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Laughing at the Looking Glass: Does Humor Style Serve as an Interpersonal Signal?

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Abstract: Objective: The provision of information appears to be an important feature of humor. The present studies examined whether humor serves as an interpersonal signal such that an individual's style of humor is associated with how the individual is perceived by others. Method: We examined this issue across two studies. In Study 1, undergraduate participants (257 targets) were rated more positively by their friends and family members (1194 perceivers) when they possessed more benign humor styles. In Study 2, 1190 community participants rated the romantic desirability of targets ostensibly possessing different humor styles. Results: Across both studies, our results were consistent with the possibility that humor serves as a signal. More specifically, individuals with benign humor styles (affiliative and self-enhancing humor styles) were evaluated more positively than those targets with injurious humor styles (aggressive and self-defeating humor styles). Conclusion: These findings are discussed in terms of the role that humor may play in interpersonal perception and relationships.

Keywords: humor styles, personality, attraction, romantic

Introduction

Humor has been thought to serve a variety of functions. Freud (1905/1960, 1928) suggested that individuals often use humor as a defense mechanism to protect themselves from feelings of anxiety or as a means for expressing unconscious desires such as aggression. More recent theorists have posited that humor serves both intrapsychic and interpersonal functions (see Martin, Puhlik-Doris, Larsen, Gray, and Weir, 2003, for a

review). The intrapsychic functions of humor include stress management (Dixon, 1980; Lefcourt and Martin, 1986), courage enhancement (Mishinsky, 1977), tension relief (Obrdlik, 1942; Ziv, 1984), and recovery from negative mood states such as depression (Goldstein, 1987). The interpersonal functions of humor include social control, status maintenance, facilitating the formation of in-group cohesion, and ostracizing out-group members (Allen, Reid, and Riemschneider, 2004; Martin, 2007; Stillman, Baumeister, and DeWall, 2007).

Humor also plays an important role in the establishment, enhancement, and maintenance of relationships with others (e.g., Allport, 1961; Maslow, 1954; Ziv, 1984). For example, humor is often important in the initiation of romantic relationships. This is reflected by the fact that both men and women consistently rate a sense of humor as one of the most desirable characteristics in potential partners (Feingold, 1992; Hansen, 1977; Hewitt, 1958; Li, Bailey, Kenrick, and Linsenmeier, 2002; Sprecher and Regan, 2002) and displays of humor have been rated as the most effective tactic for attracting mates (e.g., Buss, 1988). Interestingly, the importance ascribed to the sense of humor possessed by one's romantic partner actually increases in more serious relationships (McGee and Shevlin, 2009).

Most research concerning the role of humor in relationships has focused on the possession of a "good sense of humor". Individuals who possess a good sense of humor are often assumed to possess a number of other positive qualities such as friendliness, intelligence, and creativity (e.g., Cann and Calhoun, 2001). The use of humor has been shown to increase feelings of closeness among relative strangers and increases attraction to potential mating partners (Buss, 1988; Martin, 2007). Studies concerning the link between humor and relationships have often focused on the relatively positive aspects of humor which make the individual generating the humor feel better about himself/herself or forge a stronger bond with the audience. Although the positive aspects of humor are important, there are also negative aspects to humor that may involve causing damage to the self (e.g., belittling one's own capabilities) or others (e.g., disparaging the members of a minority group). The present studies will go beyond simply examining a "good sense of humor" by focusing on both the positive and negative aspects of humor.

It is clear that humor plays an important role in interpersonal relationships but the reason for this connection remains poorly understood. One intriguing possibility is that humor functions as a signal. We believe the signaling property of humor is due to the existence of an implicit theory concerning humor that influences how humor is perceived by others. An implicit theory refers to a set of beliefs concerning the covariation of characteristics (e.g., Asch, 1946; Dweck and Leggett, 1988; Jones and Thibaut, 1958; Kelley, 1973; Kelly, 1955). The importance of implicit theories stems from their ability to influence how individuals process information about targets. For example, if someone has an implicit theory that two characteristics are associated, then this person may be more likely to infer that a new target possesses the second characteristic after learning that this target has the first characteristic. A variety of implicit theories have been identified including those concerning physical attractiveness (Dion, Berscheid, and Walster, 1972) and high self-esteem (Zeigler-Hill, Besser, Myers, Southard, and Malkin, in press; Zeigler-Hill and Myers, 2009, 2011). The results of previous studies suggest the existence of an

implicit theory of humor because individuals often attribute an array of additional positive characteristics to humorous individuals (e.g., high levels of extraversion, agreeableness, emotional stability; Cann and Calhoun, 2001). It appears that a sense of humor is often viewed as an indicator of a broader "healthy" personality such that humorous individuals are assumed to be a source of positive interpersonal stimulation.

The idea that humor may serve as an interpersonal signal has its basis in Darwin's (1871) model of sexual selection. That is, humor is believed to have evolved as a mating display that signals the possession of certain qualities to the social environment (e.g., Alexander, 1986). A likely possibility is that humor serves as a signal for intelligence, creativity, and genetic fitness (Miller, 1998, 2000a, 2000b). According to this argument, humor – like many other psychological traits – has evolved as a result of intersexual selection and may be used as an indication of underlying mutational load. That is, individuals who carry relatively few deleterious genetic mutations may possess a stronger set of cognitive skills (e.g., intelligence, creativity) that would grant them a greater capacity to both generate and enjoy humor. Phenotypic variation in the capacity for humor should provide cues about the genetic quality of individuals, which may influence mate choice. Attraction to humorous individuals is believed to develop because mating with these individuals would provide offspring with genetic benefits (see Bressler, Martin, and Balshine, 2006, for a review).

Another possibility is that humor may serve as a signal about the material and social resources of the individual. Individuals who employ humor may be assumed to possess sufficient material resources to allow him or her the leisure time to develop and tell jokes (Miller, 1998). It has also been suggested that the use of humor may serve as a signal for self-confidence and control over the social environment (Chafe, 2007). The idea that self-assured individuals may be more likely to utilize humor has been compared to other burdensome traits (e.g., the tail of a peacock) because only individuals with high levels of status could afford to handicap themselves by using certain types of humor such as those that either harmed themselves (e.g., self-deprecating humor) or enhanced potential rivals (e.g., other-enhancing humor; Greengross and Miller, 2008). If humor serves as an indicator of either material or social resources, then it may be expected that women would show greater attraction to humorous men than men would show to humorous women. Previous research has supported this basic pattern (Bressler and Balshine, 2006; Bressler et al., 2006).

The idea that humor may serve as a signal is consistent with the observation that a wide array of organisms use signals to communicate information concerning their phenotypic and genetic qualities to their social environments (e.g., Andersson, 1994; Dale, Lank, and Reeve, 2001; Grafen, 1990; Rohwer and Rohwer, 1978; Zahavi, 1975). A prominent example is that conspicuous color traits serve as signals of dominance in a variety of species including birds (e.g., Senar, 2006), lizards (e.g., Martin and Forsman, 1999), and insects (e.g., Tibbetts and Dale, 2004). Other signals of this sort include physical characteristics (e.g., size, odor) and behaviors (e.g., vocalizations, aggressive displays; Bergman et al., 2003; Bokony, Lendvai, and Liker, 2006; Fossey, 1983; Preuschoft, 1999). Similar to ornamental physical characteristics in non-human species (e.g., the elaborate tail fan of a peacock), a sense of humor may serve as a signal of quality

(i.e., "good genes") to others in the social environment. This idea is consistent with the observation that humor is one of the most positively viewed personality traits (e.g., Anderson, 1968; Craik, Lampert, and Nelson, 1996).

