspects of psychological health has been further confirmed by recent work focusing on multiple mediators of well-being (Dozois, Martin, & Bieling, in press; Kuiper & McHale, 2009).

Taken together, the above studies provide a clear and comprehensive picture of the four humor styles and their differential relationship to psychological well-being. In contrast, much less is known about how these humor styles may impact on another person in a typical social interaction (Klein & Kuiper, 2006). As such, this issue was explored in the present set of studies by focusing on the responses made by individuals that were the recipients of humorous comments pertaining to each of the four humor styles. In this research, we were first of all interested in determining the extent to which each type of humorous comment (affiliative, self-enhancing, aggressive, and self-defeating) might have either a positive or negative impact on the recipient's overall desire to continue interacting with the individual that just made that comment. Secondly, we were also interested in determining the degree to which each type of humorous comment might make recipients feel either more positive or negative about themselves. These two issues were empirically investigated in Study 1 using a university sample, and then in Study 2 using a younger sample of high school adolescents.

In addition to investigating the potential effects of humor styles on recipients, the present studies were also designed to further our knowledge base concerning

implicit theories of humor, particularly as they apply to the four humor styles. Implicit theories of humor concern the individual's beliefs, cognitions and perceptions regarding various facets of humor and include, for example, perceptions of the additional personality attributes that are expected to characterize individuals high on each humor style (Kuiper & Leite, 2010).

Since the humor styles have only been recently identified, little research has thus far focused on implicit theories of humor as they may directly pertain to these four styles. Accordingly, a further aim of the present research was to expand our understanding of several additional facets of implicit theories of humor. Study 2 began this examination by documenting individuals' perceptions regarding their own perceived frequency of use for each humor style, across a variety of typical relationships (e.g., close friends, family members, and teachers). Study 3, in turn, assessed participants' perceptions of the frequency of use of each humor style by others, including people in general, people one knows, and family and friends. This final study also explored the extent to which the humor styles are perceived to co-vary. In other words, given that a person displays a certain humor style (e.g., affiliative) how much would we also expect that person to display each of the remaining humor styles (i.e., self-affiliative, aggressive, and self-defeating)?

Study 1: The Impact of Humorous Comments on Others

In light of the major distinctions between adaptive and maladaptive humor styles (Martin, 2007), we expected that the various humor styles would exert quite different effects in an interpersonal context. Our first study provided a preliminary examination of this issue by investigating two potential effects of humorous comments. The first was the effect of a friend's humorous comments on the recipient's desire to continue interacting with that friend. The second was the effect of a friend's humorous comment on the recipient's feelings about self. These two effects were examined using short scenarios that were presented in a questionnaire format. Participants were first asked to imagine that a friend had just made a humorous comment in a social situation. Here, each humor style was represented by a brief statement that captured the essence of that particular style. For example, the statement for aggressive humor was, "A friend makes a humorous comment that puts down another person in the group." Following each humorous comment, participants then rated how much they wanted to continue interacting with that friend, followed by a rating of how that comment made them feel about themselves.

The humor styles model (Kuiper et al., 2004; Martin, 2007) was used to generate predictions for the expected pattern of findings. Overall, we expected that the adaptive humorous comments (self-enhancing and affiliative) would result in a stronger desire to continue interacting with the friend and more positive feelings about self, than the maladaptive humorous comments (self-defeating, aggressive). Affiliative humor, for example, functions primarily to enhance social relationships (Martin, 2007). As such, the basic facilitative nature of this adaptive style would help foster more pleasant social interactions, including more positive feelings about self. In a similar fashion, self-enhancing humor, while not directly oriented towards the other individual in an interaction, would nonetheless still contribute to a more positive and light-hearted social interchange, thus having positive effects on our two measures. In contrast, for the maladaptive humor styles, we hypothesized that the aggressive humorous comments would have the most negative impact on the recipient, resulting in the lowest desire to continue interacting and the most negative feelings about self. These predictions stem from the deliberately hurtful nature of aggressive humor that is directed towards the recipient (Martin et al., 2003; Martin, 2007). These characteristics of maladaptive aggressive humor would make the recipient want to withdraw from the situation, both emotionally and physically. At a broader level, these detrimental effects could then lead to enhanced negative feelings about the self. As such, we expected to see a significant main effect of adaptive versus maladaptive humor in our analysis.

Finally, our expectations regarding the impact of self-defeating humor on recipients were less clearly defined. The humor styles model proposes that the function of self-defeating humor is to make the individual feel more accepted by the people they interact with (Martin, 2007). In turn, this suggests that the use of self-defeating humor would be viewed by the recipients in a more favourable manner than aggressive humor, resulting in the recipients having an increased desire to continue interacting with the individual using self-defeating humor. This could also lead to more positive feelings about the self in this situation. In our analysis, this pattern of findings could be reflected in a significant interaction between adaptive-maladaptive humor and the self-other focus of this humor, with self-defeating humor being significantly less negative in its impact than aggressive humor, but not as positive as either of the adaptive humor styles (affiliative or self-enhancing). On the other hand, the explicit demeaning and ingratiating nature of self-defeating humor may result in a negative distancing response by recipients. This distancing reaction would be evident in a reduced desire to interact with the individual using this humor style, and a more detrimental impact on the recipients' feelings about self. To the extent this negative distancing effect is evident, it could result in effects for self-defeating humor that are

equivalent to those expected for aggressive humor, thus precluding any significant interaction effects in our analyses.

Method

Participants

The sample consisted of one hundred and thirty-two university students (42 males and 90 females), enrolled in introductory psychology courses at the University of Western Ontario. Their mean age was 19.23 (SD = 1.12), with a range from 17 to 24. Each participant received one course credit for participation.

Measures

Reactions to Humorous Comments Inventory (RHCI). The RHCI was designed specifically to assess participants' reactions to the use of each humor style by another person. To begin, three researchers highly familiar with the humor styles model jointly crafted a brief statement for each style that incorporated the essential aspects of that humor style. Each of these four statements was then presented on the RHCI as if a friend of the participant had just made that humorous comment in a social interaction. The four types of statements were as follows: "A friend makes a positive humorous comment to help maintain group morale" (affiliative humor style), "A friend makes a positive humorous comment to cheer him/herself up" (self-enhancing humor), "A friend makes a humorous comment that puts down another person in the group" (aggressive humor), and "A friend gets carried away in making humorous comments that are self-critical" (self-defeating humor).

