

Contextual desirability of strong men employing affiliative and aggressive humor

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Abstract

Women find men's upper body strength highly desirable, albeit primarily within short-term mating contexts. This boundary implicates strength as possessing both costs and benefits in long-term and short-term mating contexts. The desirability of strength could be contingent upon whether the costs or benefits of strength are more salient through additional behavioral repertoires that signal a specific type of mating intent. Men's humor style could be one modality to infer costs and benefits, namely their interest in affiliative humor relative to aggressive humor. This study represents a synergistic replication of previous work investigating the desirability of strength and various humor styles in mating domains. Women evaluated the short-term and long-term desirability of a prospective mate manipulated to appear physically strong or weak and described using affiliative or aggressive humor. We replicated previous findings implicating affiliative humor as desirable in long-term contexts and upper body strength in short-term contexts. However, no interactive effects

Statement of Relevance: Considerable research has indicated that women's interest in physically strong mates has limits based on their desire to minimize potential costs associated with strong mates. They identify which strong men would be particularly desirable as long-term partners. Women could thus rely on recognizing behavioral patterns connoting someone as benevolent, which could include how men use humor. This study provides an extension of previous work showing how men's strength and use of affiliative humor influence mating desirability while directly considering if the presence of both leads women to value one trait over another. Our data show that strength and humor are independent in their influence on women's preferences, though we continue to show that women prioritize men's strength in short-term relationships and affiliative humor use in long-term contexts. These data provide evidence for how women navigate mating markets through various fitness cues.

between these traits emerged. Results indicate that women's mate choices are multimodal and frequently involve evaluating the costs and benefits of various constellations of traits.

KEYWORDS

evolutionary psychology, humor, initiation of personal relationships, interpersonal perceptions

1 | INTRODUCTION

Women's mate selection requires judicious navigation of a mating market. Upper body strength is one trait that women find particularly attractive, with myriad research implicating it as sexually selected (Kordsmeyer et al., 2018; Lidborg et al., 2022; Puts, 2010). Physical features connoting strength (e.g., muscles) are central to men's physical attractiveness (Durkee et al., 2019; Frederick & Haselton, 2007; Sell et al., 2017). Strong mates could afford women reproductive opportunities with men possessing good genes that would increase the likelihood of their offspring surviving into adulthood. Nonetheless, women's preference for strong mates appears bound to contexts wherein the benefits of good genes are particularly salient. Despite being highly gregarious in many contexts (Rodriguez & Lukaszewski, 2020), strong men remain highly aggressive (Gallup et al., 2007). The size asymmetry from sexual selection positions women to be at a physical disadvantage in physical conflict, particularly among formidable men (Sell et al., 2012). This potential disadvantage would require women to identify potential mates whose behavior implicates them as nonexploitative.

In evaluating the value of strong men as mates, women could consider men's behavioral repertoires for further information about a prospective mate's overall benefits for a given relationship relative to the costs. Men's ability to produce humor could be one repertoire. Women prefer funny men (Bressler & Balshine, 2006; Feingold, 1988; Wilbur & Campbell, 2011). As humor strengthens social bonds (Li et al., 2009), selection would have favored those capable of identifying others' intentions to use humor, including humor that would satisfy the relevant goals of the perceiver. Humor styles are one modality through which women assess men's abilities as mates. For example, benign humor appears more desirable in romantic partners, whereas injurious styles are consistently regarded as aversive by women (DiDonato et al., 2013; Zeigler-Hill et al., 2013). The benefits of strong men as romantic partners could be most apparent insofar as the perceiver identifies the benefits of a benign humor style. This study assessed the desirability of strong men as a function of their preferred humor styles.

2 | CONTEXTUAL MATE VALUE OF MEN'S STRENGTH

Women's reproductive success has historically been contingent upon identifying mates whose physical and psychological traits could satisfy relevant reproductive goals. Such goals would have been satisfied by men who could produce healthy offspring and invest in offspring (Trivers, 1972). Although it is ideal to select a mate who is both physically attractive

and capable of investment, the improbability of finding this mate has necessitated women to prioritize one set of traits over another. Women's specific prioritization of traits often facilitates their interest in either short-term (STM) or long-term mating (LTM; Buss & Schmitt, 1993).