Although previous research has focused almost exclusively on the broad and undifferentiated idea of having a "good sense of humor", Martin and his colleagues (2003) have developed a two-dimensional framework for understanding the interpersonal nature of humor that has served as an important innovation in research concerning humor. This framework focuses on the social aspects of humor by suggesting that there are two underlying dimensions that reflect both the nature of humor (i.e., benign or injurious) as well as the target of enhancement (i.e., the self or relationships with others). The combination of these two dimensions results in four distinct humor styles that are referred to as *affiliative* humor (i.e., benign humor that is used to enhance relationships with others such as telling jokes or engaging in friendly banter), *self-enhancing* humor (i.e., benign humor that is used to enhance the self through means such as finding amusement even during stressful situations), *aggressive* humor (i.e., injurious humor that is used to enhance the self through activities such as ridiculing or teasing others to put them down), and *self-defeating* humor (i.e., injurious humor that is used to enhance relationships with others through actions such as belittling oneself). This differentiation is important to our consideration of the signaling properties of humor because we believe that these humor styles may send very different signals to the social environment.

A rapidly expanding body of research has shown that the benign and injurious styles of humor are differentially related to emotional and psychosocial well-being in the ways that would be expected (e.g., Besser, Luyten, and Blatt, 2011; Besser, Luyten, and Mayes, 2012; Besser and Zeigler-Hill, 2011; Zeigler-Hill and Besser, 2011). For example, the benign styles of humor (i.e., affiliative and self-enhancing) have been found to be associated with positive personality features such as high levels of extraversion, openness, and self-esteem. In contrast, the injurious styles of humor (i.e., self-defeating and aggressive) have been found to be associated with less positive personality features such as high levels of neuroticism, psychopathy, and Machiavellianism as well as low levels of agreeableness and conscientiousness (Galloway, 2010; Martin et al., 2003; Vernon, Martin, Schermer, and Mackie, 2008; Veselka, Schermer, Martin, and Vernon, 2010; see Martin, 2007, for a review). The differentiation between the benign and injurious styles of humor is consistent with previous arguments that humor can be used in different ways and serve different purposes. For example, humor may serve positive social functions such as increasing group cohesion but it also has the potential to serve negative social functions such as deriding others (e.g., Lefcourt, 2001; Lefcourt and Martin, 1986). This suggests the intriguing possibility that the different humor styles may send very different signals to the social environment. Consistent with this possibility, it has recently been found that benign humor styles are associated with positive impressions of a target whereas injurious humor styles are associated with negative impressions (Kuiper and Leite, 2010).

Overview and Predictions

The primary goal of the present studies was to examine whether a target's perceived humor style influences how he or she is evaluated by perceivers on other dimensions. That

is, we were interested in determining whether a target's style of humor serves as a signal that communicates information about the target to members of the social environment. We expected that the styles of humor would serve as different signals, which would lead them to exhibit markedly different associations with the outcomes examined in the present studies. We expected that the benign styles of humor (i.e., affiliative and self-enhancing) would have strong positive associations with desirable characteristics such as extraversion and romantic desirability. In contrast, we expected that the injurious styles of humor (i.e., aggressive and self-defeating) would be negatively associated with positive personality features and romantic desirability. Although we believed that individuals who relied heavily on both aggressive and self-defeating humor may be viewed negatively by others, we thought this may be especially true for those who frequently utilize aggressive humor. That is, we predicted that targets characterized by aggressive humor styles would be perceived in a particularly negative manner by others because these individuals are likely to use their humor to make themselves feel better by belittling or insulting others. This behavior may serve as a signal to others that the target may possess other undesirable characteristics (e.g., high levels of trait aggressiveness) and may be a less than ideal relationship partner.

Study 1: Ratings of Targets by Friends and Family Members

The primary purpose of Study 1 was to examine whether the humor styles of the targets were associated with the perceived self-esteem, narcissism, personality features, and aggression ascribed to these targets by those in their social environment. That is, we wanted to determine the extent to which there is a connection between humor style (both self-reported and perceived) and perceptions of the target on other dimensions. In addition, we wanted to determine whether the self-reported humor styles of the targets were associated with the ratings provided by the perceivers. This is important because there have been relatively few studies that have examined the correspondence between self-reported and perceived humor styles. Martin et al. (2003) found significant correlations between self-reports and perceiver-ratings of the four humor styles but the perceiver ratings only consisted of a single item for each humor style. Cann, Zapata, and Davis (2011) also found positive correlations between self-reported humor styles and perceiver-ratings of humor but these associations were not particularly strong. Given these previous results, we believe it is important to examine whether there is significant correspondence between self- and perceiver-ratings of humor style.

We accomplished the goals of the present study by asking participants to complete a measure of their humor styles before recruiting friends and family members to evaluate their humor styles, self-esteem, narcissism, personality features, and aggression. Our predictions were that the humor styles of the targets – both self-reported and perceived – would be associated with their perceived self-esteem, narcissism, personality features, and aggression. The rationale for these predictions was that the perceivers – given their status as friends and family members of the targets – would have access to a considerable amount of information about the targets so that the signals that were broadcast by the targets via their humor styles would be relatively easily received by the perceivers and would be associated with how they rated the targets on other dimensions.

Materials and Methods

Participants and Procedure

Participants were 388 undergraduates at a university in the southern region of the United States who were enrolled in psychology courses and participated in return for partial fulfillment of a research participation requirement. Participants provided basic demographic information (e.g., age, sex) and completed a measure of their humor style during an online prescreening session at the beginning of the semester. These participants were offered additional research credit in exchange for recruiting up to five friends or family members (i.e., perceivers) to complete questionnaires concerning the participant (i.e., the target) via the internet. In order to assess the manner in which individuals with different humor styles were viewed by others, we had to establish some minimum number of perceivers for each target in order for them to be included in the final analyses. Based on the convention used in studies using a similar methodology (e.g., Malkin, Zeigler-Hill, Barry, and Southard, in press; Zeigler-Hill et al., in press), we decided to only include targets in the final analyses who successfully recruited three or more perceivers. Of the 388 participants who completed the initial questionnaires, 257 participants (38 men and 219 women) recruited three or more perceivers to participate in the study by completing questionnaires about their perceptions of the targets who recruited them (66% of the original sample). The mean age of the targets was 20.59 years ($SD = 4.57$) and their racial/ethnic composition was 60% White, 35% Black, 2% Hispanic, 1% Asian, and 2% Other. The targets included in our final analyses did not differ from those participants who did not recruit three or more perceivers in terms of age ($t_{[386]} = 1.24$, $p = .22$), racial/ethnic background ($\chi^2_{[6]} = 4.25$, $p = .64$), affiliative humor style ($t_{[386]} = 1.55$, $p = .12$), self-enhancing humor style ($t_{[386]} = 1.01$, $p = .32$), aggressive humor style ($t_{[386]} = 0.16$, $p = .87$), or self-defeating humor style ($t_{[386]} = 1.78$, $p = .07$). However, women were more likely than men to recruit three or more perceivers which resulted in women being more likely than men to be included in the final analyses ($\chi^2_{[1]} = 5.46$, $p < .05$). The 257 targets recruited a total of 1194 perceivers (386 men and 808 women) with an average of 4.64 perceivers for each target. Perceivers were only allowed to submit one rating for a single participant (i.e., the same perceiver could not provide ratings for more than one target). The mean age of the perceivers was 28.42 years ($SD = 13.20$), and their racial/ethnic composition was 62% White, 34% Black, 2% Hispanic, 1% Asian, and 1% Other. The targets recruited perceivers who were generally older than themselves ($M_{targets} = 20.59$ years; $M_{perceivers} = 28.42$ years; $t_{[449]} = 9.38$, $p < .001$) and the perceivers were more likely than the targets to be men (15% of targets but 32% of perceivers; $\chi^2_{[1]} = 31.47$, $p < .001$). However, the targets and the perceivers were similar in terms of their racial/ethnic composition ($\chi^2_{[6]} = 7.29$, $p = .30$).