For each humorous comment, participants were first asked to rate the degree to which they would want to continue interacting with a friend using that type of humor. Following this, participants indicated the extent to which each type of humorous comment would make them feel either more positive or negative about themselves. These self-ratings were made separately for positive and negative feelings, as previous research has demonstrated that these two constructs are often independent (Kirsh & Kuiper, 2003). All of the ratings on the RHCI were made on 5-point Likert scales, with 1 = "not at all" and 5 = "very much."

Procedure

After receiving appropriate ethics approval, participants were tested in groups that ranged in size from 20 to 25 individuals. Each participant was given an informed

consent form prior to completing the questionnaire booklet (which also contained several further questionnaires not relevant to the present study). Upon completion of the booklet, which took approximately 30 minutes, participants were given a debriefing form with further details regarding the present research.

Results and Discussion

The means and standard deviations for each RHCI rating are presented in Table 1,

		HUMOROUS COMMENTS			
		Adaptive		Maladaptive	
		Self	Other	Self	Other
		Self-Enhancing	Affiliative	Self-Defeating	Aggressive
Continue Interacting	M	4.38	4.36	3.30	2.72
	SD	.68	.70	.89	1.08
Positive Self-Feeling	M	3.58	3.70	2.72	2.43
	SD	1.11	.87	1.00	1.10
Negative Self-Feeling	M	1.73	1.52	2.40	2.38
	SD	.91	.73	1.00	1.12

Notes. n = 132 All ratings were made on 5 point scales, with 1 = "Not at all" and 5 = "very much.

Table 1: Study 1 Means and SDs for Responses to Humorous Comments

for each type of Humorous Comment. Each rating (continue interacting, positive and negative self-feelings) was analyzed using a 2 x 2 repeated measures analysis of variance (ANOVA), in which the first factor was the adaptive versus maladaptive nature of the humorous comment involved. Recall that the adaptive comments involved either self-enhancing or affiliative humor, whereas the maladaptive comments involved either self-defeating or aggressive humor. The second factor for each ANOVA considered the self versus other focus of the humorous comment; with self-enhancing and self-defeating humor being self-focused, and affiliative and aggressive humor being other-focused. This 2 x 2 analysis followed directly from the theoretical distinctions made in the humor styles model (Martin et al., 2003). Finally,

in addition to considering main effects, each ANOVA also tested for a significant interaction between adaptive-maladaptive and self-other humor styles.

Desire to Continue Interacting. The 2 x 2 ANOVA on these ratings (shown in the top row of Table 1) revealed the expected significant main effect of adaptive versus maladaptive humor, $F = 283.89$, $p < .001$. Here, participants indicated that they would be significantly more likely to continue interacting with a friend who used adaptive rather than maladaptive humor (respective main effect means of 4.37 versus 3.01). This ANOVA also revealed that the main effect of self-other humor was significant, $F = 26.65$, $p < .001$, with self-focused humor resulting in a greater desire to continue interacting than other-focused humor (respective means of 3.83 versus 3.54). Both of these main effects, however, were qualified by a significant interaction between adaptive-maladaptive and self-other humor. Examination of the cell means shown in the top row of Table 1 indicated that all t-test comparisons were significant (p's <.001), except affiliative versus self-enhancing humor. Thus, for both types of adaptive humorous comments (self-enhancing, affiliative) participants were more willing to continue interacting with these friends than with friends that used either aggressive or self-defeating humorous comments. Furthermore, participants were significantly less likely to want to continue interacting with friends who used aggressive humorous comments, when compared with friends who used self-defeating comments. This pattern indicates that aggressive humor is even more maladaptive in a social interaction context than self-defeating humor.

Positive Self-Feelings. The 2 x 2 ANOVA on the ratings shown in the middle row of Table 1 indicated a sole significant main effect for adaptive versus maladaptive humor, $F = 158.61$, $p < .001$. As expected, a friend's use of adaptive humor resulted in significantly more positive feelings about the self than the friend's use of maladaptive humor (respective main effect means of 3.64 versus 2.58). Neither the main effect of self-other humor, nor the two-way interaction were significant. Overall, this pattern indicates that recipients' positive feelings about the self are only influenced by the adaptive versus maladaptive nature of the humorous comments; and are not influenced by the self versus other focus of these comments. With respect to maladaptive humor, for example, it was not the case that aggressive humorous comments lead to significantly less positive self-feelings than self-defeating humorous comments. Similarly, both adaptive humorous comments (affiliative and self-enhancing) resulted in the same degree of positive feelings about self.

Negative Self-Feelings. A 2 x 2 repeated measures ANOVA on the ratings shown in the bottom row of Table 1 indicated a sole significant main effect for adaptive

versus maladaptive humor, $F = 83.83$, $p < .001$. Again, as expected, there were more negative feelings about the self following a friend's use of maladaptive humor than after adaptive humor (respective means of 2.49 versus 1.63). Neither the main effect of self-other humor nor the two-way interaction were significant. Thus, once again only the adaptive versus maladaptive nature of the humorous comments was relevant. The self versus other focus of the humorous comments was once again irrelevant; aggressive humorous comments did not result in more negative self-feelings than self-defeating humorous comments. Similarly, the two adaptive humorous comments (self-enhancing and affiliative) both had the same impact on the recipients' negative feelings about self.

Study 2: The Impact and Use of Humor in Adolescents

The vast majority of research on the humor styles model has been conducted with adult samples (Martin, 2007). Much less is known about humor styles in younger participants, although recent work by Erickson and Feldstein (2007) has found evidence for the existence of humor styles in adolescents as young as 12 years of age. Furthermore, these researchers found that the humor style scores displayed by these adolescents were quite comparable to an adult comparison group; and that the adolescent sample also showed the same general pattern of relationships between each humor style and coping or psychological well-being as adults. These findings indicate that the further investigation of humor styles in adolescents is warranted.

Accordingly, the first part of Study 2 examined the same issues looked at in Study 1, but now using a younger sample of adolescents in high school. As noted by many developmental psychologists, adolescence is a time of profound change, with the individual practicing a variety of new roles and incorporating several of these into a more complex and differentiated self-concept (Harter, Bresnick, Bouchey & Whitesell, 1997). These different aspects of self emerge across adolescence, with discrepancies often being evident across various self-concept roles and relationships, such as being shy in romantic relationships yet very talkative with same-sex friends (Harter, 1999).