Certain constellations of traits are desirable in LTM and STM to optimize reproductive goals. STM relies on promiscuous mating strategies with multiple short-term sexual partners. In this context, women prioritize traits that connote good genes and emphasize physical attractiveness in their mate preferences (Conroy-Beam & Buss, 2017; Kenrick et al., 1993; Li et al., 2013; Li & Kenrick, 2006). Men's desirability in STM is rooted in bodily features diagnostic of upper body strength (Puts, 2010), as evidenced by strong men reporting greater reproductive success (Gallup et al., 2007; Lassek & Gaulin, 2009). Women prefer muscular men as short-term mates (Frederick & Haselton, 2007; Sacco, Jones, et al., 2012; Sacco, Young, et al., 2012), while also reporting similar preferences for large chests and masculinized faces (Garza & Byrd-Craven, 2021; Jones et al., 2018; Sacco, Jones, et al., 2012; Sacco, Young, et al., 2012). Men exhibiting such features are further perceived as preferring STM (Brown, Boykin, & Sacco, 2022). This perception appears to have a kernel of truth (Polo et al., 2019), suggesting that strong men could afford reproductive opportunities with a mate exhibiting consonant mating interests (see Jonason & Buss, 2012).

Conversely, women's goals in LTM center around men's potential to invest in a given relationship (Li et al., 2013; Walter et al., 2020). Men's interest in LTM is often connoted through socially conventional behavior, which could include monogamous intent or an interest in resource provisioning (Bhagal et al., 2019; Brown, Keefer, Sacco, & Brown, 2022; Brown & Sacco, 2019; Brown, Westrich, et al., 2020). Such men would be seen as the most capable of offsetting women's larger minimal reproductive costs (e.g., gestation, lactation) compared to men (e.g., sperm provision), as they would be more interested in the provision of resources to their offspring.

Despite the potential benefits of strong mates, several costs can emerge in LTM that result in women downregulating their interest in strength. Strong men are perceived as protective parents and mates that could afford security against interpersonal threats (Brown, Donahoe, & Boykin, 2022; Brown, Sacco, & Drea, 2022; Snyder et al., 2011). However, several competing inferences could undermine this desirability, as masculinized features could connote aggressive and promiscuous intent (Brown & Sacco, 2017; Brown, Tracy, & Boykin, 2022; Gallup et al., 2007; Geniole & McCormick, 2013; Sacco et al., 2020). Strong men could be perceived as threatening to women due to the physical size asymmetry imposed by sexual dimorphism that could lead them to feel vulnerable to exploitation (Sell et al., 2012). Nonetheless, strong men remain interpersonally gregarious, which could implicate them as providing affiliative opportunities in certain contexts (e.g., Rodriguez & Lukaszewski, 2020). The competing signal values of strength's costs and benefits could necessitate additional information to be utilized to inform women's mate preferences, especially when considering mate preferences are largely multimodal (Jonason et al., 2012).

3 | DESIRABILITY OF HUMOR STYLES ACROSS MATING CONTEXTS

Men's sense of humor affords advantages on the mating market. Their ability to produce humor appears sexually selected, as evidenced by men being generally funnier (Greengross

et al., 2020). In fact, funny men report a larger number of lifetime sexual partners (Greengross & Miller, 2011). Despite the overall desirability of humor, not all forms of humor are preferred in a mate. Men's humor could be strategic to ensure the content of the display may signal their ability to satisfy women's salient goals. For example, sociosexually unrestricted women indicate greater receptivity to dirty humor, though such displays would be inappropriate for LTM (Medlin et al., 2018). Inappropriate humor could implicate the humorist as having an aggressive humor style that undermines perceptions of their warmth necessary for LTM (Betz & DiDonato, 2020).

Mating decisions could be shaped by specific humor styles. Humor styles refer to individual differences in humor production across interpersonal and intrapersonal domains (Martin et al., 2003). Most pertinent to this conversation are the interpersonal humor styles, which serve direct ingratiation functions. Affiliative humor fosters social closeness, whereas aggressive humor seeks to embolden the self at the expense of others. Agreeable individuals prefer affiliative humor (Greengross et al., 2012), which could motivate their interest in monogamous strategies (Schmitt & Shackelford, 2008). Conversely, aggressive humor appears common among antagonistic individuals who tend to be more interested in promiscuity. Inferences of a prospective mate's preferred humor style could assist women to understand specific men's ability to satisfy relevant mating goals. Affiliative humor appears more desirable in romantic partners (Zeigler-Hill et al., 2013), particularly in LTM due to perceptions of warmth (DiDonato et al., 2013). In fact, when primed with LTM, men indicate greater interest in using affiliative humor strategies (DiDonato & Jakubiak, 2016). Conversely, women have reported greater interest in aggressive humor in STM relative to LTM, a preference potentially rooted in recognizing these men as more interested in promiscuous strategies (DiDonato et al., 2013; Greengross & Miller, 2008; Luevano et al., 2021).