Measure Completed by the Targets

Humor style. The Humor Styles Questionnaire (Martin et al., 2003) was used to assess benign and injurious humor styles. It is a 32-item measure that consists of four subscales that assess the following styles of humor: affiliative (e.g., "I laugh and joke a lot with my friends"; $\alpha = 0.79$), self-enhancing (e.g., "My humorous outlook on life keeps me

from getting overly upset or depressed about things"; $\alpha = 0.82$), aggressive (e.g., "If someone makes a mistake, I will often tease them about it"; $\alpha = 0.74$), and self-defeating (e.g., "I let people laugh at me or make fun at my expense more than I should"; $\alpha = 0.79$). Responses were made on scales ranging from 1 (*totally disagree*) to 7 (*totally agree*). Martin et al. (2003) have shown that this instrument demonstrates adequate psychometric properties.

Measures Completed by the Perceivers

Perceived humor style. The perceived humor styles of the targets were assessed using a brief version of the Humor Styles Questionnaire. For each of the four humor styles, we selected three items from the subscales of the Humor Styles Questionnaire to capture the breadth of that particular style of humor: affiliative ("The target usually doesn't laugh or joke around much with other people" [reverse-scored]; "The target laughs and jokes a lot with his/her friends"; "The target enjoys making people laugh"; $\alpha = 0.73$), self-enhancing (e.g., "If the target is feeling depressed, he/she can usually cheer himself/herself up with humor"; "Even when the target is by himself/herself, he/she is often amused by the absurdities of life"; "The target's humorous outlook on life keeps him/her from getting overly upset or depressed about things"; $\alpha = 0.71$), aggressive (e.g., "If someone makes a mistake, the target will often tease them about it"; "When telling jokes of saying funny things, the target is usually not very concerned about how other people are taking it"; "If the target doesn't like someone, he/she often uses humor or teasing to put them down"; $\alpha = 0.79$), and self-defeating (e.g., "The target lets people laugh at him/her or make fun at his/her expense more than he/she should"; "The target will often get carried away in putting himself/herself down if it makes his/her family or friends laugh"; "The target often tries to make people like or accept him/her more by saying something funny about his/her own weaknesses, blunders, or faults"; $\alpha = 0.84$). Responses were made on scales ranging from 1 (*totally disagree*) to 7 (*totally agree*).

Perceived self-esteem level. The perceived self-esteem levels of the targets were assessed using modified versions of the Single-Item Self-Esteem Scale (Robins, Hendin, and Trzesniewski, 2001) and the State Self-Esteem Scale (Heatherton and Polivy, 1991). The Single-Item Self-Esteem Scale measures global self-esteem using only a single item (i.e., "I see the target as someone who has high self-esteem") and responses were made on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The State Self-Esteem Scale is a 20-item measure that assesses perceived self-esteem across three domains: Performance (7 items; e.g., "The target appears to feel confident about his/her abilities"; $\alpha = 0.79$), Social (7 items; e.g., "The target appears to feel concerned about the impression he/she is making" [reverse-scored]; $\alpha = 0.85$), and Appearance (6 items; e.g., "The target feels satisfied with the way his/her body looks right now"; $\alpha = 0.83$). Responses for the State Self-Esteem Scale were made on scales ranging from 1 (*not at all*) to 5 (*extremely*). A composite measure of perceived self-esteem was calculated that consisted of the standardized scores from these measures ($\alpha = 0.91$).

Perceived grandiosity. A modified version of the Narcissistic Grandiosity Scale (Rosenthal, Hooley, and Steshenko, 2007) was used to assess the extent to which the perceivers thought that the targets held grandiose beliefs about themselves. The Narcissistic

Grandiosity Scale consists of 16 trait adjectives (e.g., perfect, glorious), and perceivers were asked to rate how well each adjective described the way the targets viewed themselves using scales ranging from 1 (*not at all*) to 7 (*extremely*). The internal consistency of the Narcissistic Grandiosity Scale was $\alpha = 0.97$ for the present study.

Perceived entitlement. A modified version of the Psychological Entitlement Scale (Campbell, Bonacci, Shelton, Exline, and Bushman, 2004) was used to capture the extent to which targets were viewed as possessing the sense of entitlement that often accompanies narcissism. Perceivers were asked to rate their level of agreement with each of nine statements concerning the target (e.g., "The target honestly feels that he/she is just more deserving than others") using scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The internal consistency of the Psychological Entitlement Scale was $\alpha = 0.88$ for the present study.

Perceived aggression. A modified version of the Forms and Functions of Aggression Scale (Little, Henrich, Jones, and Hawley, 2003) was used to capture the extent to which the perceivers viewed the targets as aggressive. This measure consists of 36 items (e.g., "The target is the kind of person who often fights with others") and perceivers were asked to rate their level of agreement with statements concerning their view of the target using scales ranging from 1 (*not at all*) to 4 (*completely true*). The internal consistency of the Forms and Functions of Aggression Scale was $\alpha = 0.97$ for the present study.

Perceived personality features. A modified version of the Ten-Item Personality Inventory (Gosling, Rentfrow, and Swann, 2003) was used to capture the perceived personality characteristics of the targets. The Ten-Item Personality Inventory assesses the Big Five personality dimensions of extraversion, agreeableness, conscientiousness, emotional stability, and openness. Respondents were asked to rate how well each pair of adjectives (e.g., extraverted, enthusiastic) described the targets using scales that ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

Results

Correlations for the self-reported humor styles showed that the affiliative and self-enhancing styles were positively associated with each other ($r = .33$, $p < .001$) as were the aggressive and self-defeating styles ($r = .41$, $p < .001$). Further, significant levels of correspondence emerged between the targets' self-reported humor styles and the perceiver ratings of the targets' humor styles: self-reported and perceived affiliative humor style ($r = .43$, $p < .001$), self-reported and perceived self-enhancing humor style ($r = .28$, $p < .001$), self-reported and perceived aggressive humor style ($r = .30$, $p < .001$), and self-reported and perceived self-defeating humor style ($r = .31$, $p < .001$).

Data Analytic Strategy

The present analyses had three goals, which map directly onto our hypotheses. The first goal was to examine the covariation between perceivers' ratings of humor styles and perceivers' ratings of self-esteem, personality features, and aggression. The second goal was to examine whether there was self-other agreement concerning the humor styles possessed by the targets. The third goal was to examine whether the targets' self-reported

humor styles were associated with their perceived self-esteem, narcissism, personality features, and aggression. The data from the present study comprised a multilevel data structure because observations at one level of analysis were nested within another level of analysis (i.e., perceivers' ratings were nested within targets). More specifically, this was a *one-with-many design* (see Marcus, Kashy, and Baldwin, 2009, for a review) in which each target was evaluated by multiple perceivers. A series of multilevel models using the program HLM (Bryk, Raudenbush, and Congdon, 1998) were employed to analyze these data due to this hierarchical structure. This approach is necessary to account for the violation of the independence assumption that occurs as a result of using multiple perceivers for each target. At a conceptual level, these multilevel models involved two steps. In the first step, a regression equation was estimated for each target at Level 1 (the among-perceivers level) to yield intercept and slope coefficients that serve as an index of the association between the ratings provided by the perceivers (e.g., "Do perceivers rate a target as being more extraverted when they believe that target has a self-enhancing humor style?"). For the second step, Level 2 analyses (the across-targets level) examined whether the perceptions of the targets obtained from the Level 1 analyses differed between targets depending on their self-reported humor styles (e.g., "Were those targets who described themselves as utilizing an aggressive humor style perceived as more aggressive by their friends and family members?").