The examination of humor is particularly relevant to this age group, as one of the defining characteristics of adolescence is the increasing emphasis on forming and maintaining relationships of various kinds, including close friends, romantic partners, and casual acquaintances. In these relationships, humorous communication is often taken less seriously than non-humorous communication, and can therefore function

as an outlet for experimentation with new roles and activities. As such, examining the impact of humor in a social context may have particular relevance for adolescents.

Given that the four humor styles are also quite evident in adolescents (Erikson & Feldstein, 2007) we expected a pattern of findings similar to Study 1. In other words, we expected that the adaptive humorous comments would lead to an increased desire to continue interacting, along with more positive (and less negative) feelings about self, when compared with maladaptive humorous comments. With regards to further distinctions between the two types of maladaptive humorous comments (self-defeating versus aggressive), Erikson and Feldstein (2007) found that self-defeating humor was particularly salient during adolescence, and predicted depression symptoms above and beyond coping styles and other defence strategies. Thus, it may be the case that adolescents distinguish more clearly between the effects of self-defeating versus aggressive humorous comments than do adults. If so, this may result in differential effects for these two maladaptive humor styles across all three of our measures, namely the desire to continue interacting, as well as positive and negative feelings about the self. This pattern would emerge in the form of a significant interaction term for all three analyses. On the other hand, it also remains possible that adolescents will display a pattern similar to adults, with differences between self-defeating and aggressive humor comments being limited only to the desire to continue interacting with the friend.

In turn, the second part of Study 2 focused on implicit theories of humor as they pertain directly to the four humor styles. Since almost no research has examined this issue, we began our investigation by determining how individuals view certain aspects of their own humor styles. Thus, the Reactions to Humorous Comments Inventory (RHCI) was further modified to assess the perceived frequency of use for each of the four humor styles across five different types of relationships. These relationships included close friends, family members, romantic partners, casual acquaintances, and teachers. These categories ensured coverage of both close and more distant relationships.

In general, we expected that the adaptive humor styles (both affiliative and self-enhancing) would be more widely used across all of the above relationship categories than the maladaptive styles (self-defeating and aggressive). In addition, we expected that the highest overall frequencies of humor use would be evident for close relationships (such as close friends and family), whereas the lowest frequencies of humor use would be evident for the more distant relationships (e.g., teachers).

Beyond this, however, we also expected that the distinct multidimensional nature of the self-concept in adolescence (Harter et al., 1997; Harter, 1999) would enhance the use of quite different humor styles for some of these relationships. For example, adolescents may be much more comfortable using the maladaptive humor styles most often with close friends, but least often with teachers and family members.

Method

Participants

The sample consisted of 181 students (80 males and 101 females) enrolled in two local high schools. The students were in grades 9 through 13, and were taking classes in English, Computer Science, Geography, Mathematics, and Parenting. Their mean age was 16.55 (SD = 1.50), with a range from 14 to 21 years.

Measures

Reactions to Humorous Comments Inventory (RHCI). Study 1 provided a description of the initial RHCI that assessed the impact of humorous comments on both the desire to continue interacting and self-feelings (positive and negative). In Study 2, a second section was added to the RHCI to assess participants' use of each of the four humor styles in five different types of relationships (with close friends, family members, romantic partner, casual acquaintances, and teachers). Each humor style was presented for each type of relationship by using the self-referent format illustrated in the following statements: "I make positive humorous comments to help maintain the morale of others" (affiliative humor), "I make positive humorous comments to cheer myself up." (self-enhancing humor), "I make humorous comments that put down another person." (aggressive humor), and "I get carried away in making humorous comments that are self-critical." (self-defeating humor). Frequency of use was assessed for each humor style, for each type of relationship, using a 5-point Likert scale, with 1 = "Very rarely used" and 5 = "Very frequently used."

Procedure

The study received ethics approval from the university, as well as the two school boards that were involved. Two high schools (one from each school board) participated in the study. The principals in each school described the study to the teachers, and those interested volunteered their class time. Each student was given an informed consent form that was taken home and signed by a parent (or

guardian) and the student. Participants completed the booklets (which contained further questionnaires not relevant to the present study) in classes of 10 to 25 students, in about 40 minutes. Upon completion of the booklet, participants were given a debriefing form with further details of the study.

Results and Discussion

T-tests revealed that there were no significant differences between the two schools on any of the measures. Accordingly, the findings reported below are based on analyses that collapsed the data across the two high schools.

Means and standard deviations for the desire to continue interacting, as well as positive and negative feelings about the self, are shown in Table 2. Each measure was analyzed using a 2 x 2 repeated factors ANOVA to test for both the main effects of adaptive-maladaptive and self-other humor, as well as their possible interaction.

Desire to Continue Interacting. The top row of Table 2 presents the effects of a friend's humorous comment on a recipient's desire to continue interacting with that friend. As expected, a significant main effect was found for adaptive-maladaptive humor, $F = 419.50$, $p < .001$, with a much stronger desire to continue interacting with a friend that used adaptive versus maladaptive humorous comments (respective main effect means of 4.03 versus 2.62). A significant main effect was also found for the self-other focus of the humor, $F = 20.03$, $p < .001$, with recipients reporting a stronger desire to continue interacting with a friend that used self rather than other humorous comments (respective main effect means of 3.44 and 3.21). A significant interaction was also found, $F = 7.18$, $p < .025$, with post-hoc tests indicating that all comparisons among the four cell means shown in the top row of Table 2 were significantly different, except affiliative versus self-enhancing humor. Thus, affiliative and self-enhancing humor resulted in the most favourable reaction to continue interacting, followed by self-defeating, and then aggressive humorous comments. This is the same overall pattern found in Study 1, and indicates that aggressive humorous comments were also the most detrimental for adolescents.

		HUMOROUS COMMENTS			
		Adaptive		Maladaptive	
		Self	Other	Self	Other
		Self-Enhancing	Affiliative	Self-Defeating	Aggressive
Continue Interacting	M	4.08	3.98	2.81	2.43
	SD	.91	.84	.93	1.04
Positive Self Feelings	M	3.53	3.58	2.61	2.40
	SD	1.01	.90	.98	1.14
Negative Self Feelings	M	1.96	1.75	2.59	2.46
	SD	1.06	.87	1.14	1.19

Notes. n = 181 All ratings were made on 5 point scales, with 1 = "Not at all" and 5 = "very much.