The costs or benefits of strong men could be most salient with knowledge of their preferred humor style. The identification of a physically attractive mate could necessitate the perceiver to identify whether the target could satisfy relevant mating goals through a behavioral repertoire. Given the function of humor as an interest indicator (Li et al., 2009), the concomitant humor style of men exhibiting good genes could implicate them as capable of satisfying certain mating goals.

Strong men are perceived as prone to using different humor styles. Perceivers use upper body strength as a heuristic for men's proclivity to employ both affiliative and aggressive humor (Brown, Donahoe, & Boykin, 2022). These dual signal values suggest that additional context clues could foster different perceptions of strength. When strong men use affiliative humor, the social benefits could increase in salience. These benefits could implicate an affiliative strong man as interested in monogamous pairbonds. Conversely, increased salience of the potential costs imposed by strong men could undermine this desirability (Geniole & McCormick, 2013). Such costs would be less critical in STM, given women's greater willingness to engage potentially exploitative men in limited sexual encounters (e.g., Frederick & Haselton, 2007; Medlin et al., 2018).

4 | CURRENT RESEARCH

This study sought to determine how women evaluate the costs and benefits of physical strength across LTM and STM domains. We considered the accompanying humor style of a prospective mate, namely aggressive and affiliative humor, given the fact that strong men are perceived as

exhibiting a higher proclivity to use both types (Brown, Donahoe, & Boykin, 2022). Because of the general aversiveness of aggressive humor in LTM (Betz & DiDonato, 2020; DiDonato et al., 2013), we predicted that a prospective mate employing aggressive humor would be seen as less desirable in LTM. This aversion should be further heightened toward aggressive humorists with greater upper body strength, as the perceived dominance of strong mates could impose greater costs toward women (Frederick & Haselton, 2007; Sell et al., 2012).

Conversely, these costs should be less central to STM decisions due to women's reduced likelihood of incurring costs in that context (Gallup et al., 2007). We predicted that strong men would be more desirable in STM when using aggressive humor. Women's preference for strong men using aggressive humor in STM should similarly translate to disinterest in weak men using similar humor in STM, as such men would likely offer few benefits for women. The competing signal values of strength necessitates consideration for the perceived benefits of strong men in LTM. When presented with information suggesting a strong man employs affiliative humor, the benefits of strong men should be particularly salient. We predicted that strong men would be more desirable in LTM when displaying affiliative humor compared to weak men.¹

5 | METHODS

5.1 | Participants

A sample of 384 women from a large public university in Southeastern U.S. completed this study for course credit ($M_{\text{Age}} = 19.02$, $SD = 1.47$; 85.4% White, 7.6% Latin, 2.6% Asian, 1.8% Black, 2.6% Other; 251 single, 143 partnered).² Specific recruitment criteria were participants reporting heterosexual attraction (355 heterosexual, 29 bisexual) and being under 41. The latter decision was to reduce the likelihood of participants having entered menopause, given its occurrence being as early as 41 (Brown, Keefer, & Sacco, 2020; te Velde & Pearson, 2002).

A statistical sensitivity analysis indicated sufficient power to detect small effects for a $2 \times 2 \times 2$ mixed experimental design with two between-subjects factors and one within-subjects factor needed for the primary analysis (Cohen's $f = 0.08$, $1 - \beta = 0.80$). Data collection occurred from February to April 2022. We received IRB approval to conduct this research.

5.2 | Materials and procedures

5.2.1 | Target humor styles

Participants read one of two vignettes describing themselves at a singles bar while a hypothetical man approaches them. This man was described as trying to flirt with the participant who was ultimately receptive to the display. He used either an affiliative ($n = 193$) or an aggressive humor style ($n = 191$) on a between-subjects basis (see Table 1).