The Associations between Perceived Humor Styles and Perceived Self-Esteem, Narcissism, Personality Features, and Aggression

Two-level models were used to examine the relationship between perceiver ratings of the targets' humor styles and the perceived self-esteem, narcissism, personality features, and aggression of the targets. The Level 1 (among-perceivers) model was as follows:

$y_{ij} = \beta_{0j} + \beta_{1j}$AFFILIATIVE $+ \beta_{2j}$SELF-ENHANCING $+ \beta_{3j}$AGGRESSIVE $+ \beta_{4j}$SELF-DEFEATING $+ r_{ij}$

in which *y* is the perceived self-esteem, narcissism, personality features, or aggression of target *j* as rated by perceiver *i*, β_{0j} is a random coefficient representing the intercept for target *j*, β_{1j} is a random coefficient for perceived affiliative humor, β_{2j} is a random coefficient for perceived self-enhancing humor, β_{3j} is a random coefficient for perceived aggressive humor, β_{4j} is a random coefficient for perceived self-defeating humor, and r_{ij} represents error. For these analyses, the perceiver ratings were group-mean centered with *group* defined as the perceivers who shared a common target (Raudenbush and Bryk, 2002). This technique was used because there was considerable variability in the ratings between perceivers (e.g., some perceivers rated their target as more extraverted than other perceivers who rated the same target) and across targets (e.g., some targets were generally rated as more extraverted than other targets). The use of group-mean centering for perceiver ratings eliminated the influence of these differences on parameter estimates and allowed us to examine the associations that deviations from the average perception of the target's humor style had with perceived self-esteem, narcissism, personality features, and aggression (e.g., "Do perceivers rate targets as more aggressive when they view the target

as utilizing more aggressive humor than is typical for that target?"). The perceived humor styles were entered as predictors in the same model in order to examine their unique associations with perceived self-esteem, narcissism, personality features, and aggression.

The extent to which the perceived humor styles were associated with perceived self-esteem, narcissism, personality features, and aggression was examined by analyzing Level 1 (among-perceivers) coefficients at Level 2 (across-targets) using the following model:

Intercept: $\beta_{0j} = \gamma_{00} + u_{0j}$
Affiliative: $\beta_{1j} = \gamma_{10} + u_{1j}$
Self-Enhancing: $\beta_{2j} = \gamma_{20} + u_{2j}$
Aggressive: $\beta_{3j} = \gamma_{30} + u_{3j}$
Self-Defeating: $\beta_{4j} = \gamma_{40} + u_{4j}$

In this model, γ_{00} represented the average of the perceiver intercepts, whereas γ_{10}, γ_{20}, γ_{30}, and γ_{40} represented the average ratings of affiliative humor, self-enhancing humor, aggressive humor, and self-defeating, respectively. All five among-perceivers coefficients are modeled as random (i.e., u_{0j}, u_{1j}, u_{2j}, u_{3j}, and u_{4j} terms are included). Perceptions of the affiliative humor style possessed by the targets were positively associated with their perceived self-esteem and personality features (γ_{10}s $> .12$, $ts > 4.98$, $ps < .001$) but negatively associated with their perceived aggression ($\gamma_{10} = -.08$, $t = -4.38$, $p < .001$). Ratings of the self-enhancing humor utilized by the targets were positively associated with the perceived self-esteem ($\gamma_{20} = .06$, $t = 3.04$, $p = .003$), agreeableness ($\gamma_{20} = .14$, $t = 4.02$, $p < .001$), conscientiousness ($\gamma_{20} = .12$, $t = 3.78$, $p < .001$), emotional stability ($\gamma_{20} = .14$, $t = 3.53$, $p < .001$), and openness ($\gamma_{20} = .08$, $t = 2.75$, $p = .006$) of the targets. The perception of aggressive humor was positively associated with perceived grandiosity ($\gamma_{30} = .22$, $t = 4.82$, $p < .001$), entitlement ($\gamma_{30} = .27$, $t = 6.62$, $p < .001$), and aggression ($\gamma_{30} = .17$, $t = 10.06$, $p < .001$) of the targets but it was negatively associated with their perceived self-esteem ($\gamma_{30} = -.05$, $t = -2.42$, $p = .03$), agreeableness ($\gamma_{30} = -.36$, $t = -8.37$, $p < .001$), conscientiousness ($\gamma_{30} = -.22$, $t = -6.07$, $p < .001$), emotional stability ($\gamma_{30} = -.19$, $t = -4.51$, $p < .001$), and openness ($\gamma_{30} = -.17$, $t = -4.81$, $p < .001$). Perceptions of the self-defeating humor styles was positively associated with the perceived entitlement ($\gamma_{40} = .12$, $t = 3.17$, $p = .002$) and aggression ($\gamma_{40} = .04$, $t = 2.63$, $p = .009$) of the targets but it was negatively associated with their perceived self-esteem ($\gamma_{40} = -.11$, $t = -5.29$, $p < .001$), conscientiousness ($\gamma_{40} = -.12$, $t = -3.61$, $p < .001$), and emotional stability ($\gamma_{40} = -.12$, $t = -3.04$, $p = .003$). These results suggest that targets who are believed to possess benign humor styles (i.e., affiliative and self-enhancing) are viewed quite differently than those who are believed to possess the injurious humor styles (i.e., aggressive and self-defeating). For example, the benign humor styles had positive associations with outcomes such as perceived self-esteem, conscientiousness, and emotional stability whereas the injurious humor styles had negative associations with these outcomes.

Self-Other Agreement Concerning Humor Styles

Additional analyses examined whether the self-reported humor styles of the targets

were associated with the humor style ratings that the perceivers provided for the targets. In essence, these analyses were focused on the extent to which there was self-other agreement concerning the humor styles of the targets. This was accomplished using a series of two-level models that examined these effects at Level 2 (across-targets) by modeling the variability of β_{0j} which is the coefficient from the Level 1 (among-perceivers) model that represents the group mean for that particular perceiver rating (i.e., β_{0j} would represent the perceiver ratings of the affiliative humor style for the first model, the self-enhancing humor style for the second model, and so on). This type of analysis is referred to as a *means as outcomes* analysis (Bryk and Raudenbush, 1992; Nezlek and Zyzniewski, 1998). The following Level 2 (across-targets) model was used to examine whether the average scores for the perceivers' ratings of the targets were associated with the self-reported humor styles of the targets:

$\beta_{0j} = \gamma_{00} + \gamma_{01}$(SELF-REPORTED AFFILIATIVE HUMOR) + γ_{02}(SELF-REPORTED SELF-ENHANCING HUMOR) + γ_{03}(SELF-REPORTED AGGRESSIVE HUMOR) + γ_{04}(SELF-REPORTED SELF-DEFEATING HUMOR) + u_{0j}.

Self-reported affiliative humor ($\gamma_{01} = .33$, $t = 6.22$, $p < .001$) and self-reported self-enhancing humor ($\gamma_{02} = .21$, $t = 4.23$, $p < .001$) were positively associated with perceived affiliative humor. Similarly, self-reported affiliative humor ($\gamma_{01} = .17$, $t = 2.65$, $p < .009$) and self-reported self-enhancing humor ($\gamma_{02} = .20$, $t = 2.90$, $p < .004$) were positively associated with perceived self-enhancing humor. The self-reported aggressive humor style was the only style of humor associated with perceived aggressive humor ($\gamma_{03} = .34$, $t = 3.70$, $p < .001$) and the self-reported self-defeating humor style was the only style associated with perceived self-defeating humor ($\gamma_{04} = .34$, $t = 5.41$, $p < .001$). These results show a high level of self-other agreement concerning the humor styles of the targets. This suggests that the targets are emitting relatively clear signals concerning their humor styles. However, it is important to note that there was less differentiation among the benign styles of humor that was observed for the injurious styles. This suggests that perceivers may have more difficulty distinguishing between affiliative and self-enhancing humor styles than they do when distinguishing between the aggressive and self-defeating humor styles.