Table 2: Study 2 Means and SDs for Responses to Humorous Comments

Positive Self-feelings. The degree to which humorous comments impact the self in a positive way are presented in the middle row of Table 2. The 2 x 2 ANOVA on these ratings indicated a significant main effect for adaptive-maladaptive humor, $F = 177.28$, $p<.001$; with significantly more positive feelings about the self for adaptive compared to maladaptive humorous comments (respective means of 3.44 versus 2.50). No further effects were found for this ANOVA. This pattern for adolescents is identical to that found for the young adults in Study 1.

Negative Self-feelings. The bottom row of Table 2 presents the means and standard deviations for negative feelings about the self. A 2 x 2 ANOVA indicated significant main effects for both adaptive-maladaptive, $F = 7.37$, $p <.025$, and self-other humor, $F = 60.42$, $p <.001$. Thus, as was the case for adults in Study 1, the adolescents in Study 2 also reported more negative feelings about themselves after a friend's use of maladaptive versus adaptive humorous comments (respective main effect means of 2.51 versus 1.86). In addition, however, these adolescents also reported more

negative self-feelings after the friend's use of humorous comments with a self rather than other focus (respective main effect means of 2.29 versus 2.11). Finally, the interaction term was not significant in this analysis, as was the case in Study 1.

		HUMOR STYLES			
		Self-Enhancing	Affiliative	Self-Defeating	Aggressive
Close Friends	M	3.64	4.32	2.79	2.51
(M=3.32)	SD	1.21	.89	1.18	1.37
Family Members	M	3.32	3.68	2.53	2.46
(M=3.00)	SD	1.16	1.03	1.24	1.36
Romantic Partners	M	3.16	3.70	2.30	1.77
(M=2.72)	SD	1.31	1.05	1.13	1.09
Causal Acquaintances	M	2.74	3.23	2.02	1.78
(M=2.45)	SD	1.17	.94	1.06	1.04
Teachers	M	2.44	2.75	1.74	1.52
(M=2.11)	SD	1.26	1.16	.98	.99
		Self-Enhancing	Affiliative	Self-Defeating	Aggressive
Overall M		3.06	3.53	2.28	2.01

Table 3: Study 2 Means and SDs for Humor Styles Use by Type of Relationship

Humor Use in Different Types of Relationships. Table 3 shows the perceived use of each humor style across five different relationships. Examination of the means shown in Table 3 indicates two prominent patterns. First, the pattern of use for the humor styles remains quite consistent within each of the five relationships. In other words, when looking across each row of Table 3, it is evident that affiliative humor is used most often in each type of relationship (close friends, family members, etc.), compared to the remaining three humor styles. After affiliative humor, self-enhancing humor is used second most often, followed by self-defeating humor, and then aggressive humor, which is used least often (see also the bottom-most row of Table 3 for overall means for each humor style collapsed over all relationships). Thus, as expected, the adaptive humor styles were perceived as being used more often by the self than the maladaptive humor styles.

A second consistent pattern is the relative frequency of humor use across the five relationships. As shown in the columns of Table 3, each of the four humor styles is used most frequently with close friends, followed by family members, romantic partners, casual acquaintances, and teachers. Combining the two patterns indicates that the humor style used most often is affiliative humor, and it is used most often with close friends.

The overall means for humor use in each type of relationship (i.e., the averaged use of all four humor styles for that relationship) are presented directly under each relationship label along the left-side of Table 3. Given that all four humor styles were used most frequently with close friends, t-tests were performed comparing overall humor use in this type of relationship with all of the remaining types of relationships. All of these comparisons were significant, all p's $< .001$, indicating that significantly more humor is used with close friends than with any of the other types of relationships. Overall, this pattern supports the proposal that more humor is used in close rather than more distant relationships (e.g., close friends versus teachers).

Study 3: Implicit Theories of Humor Use and Covariation in Others

There has been very little research examining how implicit theories of humor might incorporate the four humor styles. For example, it is not yet known whether affiliative humor is perceived as being used by other individuals more frequently than self-enhancing humor. Similarly, nothing is yet known about the perceived frequency of use of either aggressive or self-defeating humor by others. Furthermore, there has been no investigation of individuals' perceptions of the covariation among the four humor styles. In other words, it is unclear how a person that displays high affiliative humor would be perceived with respect to the remaining styles of humor, such as self-enhancing or aggressive humor. Would such an individual be viewed as also having higher self-enhancing humor than aggressive humor, or vice-versa, or equal levels of both? In addition, would their level of self-defeating humor be viewed as being higher or lower than their self-enhancing or aggressive humor? Currently, no information exists regarding the perceived patterns of humor covariation that underlie an implicit theory of humor styles.

Accordingly, the main purpose of Study 3 was to investigate the above issues. We began by exploring how often each humor style is thought to be used by other people. Here, we also took into account the potential impact of various types of relationships that differ in familiarity. Thus, we considered perceived frequency of use for each humor style for people in general, people one knows, and close family

and friends. Overall, we expected that the perceived frequency of use for the two adaptive humor styles (affiliative, self-enhancing) would be higher than perceptions of use regarding the two maladaptive humor styles (aggressive, self-defeating). This pattern would be consistent with research findings indicating that positive instances of humor use are generally much more frequent than negative (Butzer & Kuiper, 2008; DeKoning & Wiess, 2002; Martin, 2007).

It is possible that any distinctions between perceived frequencies of use for the four humor styles may pertain to the target group being considered. For example, the use of adaptive humor that facilitates interactions may be particularly valued in encounters with people one does not know well, thus highlighting affiliative humor for people in general. However, for highly familiar others, such as family members, affiliative humor may not play such a central role. In turn, this may limit the salience of its perceived use among family members and friends. Furthermore, for familiar others, one may become more cognizant of that person's use of adaptive humor for other purposes, such as coping with stress via self-enhancing humor. Thus, by including target groups with three different levels of familiarity, we were able to examine the degree to which perceptions of humor use may also be sensitive to the degree of knowledge about others.

The second and final part of Study 3 examined individuals' perceptions of the relationships among the four humor styles. Participants were given separate descriptions of four target individuals, each of whom was high on one of the four humor styles. For each target individual, participants were then asked to rate the degree to which they believed the remaining three humor styles would also be characteristic of that target person, thus providing an assessment of the perceived degree of covariation among the various humor styles.