The affiliative display was designed to convey a friendliness through witty banter, whereas the aggressive display presented an assertive approach that resulted in the participant being interested in the target (DiDonato et al., 2013). Both vignettes reported similar levels of humor between them; the target was seen as similarly flirtatious across conditions.

TABLE 1 Affiliative and aggressive humor vignettes presented to participants

Humor style	Vignette
Affiliative	<p>You sit down at a bar, order a drink, and this stranger pictured above sits down next to you. You hear him say, "Do you like Justin Bieber?" You turn your head and realize that the stranger is talking to you</p> <p>"Excuse me?" you ask. "I hear that one out of every three women likes him. I figure if you do not, then we have already got lots in common and if you do, then I can be your new best friend and teach you about good music," he says, smiling. You laugh and the two of you begin a conversation</p>
Aggressive	<p>You sit down at a bar, order a drink, and this stranger pictured above sits down next to you. You hear him say, "See that bartender? He spit in your drink." You turn your head and realize that the stranger is talking at you</p> <p>"Excuse me?" you ask. He says, "Yep, and you have been drinking it this whole time. Do you always drink stuff that people spit in? Is that your thing?" He then adds, "I just cannot watch you do it anymore." He grabs your drink and pours it on the floor and you hear the people next to you laughing. He watches you, smiling at you for a moment. "Alright," he says, "I guess I can buy you a new one." You are amused by this. You laugh, and the two of you begin a conversation</p>



FIGURE 1 Strong (left) and weak target bodies. Targets viewed the same head on their respective target.

5.2.2 | Target strength

Accompanying each vignette was an image of the hypothetical man (see Figure 1). The target was a man from a larger set of stimuli containing men who varied in upper body strength, as indexed by composite measures of handgrip and chest press strength (Lukaszewski et al., 2016). Targets were subsequently categorized as either strong or weak, with these men's bodies accurately being perceived as such. Participants viewed a target with a body that was either strong ($n = 193$) or weak ($n = 191$) on a between-subjects basis. To reduce potential stimulus effects,

participants viewed the same unique man whose head was cropped onto another body to create a strong and a weak version of the target.

5.2.3 | Manipulation checks

Participants evaluated the target using several trait inferences to determine the potential social affordances of strong men as a function of their preferred humor style, which would inform us of our manipulation's efficacy. Specifically, they indicated the extent to which they viewed the target as strong, funny, friendly, aggressive, and safe. These perceptions operated along single-item scales (1 = *Not at All [Adjective]*; 7 = *Very [Adjective]*).

5.2.4 | Personality

Another set of analyses came from a modified version of the 10-Item Personality Inventory designed to assess perceptions of a target's personality within the Big Five (Brown, Keefer, Sacco, & Brown, 2022). All traits exhibited acceptable reliabilities for two-item subscales, with one item being reverse-scored for each trait (1 = *Strongly Disagree*; 7 = *Strongly Agree*; Spearman-Brown: 0.32–0.63; Brown, 2022).

5.2.5 | Desirability

Participants indicated how desirable they viewed the target in STM and LTM. Desirability was assessed using two separate single items (1 = *Very Undesirable*; 9 = *Very Desirable*; Brown & Sacco, 2018).

5.3 | Data analysis

For our analyses, we conducted 10 separate 2 (Target Strength: Strong vs. Weak) \times 2 (Target Humor: Affiliative vs. Aggressive) factorial analysis of variance (ANOVAs) for each manipulation check item and the separate trait measures for personality inferences. Our primary analysis was a 2 (Target Strength: Strong vs. Weak) \times 2 (Target Humor: Affiliative vs. Aggressive) \times 2 (Mating Context: STM vs. LTM) mixed-model ANOVA with repeated factors over the latter factor to identify the potential interactive effects between mating contexts with both of the between-subjects factors.

6 | RESULTS

6.1 | Manipulation checks

Our first analyses were the five separate ANOVAs for perceived strength, funniness, friendliness, aggressiveness, and ability to ensure participants feel safe as manipulation checks.

6.1.1 | Strength

The strong target was indeed perceived as stronger ($M = 4.84$, $SD = 1.04$) than the weak target ($M = 3.75$, $SD = 1.22$), $F(1, 376) = 87.25$, $p < .001$, $\eta_p^2 = 0.188$. Neither the Target Humor main effect nor the interaction was significant ($ps > .324$).