The Association between Self-Reported Humor Styles and Perceiver Ratings of Self-Esteem, Narcissism, Personality Features, and Aggression

The present analyses examined whether the self-reported humor styles of the targets were associated with the perceiver ratings of the targets for self-esteem, narcissism, personality features, and aggression. This was accomplished using a series of two-level models similar to those described in the previous section (i.e., means as outcomes analyses). Self-reported affiliative humor was found to be negatively associated with perceiver ratings of aggression ($\gamma_{01} = -.06$, $t = -1.97$, $p = .05$) as well as being positively associated with perceived extraversion ($\gamma_{01} = .29$, $t = 3.94$, $p < .001$) and openness ($\gamma_{01} = .18$, $t = 3.82$, $p < .001$). Self-reported use of the self-enhancing humor style was found to be positively associated with perceived self-esteem ($\gamma_{02} = .11$, $t = 2.84$, $p = .01$), agreeableness

(γ_{02} = .13, t = 2.13, p = .03), conscientiousness (γ_{02} = .20, t = 3.43, p < .001), emotional stability (γ_{02} = .18, t = 3.27, p = .002), and openness (γ_{02} = .19, t = 4.03, p < .001) as well as negatively associated with perceiver ratings of aggression (γ_{02} = -.09, t = -2.44, p = .02). Self-reported aggressive humor was found to be positively associated with perceiver ratings of entitlement (γ_{03} = .28, t = 3.19, p = .002) and aggression (γ_{03} = .10, t = 2.68, p = .01). Self-reported scores concerning the use of self-defeating humor were found to be negatively associated with perceived self-esteem (γ_{04} = -.13, t = -3.29, p = .002), conscientiousness (γ_{04} = -.13, t = -2.36, p = .02), and emotional stability (γ_{04} = -.22, t = -3.32, p < .001). Taken together, these results suggest that individuals who possess benign humor styles tend to be perceived by their friends and family members in a more positive fashion (e.g., higher levels of self-esteem and less aggressive) than those with injurious humor styles.

Discussion

The association between targets' self-reported humor styles and the perceived humor styles that emerged in Study 1 suggests that the humor styles of the targets can be clearly discerned. However, it is important to note that perceivers were better able to distinguish between the aggressive and self-defeating humor styles than they could distinguish between the affiliative and self-enhancing humor styles. It is important to note that the self-other agreement for the humor styles was similar in magnitude to what has been observed for personality features and self-esteem in previous studies (e.g., Zeigler-Hill et al., in press).

The benign humor styles were generally accompanied by more positive perceptions than the injurious humor styles. These results are consistent with the idea that humor serves as a signal because they show that the humor styles of the targets were associated with how they were viewed by their friends and family members. These findings show that humor – both self-reported humor styles and perceived humor styles – are associated with perceptions of the target on a variety of dimensions.

Study 2: Ratings of Targets Based on a Brief Description

The purpose of Study 2 was to extend the results of Study 1 by determining whether a target's humor style was associated with the evaluations provided by perceivers who did not actually know the target. More specifically, participants (i.e., perceivers) in the present study were asked to read personality descriptions that were ostensibly written about other-sex participants from a previous study (i.e., targets) and complete evaluations of the targets' romantic desirability based only on this limited information. We selected the domain of romantic desirability for the present study because of the important role that humor plays in attraction (e.g., Cann, Calhoun, and Banks, 1997; McGee and Shevlin, 2009). Our prediction for Study 2 was that the targets described as possessing more benign humor styles would be viewed as more romantically desirable than those targets possessing injurious humor styles. To examine this possibility, we adopted an approach that was similar to what was done by Kuiper and Leite (2010). That is, we developed descriptions of individuals who ostensibly possessed each of the four humor styles and asked participants

to rate the romantic desirability of these targets.

Materials and Methods

Participants and Procedure

Our sample consisted of 1190 Jewish Israeli community participants (522 men, 668 women) who responded to requests posted in various public areas (e.g., clubs, hotels, restaurants, shops) that asked for volunteers to take part in a study concerning attributes relevant to the selection of a potential mate. We were initially contacted by 1322 individuals who were interested in possibly participating in the study but 132 of these individuals declined to participate due to time constraints. Our recruitment of participants ended when we reached 1190 participants (90% of the participants initially contacted). Participants were unmarried young adults in their mid-20s (ages ranged from 20 to 36 years, $M = 24.59$, $SD = 3.01$) and had more than 12 years of formal education ($M = 13.17$, $SD = 1.59$). Participation in the study was voluntary and participants were not paid or compensated for their participation.

The study was conducted across two separate sessions. For half of the participants, the Time-1 session took place at the beginning of the week and the Time-2 session took place 6 days later. For the other half of the participants, the Time-1 session took place at the end of the week and the Time-2 session took place 6 days later. An interval of 6 days was selected because it is long enough to allow us to separate the two sessions but it is still short enough to keep track of participants and minimize attrition. Participants reported to the laboratory individually. All questionnaires were administered in Hebrew with the original English versions being translated using the back-translation method. Participants were reminded of their right to withdraw from the study if they felt uncomfortable at any point but none elected to do so. No attrition occurred between the Time-1 and Time-2 sessions.

During the Time-1 session, participants reported basic demographic information (e.g., sex, age) and completed self-report measures that are not included as part of the present study. During the Time-2 session, participants were randomly assigned to read one of four "personality profiles" that were ostensibly written by a clinical psychology graduate student to describe a participant from a previous study based on an extensive interview with the participant and objective personality measures completed by the participant. These profiles were actually created by the researchers to capture particular humor styles (i.e., aggressive, self-enhancing, affiliative, or self-defeating). These profiles are included in the Appendix. A pilot study was conducted in which six independent judges who were blind to the aims of the study rated these profiles in a random order concerning their capacity to evoke each of the particular underlying humor style, using scales ranging from 1 (*not at all*) to 7 (*very much*). The interrater intraclass correlation reliability coefficients (Shrout and Fleiss, 1979) for the ratings of the judges across the profiles were acceptable (ICCs > .94). It is important to note that we conducted preliminary analyses that included self-report measures of humor style in order to examine whether the obtained results were due to the interpersonal signaling property of humor rather than the possible 'projection' of perceivers' humor styles onto targets. These analyses found that self-reported humor styles

of the perceivers did not have a significant impact on the results. As a result, we only report the parsimonious analyses.

After reading their assigned personality profiles, participants were asked to provide ratings concerning their impression of the target on a number of dimensions including his or her desirability as a potential relationship partner. Of the 1190 participants, 298 (134 men, 164 women) were randomly assigned to read the *aggressive humor* profile, 297 (131 men, 166 women) were randomly assigned to read the *self-enhancing humor* profile, 293 (128 men, 165 women) were randomly assigned to read the *affiliative humor* profile, and the remaining 302 (129 men, 173 women) were randomly assigned to read the *self-defeating humor* profile. We controlled for potential order effects by presenting the questionnaires – during both the Time-1 and Time-2 sessions – in a random order. The participants were provided with a written debriefing statement at the end of their participation in the study.

Measures

Perceived impact of target's humor style for the target. A single-item measure was included to assess the extent to which participants believed that the humor style of the target would be injurious or benign with regard to the target (i.e., "How is this person's sense of humor likely to make him/her feel?"). Participants provided their responses to this item on a scale ranging from 1 (*Worse about himself/herself*) to 9 (*Better about himself/herself*).