At least two possibilities exist for how individuals may perceive the humor styles to be associated. One possibility is that perceived covariation may be primarily based on the adaptive versus maladaptive nature of humor, as this dimension appears to be a fundamental underlying characteristic of the humor styles model (Martin, 2007). If this is the case, then individuals may perceive the adaptive humor styles to be strongly related. For example, an individual with high affiliative humor may be perceived as also having higher levels of self-enhancing humor and lower levels of maladaptive humor (aggressive and self-defeating). Similarly, individuals may perceive the two maladaptive humor styles to be strongly related. Here, an individual high on aggressive humor would be perceived as having higher levels of self-defeating humor and lower levels of adaptive humor (affiliative and self-enhancing).

It remains possible, however, that patterns of covariation may also be influenced by the second underlying dimension of the humor styles model, namely, a self versus other focus (Martin, 2007). If this is the case, then individuals may perceive a strong positive relationship between the two self-focused humor styles (self-enhancing and self-defeating), and also between the two other-focused styles (affiliative and aggressive humor). As one illustration, an individual high on self-enhancing humor would be attributed with higher levels of self-defeating humor than with affiliative or aggressive humor. Thus, by assessing covariation for all four of the humor styles, we will be able to determine the extent to which the relationships among the styles may be driven by each of the underlying dimensions (adaptive-maladaptive and self-other).

Method

Participants

The sample consisted of 166 students (102 females, 64 males) in introductory psychology classes at the University of Western Ontario. Their mean age was 19.50, with a range from 18 to 33. Each participant received one course credit for participation in this study.

Materials and Measures

Frequency of Use for each Humor Style. For each of the four humor styles, participants were first presented with a brief description of the main humor-related behaviors and motivations associated with that humor style. These descriptions were created via the consensus of three investigators highly familiar with the humor styles model, and are presented directly below.

> Self-enhancing humor is a humor style that involves a tendency to be amused by the absurdities of daily living. Individuals with this humor style have a humorous outlook on life, even in the face of stress and adversity. When things go wrong or when they are upset, these individuals can usually find something amusing about the situation to cheer themselves up.
>
> Affiliative humor is a humor style that involves saying funny things to amuse others and to put others at ease. Individuals with this humor style tend to make people laugh by making friendly jokes and finding witty things to say. This humor style often helps to facilitate relationships with others and decrease tension in a group.

> Self-defeating humor involves making fun of one's own weaknesses and faults in order to get acceptance. Individuals with this humor style allow themselves to be the "butt" of jokes, and laugh along when others ridicule them, in order to gain others' approval. These individuals let others laugh at them and make fun at their expense in the hopes that others will like and accept them.
>
> Aggressive humor is a style of humor that is sarcastic and used to ridicule and put-down others. Individuals with this humor style can't resist saying funny things that may be offensive and hurtful to others, and express humor without regard for its impact (e.g. sexist or racist humor). This type of humor often involves criticizing and teasing other individuals.

Each of the above humor style descriptions was printed on a separate page, followed immediately by three frequency of use items. The first item asked participants to indicate on a 7-point scale how often the given humor style is used by people in general, with 1 = "not used very often," 4 = "sometimes used," and 7 = "used all the time." The second item asked participants to indicate the approximate percentage of people they know that use the given humor style (with a possible range from 0 to 100%). The third item asked participants to indicate on a 7-point scale how often the given humor style is used among their social circle of family and friends, with 1 = "never," 4 = "occasionally," and 7 = "almost always"

Humor Style Covariation. Participants were instructed to imagine a person who is high on a given style of humor by being presented with a description of the humor behaviors and motivations that characterize this person. These descriptions were obtained by slightly modifying the versions used previously for the frequency of use measure. Two illustrative examples are presented directly below.

> Now, please imagine a person who is high on affiliative humor. Remember, 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.
>
> Now, please imagine a person who is high on self-defeating humor. Remember, this means that this person allows them self to be the "butt" of jokes and laughs along when others ridicule and disparage 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.

Following each description of a person high on a given humor style, participants were then presented with three further items. Each item described the key humor behaviors indicative of one of the remaining three humor styles. For example, if the given humor style was high affiliative humor, then the three subsequent items pertained to aggressive humor ("Also uses humor to ridicule, criticize, and 'put-down' others"), self-enhancing humor ("Has a humorous outlook on life, even in the face of stress and adversity"), and self-defeating humor ("Lets others criticize and make fun of them, in order to be accepted"). When the given humor style was not affiliative humor, the subsequent item used to describe affiliative humor was, "Also uses humor to facilitate relationships."

For each of these items, participants were asked to rate the extent to which the imagined individual (e.g., a person with high levels of affiliative humor) would also display the humorous behaviors portrayed in that item. Each rating was made on a 7-point Likert scale, with 1 = "almost never," 4 = "sometimes," and 7 = "All the time." The items were presented in different random orders for each of the given humor styles.

Procedure

Participants were tested in groups of 15 to 30 people. After reading and signing an informed consent form, participants completed a booklet of questionnaires containing both the frequency of use and covariation measures. The order of presenting all of the measures was randomly varied across booklets. After completion of the booklet, participants were given a debriefing form.

Results and Discussion

Frequency of Humor Styles Use. The means and standard deviations for perceived humor use by people in general are shown in the top row of Table 4, as a function of humor style (self-enhancing, affiliative, self-defeating, and aggressive). The ANOVA on these frequency of use ratings indicated that the main effect of humor style was significant, $F = 21.83$, $p < .001$. Subsequent t-tests indicated that, as expected, individuals rated affiliative humor as being used more often than the remaining adaptive style of self-enhancing humor, $p < .01$; or either of the two maladaptive styles of aggressive and self-defeating humor, p's $< .001$. Furthermore, self-enhancing humor was perceived as being used more frequently than self-defeating

humor, $p < .001$; but not more frequently than aggressive humor. Finally, no significant difference was found between the frequency of use for the two maladaptive styles of aggressive and self-defeating humor.