Perceived impact of target's humor style for others. A single-item measure was included to assess the extent to which participants believed that the humor style of the target would be injurious or benign with regard to others in the target's social environment (i.e., "How is this person's sense of humor likely to make other people feel?"). Participants provided their responses to this item on a scale ranging from 1 (*Worse about themselves*) to 9 (*Better about themselves*).

Perceived romantic desirability of target. The Partner Ideal Scales (Fletcher, Simpson, Thomas, and Giles, 1999) were used to assess the perceived romantic desirability of the target. The Partner Ideal Scales consist of 17 items that assess three dimensions shown to be important for evaluating potential partners. The Warmth-Trustworthiness (for the present study $\alpha = .81$) dimension consists of the following attributes: *understanding*, *supportive*, *kind*, *good listener*, *sensitive*, and *considerate*. The Attractiveness-Vitality dimension (for the present study $\alpha = .82$) is comprised of the following attributes: *sexy*, *nice body*, *attractive appearance*, *good lover*, *outgoing*, and *adventurous*. The Status-Resources dimension (for the present study $\alpha = .80$) consists of the following attributes: *successful*, *nice house*, *financially secure*, *dresses well*, and *good job*. The phrase "potential to achieve" was added to the items from the Status/Resources dimension (e.g., "good job [or potential to achieve]"). Participants were asked to evaluate each target using scales ranging from 1 (*Does not appear to describe this person very well*) to 7 (*Appears to describe this person very well*). The internal consistency estimates were calculated across the various targets/conditions.

Perceived overall mate value of target. Participants were asked to evaluate the overall mate value of each target using two items (i.e., "This person's overall attractiveness" and "This person's overall value as a potential relationship partner").

Participants provided their responses using scales ranging from 1 (*very low*) to 7 (*very high*).

Results

Manipulation Check

We examined the success of our humor style manipulation by conducting a 2 (Sex: Men Rating Female Targets vs. Women Rating Male Targets) × 4 (Humor Style Condition: Affiliative vs. Self-Enhancing vs. Aggressive vs. Self-Defeating) × 2 (Outcome of Humor: Target vs. Others) ANOVA with Outcome of Humor as a within-subjects factor. The purpose of this analysis was to examine whether the ostensible humor style of the target influenced the anticipated impact of the target's humor style for the target and others in the target's social environment. Results indicated significant main effects for sex ($F_{[1, 1182]} = 9.74$, $p < .01$, $\eta_p^2 = .01$), humor style condition ($F_{[3, 1182]} = 248.98$, $p < .001$, $\eta_p^2 = .39$), and outcome of humor ($F_{[1, 1182]} = 143.61$, $p < .001$, $\eta_p^2 = .11$). The interaction of sex and humor style condition was not significant ($F_{[3, 1182]} = 1.32$, $p = .27$) but the other two-way interactions did emerge: sex × outcome of humor ($F_{[1, 1182]} = 9.06$, $p = .003$, $\eta_p^2 = .01$) and humor style condition × outcome of humor ($F_{[3, 1182]} = 291.38$, $p < .001$, $\eta_p^2 = .43$). However, it is important to note that these effects were qualified by the emergence of the significant three-way interaction: sex × humor style condition × outcome of humor ($F_{[3, 1182]} = 7.29$, $p < .001$, $\eta_p^2 = .02$). The results of this three-way interaction are presented in Figure 1. Probing of the three-way interaction revealed that participants rated the humor style of the targets in the self-defeating humor condition as being more beneficial for others than for the target ($F_{[1, 301]} = 167.73$, $p < .001$, $\eta_p^2 = .36$). In contrast, the humor style of targets in the self-enhancing humor condition was perceived to be more beneficial for the target than it would be for others ($F_{[1, 296]} = 81.50$, $p < .001$, $\eta_p^2 = .22$). Similar patterns emerged for targets who ostensibly possessed an affiliative humor style ($F_{[1, 292]} = 44.55$, $p < .001$, $\eta_p^2 = .13$) and an aggressive humor style ($F_{[1, 297]} = 481.06$, $p < .001$, $\eta_p^2 = .62$). It is important to note that the greatest difference in the impact of humor style for the target and others in the social environment emerged for targets ostensibly possessing an aggressive humor style. This difference was especially pronounced for male targets ($F_{[1, 163]} = 421.46$, $p < .001$, $\eta_p^2 = .72$) compared to female targets ($F_{[1, 133]} = 129.09$, $p < .001$, $\eta_p^2 = .49$). These results were generally consistent with our predictions based on the two-dimensional model of humor style, which suggests that our manipulation was successful.

Data Analytic Strategy

Data from the present study were analyzed using a series of 2 (Sex: Men Rating Female Targets vs. Women Rating Male Targets) × 4 (Humor Style Condition: Affiliative vs. Self-Enhancing vs. Aggressive vs. Self-Defeating) ANOVAs. The purpose of these analyses was to examine whether the humor style of an imagined target influenced how the target was evaluated in terms of his or her romantic desirability. To control for the number of analyses, a modified Bonferroni correction was used to account for the degree to which the outcome variables are correlated (Simes, 1986). This modified Bonferroni correction controls Type I error without being overly conservative. As a result of this correction, the

only omnibus results that are reported as reaching conventional levels of significance are those for which $p < .005$.

    Warmth-trustworthiness. The main effect of sex reached significance ($F_{[1,\ 1182]} = 28.62$, $p < .001$, $\eta_p^2 = .02$) such that men rated female targets as warmer and more trustworthy than women rated male targets. The main effect of humor style condition also reached significance ($F_{[3,\ 1182]} = 69.38$, $p < .001$, $\eta_p^2 = .15$). The results of this analysis are presented in Panel A of Figure 2. Post hoc tests revealed that targets in the aggressive humor condition were rated as having less warmth-trustworthiness than those in the self-defeating humor condition ($t_{[598]} = 7.09$, $p < .001$) who were, in turn, rated less positively than those in the self-enhancing humor condition ($t_{[597]} = 6.61$, $p < .001$) or the affiliative humor condition ($t_{[593]} = 5.00$, $p < .001$). The interaction of sex and humor style condition did not approach conventional levels of significance ($F_{[3,\ 1182]} = 1.31$, $p = .27$).

    Attractiveness-vitality. The main effect of sex reached significance ($F_{[1,\ 1182]} = 37.00$, $p < .001$, $\eta_p^2 = .03$) such that men rated female targets as more attractive and possessing greater vitality than women rated male targets. The main effect of humor style condition also reached significance ($F_{[3,\ 1182]} = 94.23$, $p < .001$, $\eta_p^2 = .19$). The results of this analysis are presented in Panel B of Figure 2. Post hoc tests revealed that targets in the aggressive humor condition were rated as having lower levels of attractiveness-vitality than those in the self-defeating humor condition ($t_{[598]} = 3.84$, $p < .001$) who were, in turn, rated less positively than those in the self-enhancing humor condition ($t_{[597]} = 10.97$, $p < .001$) or the affiliative humor condition ($t_{[593]} = 8.34$, $p < .001$). The interaction of sex and humor style condition did not approach conventional levels of significance ($F_{[3,\ 1182]} = 1.45$, $p = .23$).