		HUMOR STYLES			
		Self-Enhancing	Affiliative	Self-Defeating	Aggressive
People in General	M	4.63	5.57	3.95	4.21
	SD	1.05	.92	1.10	1.51
People One Knows	M	51.17	63.42	33.06	36.89
	SD	19.51	20.54	21.10	26.54
Family & Friends	M	4.82	5.65	3.39	3.57
	SD	1.19	1.02	1.32	1.62

Notes. n = 166 People in General were rated on a 7-point scale, with 1 = "Not used very often", and 7 = "Used all the time." People one Knows were rated on a percentage scale, ranging from 0 to 100 percent. Family and Friends were rated on a 7-point scale, with 1 = "Never", and 7 = "Almost always."

Table 4: Study 3 Means and SDs for use of Humor Styles by Social Group

The means and standard deviations for the frequency of use ratings for people one knows are shown in the middle row of Table 4. The ANOVA on these ratings revealed a significant main effect of humor styles, $F = 30.96$, $p < .001$. A series of t-tests indicated that affiliative humor was rated as being used significantly more often than self-enhancing humor, $p < .001$; and also significantly more often that either of the two maladaptive styles of aggressive and self-defeating humor, p's < .001. Self-enhancing humor was also rated as being used significantly more often than either aggressive or self-defeating humor, p's < .001. There was no significant difference in perceived humor use between the two maladaptive styles of aggressive and self-defeating humor.

The means and standard deviations for the frequency of use ratings for family and close friends are shown in the bottom row of Table 4, with an ANOVA indicating a significant main effect of humor styles, $F = 41.29$, $p < .001$. Affiliative humor was once again perceived as being used more often than any of the remaining styles, namely, self-enhancing, aggressive and self-defeating humor, all p's < .001. Aggressive and

self-defeating humor were perceived to have equal frequencies of use, with both of these maladaptive styles being used significantly less often than either of the adaptive styles, all p's < .001.

Humor Styles Covariation. The means and standard deviations for the covariation ratings are shown in each row of Table 5. For each of the four given humor styles (high self-enhancing, high affiliative humor, and so on), a single factor repeated measures analysis of variance was performed on the perceived levels of the remaining three humor styles (as shown in each row of Table 5).

The ANOVA on the covariation ratings for the target high on self-enhancing humor indicated a significant main effect of humor styles, F = 28.48, p < .001. As shown in the top row of Table 5, this target person was attributed with significantly higher levels of affiliative humor than either aggressive or self-defeating humor, p's < .001. This pattern supports the proposal that these covariation ratings are based primarily

		HUMOR STYLE COVARIATION			
		Self-Enhancing	Affiliative	Self-Defeating	Aggressive
GIVEN HUMOR STYLE					
High Self-Enhancing	M	-	5.55	4.30	3.96
	SD	-	.74	1.40	1.53
High Affiliative	M	5.27	-	4.00	2.98
	SD	1.04	-	1.53	1.47
High Self-Defeating	M	3.54	4.79	-	4.20
	SD	1.49	1.65	-	1.74
High Aggressive	M	3.70	3.98	2.55	-
	SD	1.51	1.52	1.58	-

Notes. n = 166 All ratings were made on 7-point scales, with 1 = "almost never", and 7 = "All the time."

Table 5: Study 3 Means and SDs for Perceived Covariation

on the adaptive-maladaptive distinction in the humor styles model. Furthermore, there was no significant difference between perceived levels of self-defeating versus aggressive humor, suggesting that the self-other dimension of the humor styles model

is not particularly salient when making covariation judgments based on self-enhancing humor.

The ANOVA on the covariation ratings for the target high on affiliative humor (as shown in the second row of Table 5), also yielded a significant main effect of humor styles, $F = 36.53$, $p < .001$. As expected, a person high on affiliative humor was attributed with significantly higher levels of self-enhancing humor than either aggressive or self-defeating humor, p's < .001. Once again, this pattern supports the primacy of the adaptive-maladaptive dimension when making these covariation judgments. In addition, however, this target person was attributed with significantly lower levels of aggressive humor than self-defeating humor, $p < .001$. This latter distinction draws upon the self-other dimension, as knowing that a target has a high amount of an other-focused adaptive humor style (i.e., affiliative humor) led to decreased perceptions for the corresponding other-focused maladaptive style (i.e., aggressive humor).

High self-defeating humor also had a significant effect on perceived levels of the other three humor styles, $F = 7.80$, $p < .01$. As shown in the third row of Table 5, a person high on self-defeating humor was attributed with significantly higher levels of affiliative humor than with self-enhancing humor, $p < .01$; but with equivalent levels of aggressive humor. This pattern suggests that perceived relationships between self-defeating humor and the other humor styles are based equally on both the adaptive-maladaptive and self-other humor dimensions, as individuals who use self-defeating humor are perceived to be just as likely to use humor that disparages others (aggressive humor), as they are to use adaptive humor.

Finally, high aggressive humor also had a significant impact on levels for the remaining three humor styles, $F = 22.19$, $p < .001$. Examination of the means shown in the bottom row of Table 5 indicated that a person high on aggressive humor was attributed with significantly higher levels of affiliative and self-enhancing humor than with self-defeating humor, p's < .01. Furthermore, high aggressive humor was perceived to be associated with equivalent levels of affiliative and self-enhancing humor. Interestingly, these findings suggest that high aggressive humor is perceived to be primarily associated with the adaptive humor styles. Thus, individuals with high aggressive humor are perceived to be more likely to use humor that enhances social relationships and reduces feelings of stress, in a manner that is accepting of both the self and others, than to use humor that is self-defeating in an attempt to gain others approval.

General Discussion

Over the past decade there has been a considerable resurgence of interest in psychological approaches to the study of humor. One of these avenues of research has documented the existence of four distinct humor styles (Martin et al., 2003), and then described how these styles have very different relationships with psychological well-being (Kuiper et al., 2004). Substantial research evidence has now accumulated in support of this humor model which includes both adaptive and maladaptive humor styles (Kuiper et al., 2004; Martin et al. 2003; Martin, 2007). Recall that adaptive humor is used in a beneficial manner to help maintain social relationships (affiliative humor) or assist in coping 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). The present research employed this humor styles model as the theoretical and empirical foundation for examining possible associations between humor styles and social interactions. The first part of this examination focused on the recipients of humorous comments, whereas the second part elucidated more clearly how implicit theories of humor may incorporate these four styles when describing self or others.

The Impact of Humorous Comments on Others

The first major goal of this research was to survey the impact of a friend's use of humorous comments on the recipient's desire to continue interacting with that friend, and also on the recipient's positive and negative feelings about self. These issues were examined in Study 1 using a young adult sample and in Study 2 using an adolescent sample. Both studies provided consistent empirical support for the proposal that different types of humorous comments can have a considerable differential effect on recipients, with a positive impact being evident for adaptive humor comments and a negative impact evident for maladaptive comments. As predicted, when a friend used either style of adaptive humor (affiliative or self-enhancing), the recipient reported a greater desire to continue interacting with that friend, and more positive and less negative feelings about the self. This pattern clearly indicates that when considering the two adaptive humor styles, the self-other distinction in the humor styles model is of little functional relevance. In other words, although affiliative humorous comments are specifically orientated towards fostering social interactions and relationships (Martin, 2007) they did not result in significantly higher impact ratings than obtained for the self-enhancing humorous comments. This suggests that the general positive orientation evident in both of the adaptive

humor styles is sufficient to engender a strong social facilitative effect when using either affiliative or self-enhancing humor. Thus, humorous comments which are specifically designed to enhance the self can, nonetheless, also impart a significant positive effect on the recipient of these comments. Furthermore, this effect is comparable to that obtained for affiliative humorous comments designed specifically to enhance social relationships.

In contrast to adaptive humor, the pattern for the two maladaptive humorous comments showed that both of the underlying dimensions of the humor styles model were quite relevant. Thus, as predicted, maladaptive humorous comments resulted in a more negative impact than adaptive humorous comments. In particular, recipients were significantly less willing to continue the interaction when friends used maladaptive humorous comments (either aggressive or self-defeating), and reported less positive and more negative feelings about the self. In addition, however, the self-other dimension was also quite relevant for the maladaptive humor styles. Here, other-directed humorous comments (aggressive) demonstrated significantly more negative effects on the desire to continue interacting than did self-directed comments (self-defeating). In other words, the self-focused maladaptive style of self-defeating humor did not have as pervasive a negative impact on the relationship as the other-focused maladaptive style of aggressive humor. As such, this pattern highlights the very potent negative impact of aggressive humor on social and interpersonal relationships. It also indicates how self-defeating humor can be viewed in a somewhat less negative manner by others, thus providing some further empirical substantiation for its use as an effective tool to ingratiate oneself to others.

Although adolescence is generally a time of great flux and change with respect to social relationships and self-concept roles (Harter, 1999), we found that the high school students in our second study displayed very few differences from the young adults tested in Study 1. In fact, adolescents showed the same identical pattern of wanting to continue interacting with their friends as did the university students. As such, both studies revealed that either of the adaptive humor styles (affiliative or self-enhancing) prompted an increased desire to continue interacting. In contrast, both types of maladaptive humorous comments (aggressive or self-defeating) resulted in a reduced desire to continue interacting with the friend, but with the aggressive humorous comments again being significantly more detrimental than the self-defeating comments.

The adolescents in Study 2 also felt the most positive about themselves after being the recipients of adaptive humorous comments made by a friend, compared with

receiving maladaptive humorous comments. Similarly, when considering negative self-feelings, adolescents again showed a pattern identical to young adults, in that the maladaptive humorous comments once more led to the most negative self-feelings. In addition, however, the adolescents were sensitive to the self-other dimension of these comments, with self-focused humorous comments by a friend resulting in more negative self-feelings than other-focused comments. Overall, these findings suggest that the humor style effects that are unique to adolescence are minimal, and appear to be limited to some minor differentiation on the self-other dimension for negative self-feelings. Otherwise, the adolescents in our second study showed the same pattern of findings as the young adults in Study 1, thus highlighting the continuity of humor styles and their effects across adolescence and young adults. This continuity is in accord with research by Erickson and Feldstein (2007) demonstrating the existence of the four humor styles in a group of young adolescents, along with patterns of relationships with psychological well-being that are quite similar to those found in adult samples (e.g., Chen & Martin, 2007).

Implicit Theories of Humor Styles

The second major goal of the present research was to examine how the four humor styles may be represented in implicit theories of humor, both for self and others. The Study 2 findings for perceived frequency of humor use by the self showed a remarkably consistent pattern, with the most humor, overall, being displayed with close friends. Furthermore, the two adaptive humor styles were used most often across all of the different relationships, with affiliative humor always being more frequently employed than self-enhancing humor. Both maladaptive humor styles showed much less perceived frequency of use, with aggressive humor being used the least, regardless of the specific relationship being considered.

In Study 3 the examination of implicit theories of humor focused on the perception of humor styles in others, rather than the self. Overall, the findings for frequency of use were extremely consistent across the three different social groups we examined (people in general, people one knows, and family and friends). In particular, individuals perceived affiliative humor to be the most frequently used humor style, regardless of familiarity level, self-enhancing humor to be the second most frequently used, and the two maladaptive humor styles as being used the least often (and equivalent to one another). Furthermore, in only one instance (for people in general) was a maladaptive style (aggressive humor), rated as being used at a rate equivalent to one of the adaptive styles (self-enhancing humor). In all other instances, the two adaptive humor styles were always rated as being used more

frequently that the two maladaptive styles. This pattern of perceived use maps directly onto prior work demonstrating that positive instances of humor use have a much higher rate of occurrence than negative instances (DeKoning & Weiss, 2002; Martin, 2007). As one example, Butzer and Kuiper (2008) found that individuals in romantic relationships reported using significantly more positive humor to facilitate their relationships than negative humor to put their partners down.

The above findings suggest that affiliative humor may be the most prominent aspect of a multi-faceted implicit theory of humor. In particular, Studies 2 and 3 found very similar patterns for the perceived use of humor styles for either self or others. Affiliative humor was consistently perceived as being used the most often, followed by self-enhancing humor, then self-defeating humor, and finally, aggressive humor. This pattern of perceived use was remarkably stable across various types of relationships with the self (Study 2), as well as varying degrees of familiarity with other people (Study 3). When taken together, these systematic and consistent differences in frequencies of use suggests that individuals may generally direct their attention towards and recall experiences of adaptive humor, particularly affiliative humor, more so than experiences of maladaptive humor. This frequent attention to affiliative humor experiences is likely to increase the salience and activation level of affiliative humor within implicit theories of humor. Thus, when considering humor as a personality attribute, individuals are more likely to bring to mind more instances of adaptive styles of humor, particularly affiliative humor. In turn, this may lead individuals to primarily conceptualize humor as an adaptive characteristic that is used to enhance interpersonal relationships in a manner that is accepting of the self and others. Overall, this may help explain the general tendency in the literature to often think of humor as a positive construct that is most closely aligned with affiliative humor.