Status-resources. The main effect of sex did not reach our restricted level of significance ($F_{[1,\ 1182]} = 4.96$, $p = .03$). However, the main effect of humor style condition did emerge ($F_{[3,\ 1182]} = 165.67$, $p < .001$, $\eta_p^2 = .30$) with post hoc tests revealing that targets in the aggressive humor condition were rated as having less status and fewer resources than those in the self-defeating humor condition ($t_{[598]} = 13.24$, $p < .001$) who were, in turn,

Figure 1. The anticipated impact of the humor styles for the target and others.
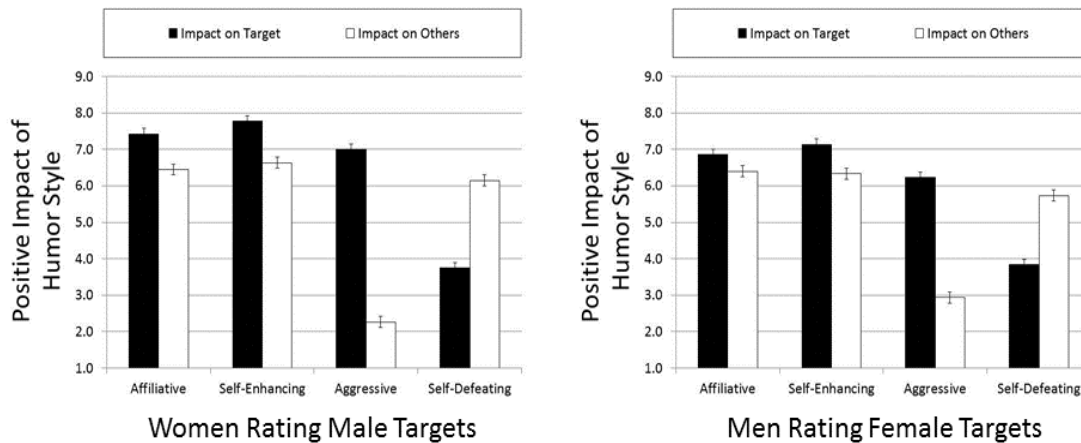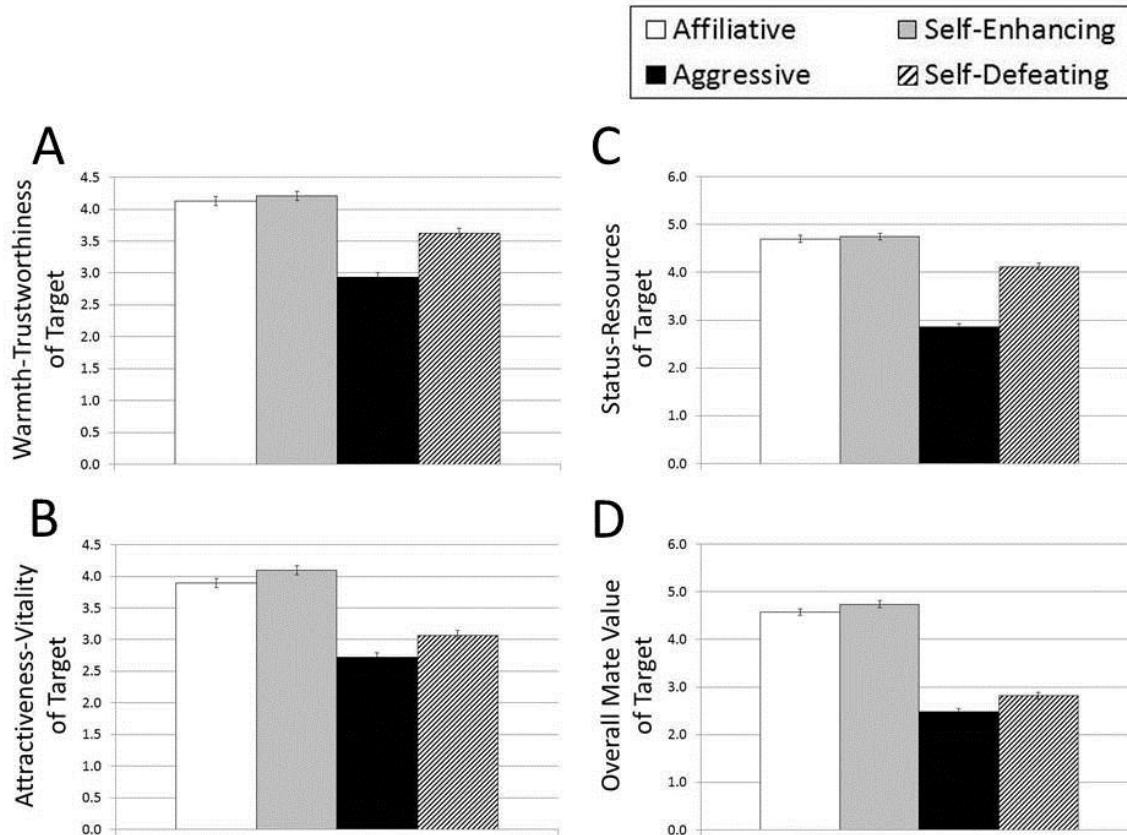
Figure 2. The effects of humor style on the perceived romantic desirability of the target.

rated less positively than those in the self-enhancing humor condition ($t_{[597]} = 6.56$, $p < .001$) or the affiliative humor condition ($t_{[593]} = 5.93$, $p < .001$). The results of this analysis are presented in Panel C of Figure 2. The interaction of sex and humor style condition was not significant ($F_{[3, 1182]} = 0.50$, $p = .69$).

Overall mate value. The main effect of sex reached significance ($F_{[1, 1182]} = 25.95$, $p < .001$, $\eta_p^2 = .02$) such that men rated female targets as having greater mate value than women rated male targets. The main effect of humor style condition also reached significance ($F_{[3, 1182]} = 255.43$, $p < .001$, $\eta_p^2 = .39$). The results of this analysis are presented in Panel D of Figure 2. Post hoc tests revealed that targets in the aggressive humor condition were rated as having less overall mate value than those in the self-defeating humor condition ($t_{[598]} = 3.09$, $p = .002$) who were, in turn, rated as having less mate value than those in the self-enhancing humor condition ($t_{[597]} = 19.40$, $p < .001$) or the affiliative humor condition ($t_{[593]} = 17.70$, $p < .001$). The interaction of sex and humor style condition did not reach conventional levels of significance ($F_{[3, 1182]} = 1.62$, $p = .18$).

Discussion

The results of Study 2 showed that targets with benign humor styles were

consistently viewed more positively than those with injurious humor styles. Although targets with the benign humor styles (i.e., self-enhancing and affiliative humor) were viewed similarly by participants, targets with the injurious humor styles (i.e., aggressive and self-defeating) were viewed quite differently from each other. More specifically, participants tended to rate targets using aggressive humor as less romantically desirable than those who used self-defeating humor. For example, targets possessing an aggressive humor style were viewed as possessing lower levels of warmth-trustworthiness than targets with other humor styles.

General Discussion

Our goal for the present studies was to examine the interpersonal signaling property of humor. More specifically, we were interested in the possibility that different humor styles may convey different signals to the social environment. The rationale for this investigation was the presumed social significance that accompanies a sense of humor (e.g., Hansen, 1977; Hewitt, 1958). Our results provide additional support for the idea that humor serves as an interpersonal signal. Across both studies, targets possessing benign styles of humor were perceived more positively than those who possessed injurious humor styles. The results of the present studies are consistent with previous observations that humor may communicate information about the target to the members of the social environment (e.g., Miller, 1998). Despite the fact that these studies utilized different methods across two cultures, the basic results were highly consistent for both studies.