In this final study we also explored covariation of the humor styles by examining individual's ratings of perceived inter-relationships among the four styles. These findings showed that a person with high affiliative humor was attributed with significantly higher levels of self-enhancing humor than either maladaptive humor style (but with more self-defeating than aggressive humor). Similarly, a person with high self-enhancing humor was attributed with significantly higher levels of affiliative humor than with either of the maladaptive humor styles (but with equal levels of aggressive and self-defeating humor). These findings indicate that individuals perceive an adaptive humor style to co-occur more strongly with a second adaptive style, than with either maladaptive style. Thus, individuals believe that a person who uses affiliative humor to enhance relationships with others in a warm and

accepting manner is more likely to also use self-enhancing humor that reduces stress in a benign and accepting manner, than to use humor that is critical and disparaging of either themselves (self-defeating) or others (aggressive humor). As such, these findings indicate that the perceived relationship between adaptive humor and other humor styles is primarily based on the adaptive-maladaptive humor dimension, especially for self-enhancing humor. However, the perceived association between affiliative humor and other humor styles is also partially a function of the self-other humor dimension, as individuals perceive high affiliative humor to co-occur more with self-defeating humor than with aggressive humor. Thus, individuals perceive humor that adaptively enhances social relationships to also involve humor that is disparaging of one's self, more so than humor that is disparaging of others.

In contrast to adaptive humor, our findings revealed that the perceived covariation of maladaptive humor with the remaining humor styles is not based primarily on the adaptive-maladaptive humor dimension. For example, high aggressive humor was perceived to be associated with higher levels of adaptive humor than with self-defeating humor, and was attributed with equal levels of affiliative and self-enhancing humor. As such, an individual with high aggressive humor is perceived to be more likely to use humor that is accepting of both the self and others, than to use humor that is self-defeating. Furthermore, it is interesting to note that perceptions of covariation between high aggressive humor and other humor styles are also not a direct function of the self-other humor dimension. In particular, individuals who use aggressive humor that derogates others are perceived to be just as likely to use affiliative humor that adaptively enhances social relationships, as humor that adaptively enhances the self.

Finally, our Study 3 results showed that high self-defeating humor, which is used to gain the approval of others, was perceived to be more strongly associated with adaptive affiliative humor that enhances relationships than with self-enhancing humor. This association between self-defeating and affiliating humor suggests that individuals may, in fact, perceive self-defeating humor to be a partially adaptive characteristic for the development of social relationships. However, a person who uses self-defeating humor is perceived to be just as likely to use aggressive humor that is derogatory of others, as to use adaptive styles of humor. As such, these findings indicate that the perceived covariations between self-defeating humor and the other humor styles are a function of both the self-other and adaptive-maladaptive dimensions of humor.

General Implications and Future Research Directions

Although previous research has suggested that humor has a facilitative effect on social relationships, that work has generally conceptualized sense of humor as a single, positive construct. In contrast, our findings demonstrate the critical need to distinguish between several different humor styles, since these styles have differential effects on social relationships. For example, compared to adaptive humor styles, we found that individuals are less likely to want to continue interacting with others displaying maladaptive aggressive or self-defeating humor. Furthermore, our findings suggest that these differential effects may also pertain to recipients' feelings about themselves. Compared to adaptive humor, maladaptive humor styles resulted in recipients having less positive and more negative feelings about themselves.

Interestingly, we found that it was the adaptive-maladaptive dimension, rather than the self-other dimension, which was central to the effects of humor on recipients' feelings about themselves. Although it may be reasonable to assume that humor focused on the self (self-enhancing and self-defeating humor) would have little impact on recipients' feelings about themselves, our findings did not support this assumption. Rather, we found that humor styles with a self-focus differed in their impact on the recipients' self-feelings, based on their adaptive-maladaptive nature. In particular, self-enhancing adaptive humor led to recipients having more positive and less negative feelings about themselves than self-defeating maladaptive humor. As such, it may be beneficial for future research to delineate the precise mechanisms whereby the various humor styles impact on recipients' feelings about themselves.

Given that adaptive humor styles are desirable and valuable qualities in social interactions, individuals may believe that they possess and frequently use these positive qualities themselves. Indeed, our findings indicate that individuals perceive themselves as using adaptive humor styles, particularly affiliative humor, more frequently than maladaptive styles. Furthermore, individuals perceive themselves as engaging least often in aggressive humor, the humor style resulting in the most social distancing by others. Future research should behaviourally assess each humor style displayed by an individual, and then determine concordance rates with that individual's perceptions of actual use. It is possible that individuals are biased and perceive themselves as more frequently using more desirable humor styles, in order to minimize their perceptions of the actual use of maladaptive styles of humor.

The present study also contributed to our understanding of the effects of humor styles on attributions about other styles of humor. In particular, individuals displaying an adaptive humor style are believed to be more likely to use another adaptive, rather than maladaptive, humor style. Thus, individuals who display affiliative humor are believed to be more likely to also use self-enhancing humor, than aggressive or self-defeating humor. Given that each of these adaptive humor styles increase recipients' desire to interact with an individual, the implicit attribution of a second adaptive humor style may contribute to, and help account for, the positive impact of adaptive humor in social interactions.

Interestingly, the present research also found that individuals using aggressive humor are believed to be more likely to use an adaptive humor style than a second maladaptive humor style (self-defeating humor). However, since the present work did not examine the level of each humor style that is attributed to a "typical" person, it is not possible to determine whether aggressive humor is associated with higher or lower levels of adaptive humor styles than would be attributed to a typical person. As such, it would be worthwhile for future research to examine this issue, as well as the effects of these attributions on subsequent social interactions.

With respect to broader implications, our findings highlight the importance of clearly acknowledging various styles of humor and their differential effects on social interactions. Thus, when psychosocial programs attempt to enhance individuals' social skills through the use of humor, it would be critical to distinguish between each humor style and encourage the development of specific adaptive styles of humor, rather than humor in general. Furthermore, programs attempting to develop skills to enhance social relationships should focus not only on affiliative humor, but also on the development of self-enhancing humor, since both these styles have an equal effect in terms of enhancing social interaction. Furthermore, the inclusion of self-enhancing humor in such programs would provide the added benefit of increasing one's repertoire of coping strategies.

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