The results of the present studies are consistent with the idea that humor styles serve as a signal to others in the social environment. The "content" of this signal appears to differ considerably depending on the humor style that the individual employs such that individuals who possess benign styles of humor are generally viewed more positively than those who report injurious styles of humor. This is potentially important because it suggests that simply possessing a "good sense of humor" is not actually what individuals find attractive in prospective mates. Rather, it appears that it is the possession of certain humor styles that individuals find attractive such that those who possess affiliative or self-enhancing humor styles are viewed more favorably than those possessing aggressive or self-defeating humor styles. It is important to note that individuals with an aggressive humor style were viewed more negatively than other individuals including those who possessed the self-defeating humor style. The most likely explanation for this is that aggressive humor served as an indicator of other aggressive qualities. This "aggressive signal" may have some reproductive costs for individuals displaying this humor style given the relative decrease in their observed romantic desirability. Although individuals with the self-defeating humor style were viewed more positively than those with the aggressive humor style, they were still viewed less positively than those with the self-enhancing or affiliative humor styles. It should not be assumed, however, that individuals with aggressive or self-defeating humor styles will always be viewed less positively than others because it is possible that those who are skillful in their use of humor may be able to use these styles to their advantage. For example, stand-up comedians are frequently able to use self-deprecating humor in such a way that they are perceived as humble and charming by

others.

Humor style is likely to serve as a signal to others because it is indicative of other positive qualities such as intelligence and creativity (Alexander, 1986; Miller, 1998, 2000a, 2000b). The capacity to generate and appreciate humor has most likely evolved through intersexual selection and provides cues about the genetic quality of individuals. Although previous research concerning the capacity of humor to serve as a signal has focused primarily on the domain of mate selection, humor has been found to play an important role in virtually all interpersonal relationships (see Martin, 2007, for a review) and, as a result, it deserves a relatively comprehensive explanation. Humor certainly allows individuals to display "good genes" when trying to attract potential mates but it is likely that there is more to humor. That is, humor may serve a similar signaling function for a wide array of social relationships (e.g., friendships, coalitions, social dominance hierarchies).

The idea that humor serves as a signal is consistent with a variety of other perspectives concerning humor. For example, it has been suggested that humor serves as an honest signal to the environment because individuals often need similar knowledge, attitudes, and preferences to understand humor (Flamson and Barrett, 2008). This possibility may explain why humor is so often deliberately obscure and in many cases involves the violation of expectations. In general, individuals tend to be more responsive to those producing humor if they share similar experiences and backgrounds.

Another intriguing possibility for the positive appraisals of humorous individuals is that humor may indicate an interest in establishing new relationships or maintaining current relationships (Li et al., 2009). This "interest indicator" model suggests that humorousness tends to be attractive because it signals that the target is interested in the perceiver. This suggests that the interest indicator model may be compatible with the broader interpersonal signaling model of humor. We suggest that this interpersonal signaling model of humor may serve a more distal explanation of humor style compared to many other models of humor that focus on more proximal explanations. Our results – along with those of previous studies – suggest that humor deserves a more prominent role in psychology because of its importance in impression formation and the establishment of social relationships.

It may be helpful for future researchers to examine additional age groups. Our studies focused almost exclusively on individuals in emerging adulthood, which is important given that these individuals are at an age when mate choice is most relevant. It remains unclear whether humor may be more or less important in older adults than it is in younger adults. It also remains to be determined whether humor differs in its importance as a signal for different kinds of relationships (e.g., short-term romantic partners, long-term romantic partners, friendships, co-workers). It would also be informative in future studies to examine whether the signaling property of humor is moderated by other characteristics such as physical attractiveness.

The sex differences that emerged in the present research are consistent with previous work suggesting that humor production is more important for the perception of men than it is for women. Put more simply, women are attracted to humorous men but men are not especially attracted to funny women (Bressler and Balshine, 2006; Lundy, Tan, and Cunningham, 1998). This does not mean that humor is not important for women but it does

appear that humor receptivity may play a vital role in the perception of women. This suggests that humor receptivity may be at least as important as humor production in understanding the role that humor plays in the behavior of women. It is possible that sexual selection may have favored women who gave positive responses to humor producers and men who preferred women who appreciated humor (Bressler et al., 2006).

The signaling property of humor may have a number of implications for the understanding of humor. The present findings suggest that perceived humor may play a more important role in how individuals are perceived by their social environments than is commonly recognized. This is consistent with previous arguments concerning the signaling property of humor, which proposes that humor may serve as a means for individuals to communicate their standing on various dimensions to those constituting their social environments. The signaling property of humor explored in the present studies suggests that individuals who are seen as possessing certain humor styles may be assumed to possess other characteristics believed to be associated with that particular humor style. Further, the present results suggest the possibility that one reason individuals are motivated to generate humor may be to communicate to others that they possess desirable characteristics.

One limitation of the present research is that the humor styles of targets in Study 2 were conveyed to participants in a somewhat artificial manner by describing their humor styles through personality profiles. In daily life, humor is obviously communicated through a combination of verbal and nonverbal behaviors. We used unambiguous indicators of humor style in the present study to avoid confounding humor style with constructs that may have similar interpersonal expressions (e.g., self-defeating humor style may be confused with low levels of self-esteem). It may be helpful for future studies to use more subtle and naturalistic manipulations of humor style.

The present studies suggest a number of possible avenues for future research. For example, previous research has examined the potential role that humor style may play in the initiation and maintenance of romantic relationships and the present findings suggest that an individual's humor style may influence the expectations and choices of potential partners. Future researchers may wish to examine the role that particular humor styles play in initial attraction and satisfaction with existing relationships. It may also be important to examine whether an individual's humor style influences how he or she is viewed in other life domains. For example, are individuals more likely to hire job applicants with particular humor styles? Are we more likely to enter into certain types of coalitions with individuals who possess certain humor styles?

Conclusion

The present studies provide additional support for the interpersonal signaling property of humor such that an individual's style of humor influences how he or she is perceived by others. The results of the present studies found that individuals with more benign humor styles were generally viewed more positively on various dimensions including personality traits and romantic desirability than those with injurious humor styles. It is important to note that individuals who utilized an aggressive humor style were

generally perceived more negatively than others including those who used a self-defeating style of humor.

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Appendix

For your next task, you will be asked to read a humor style profile and make some ratings concerning your impression of the individual. The person described in the profile was a participant in a study we conducted last semester. The profile you will read was written by one of our clinical psychology graduate students after an extensive interview with the participant. This profile is based on the participant's scores on objective measures of personality assessment as well as the clinical impressions of the graduate student. After reading the profile, you will be asked to rate your impression of the individual on a number of dimensions including his or her desirability as a potential relationship partner.

Aggressive Humor *(injurious and enhances the self)*	*Self-Enhancing Humor* *(benign and enhances the self)*
This person uses humor in order to make himself/herself feel better. This is accomplished largely by mocking and ridiculing others in a way that may be harmful to them. He/she comes across as someone who is willing to put others down and make them feel badly so that he/she can feel better about himself/herself. This individual's use of aggressive humor may be an attempt to feel better about himself/herself at the expense of others.	This person uses humor in order to make himself/herself feel better. This is accomplished largely by possessing a humorous outlook on life that is not harmful to himself/herself or others. He/she comes across as someone who is able to use humor as a coping mechanism when faced with potentially stressful events. This individual's use of self-enhancing humor may be an attempt to feel better about himself/herself without harming himself/herself or others.

Self-Defeating Humor *(injurious and enhances relationships)*	*Affiliative Humor* *(benign and enhances relationships)*
This person uses humor in order to make others like him/her more. This is accomplished largely by mocking and ridiculing himself/herself in a way that may be damaging to himself/herself. He/she comes across as someone who is willing to put himself/herself down and make himself/herself feel badly so that he/she can gain the approval of others. This individual's use of self-defeating humor may be an attempt to please others and gain their approval at his/her own expense.	This person uses humor in order to make others like him/her more. This is accomplished largely through banter and telling jokes that are not harmful to himself/herself or others. He/she comes across as someone who tries to bolster relationships so that he/she can gain the approval of others. This individual's use of affiliative humor may be an attempt to please others and gain their approval without harming himself/herself or others.