6.1.2 | Funniness

The strong target was perceived as funnier ($M = 4.41$, $SD = 1.53$) than the weak target ($M = 4.05$, $SD = 1.63$), $F(1, 379) = 4.82$, $p = .028$, $\eta_p^2 = 0.013$. Neither the Target Humor main effect nor the interaction were significant ($ps > .336$).

6.1.3 | Friendliness

The strong target was perceived as friendlier ($M = 5.03$, $SD = 1.22$) than the weak target ($M = 4.70$, $SD = 1.46$), $F(1, 375) = 6.43$, $p = .012$, $\eta_p^2 = 0.017$. The affiliative target was perceived as friendlier ($M = 5.29$, $SD = 1.22$) than the aggressive target ($M = 4.43$, $SD = 1.35$), $F(1, 375) = 42.44$, $p < .001$, $\eta_p^2 = 0.102$. No interaction emerged, $F(1, 375) = 3.07$, $p = .080$, $\eta_p^2 = 0.008$.

6.1.4 | Aggressiveness

The strong target was perceived as more aggressive ($M = 4.30$, $SD = 1.35$) relative to the weak body ($M = 3.85$, $SD = 1.37$), $F(1, 378) = 12.71$, $p < .001$, $\eta_p^2 = 0.033$. The aggressive target was more aggressive ($M = 4.57$, $SD = 1.34$) than the affiliative target ($M = 3.59$, $SD = 1.23$), $F(1, 378) = 56.86$, $p < .001$, $\eta_p^2 = 0.131$. The interaction was not significant, $F(1, 378) = 0.43$, $p = .513$, $\eta_p^2 = 0.001$.

6.1.5 | Safety

Participants felt safer around the affiliative target ($M = 3.81$, $SD = 1.30$) than the aggressive target ($M = 3.22$, $SD = 1.36$), $F(1, 375) = 18.80$, $p < .001$, $\eta_p^2 = 0.048$. Neither the Target Strength main effect nor interaction was significant ($ps > .181$).

6.2 | Personality inferences

We conducted five 2-way ANOVAs to determine how participants viewed the personalities of the target (see Table 2). No interactions emerged ($ps > .175$). The strong target was perceived as more extraverted ($\eta_p^2 = 0.013$) and more open to experience ($\eta_p^2 = 0.016$) than the weak target, $F_s > 5.06$, $ps < .026$. No other main effects emerged for Strength ($ps > .075$).

Three main effects emerged for conscientiousness, agreeableness, and neuroticism, $F_s > 26.01$, $ps < .001$. The affiliative target was perceived as more agreeable ($\eta_p^2 = 0.086$) and

conscientious ($\eta_p^2 = 0.135$). The aggressive target was perceived as more neurotic ($\eta_p^2 = 0.064$). No main effects for extraversion and openness emerged ($ps > .132$).

6.3 | Desirability

A Target Strength main effect indicated that participants found the strong target more desirable ($M = 4.27$, $SD = 2.19$) than the weak target ($M = 3.32$, $SD = 2.21$), $F(1, 379) = 21.69$, $p < .001$, $\eta_p^2 = 0.054$. A Mating Context main effect further indicated that participants found the targets more desirable in STM ($M = 4.36$, $SD = 2.37$) than in LTM ($M = 3.25$, $SD = 2.13$), $F(1, 379) = 126.20$, $p < .001$, $\eta_p^2 = 0.250$. The Target Humor main effect was not significant, $F(1, 379) = 2.17$, $p = .142$, $\eta_p^2 = 0.006$.

Effects were initially qualified by a Target Strength \times Mating Context interaction, $F(1, 379) = 4.25$, $p = .040$, $\eta_p^2 = 0.011$ (Figure 2a). Simple effects indicated that participants found the strong target more desirable in STM ($M = 4.22$, $SD = 2.29$) than the weak target ($M = 3.78$, $SD = 2.32$), $F(1, 379) = 89.08$, $p < .001$, $\eta_p^2 = 0.190$. A similar difference emerged for the strong target in LTM ($M = 3.62$, $SD = 2.09$) relative to the weak target ($M = 2.87$, $SD = 2.10$), albeit at a reduced magnitude, $F(1, 379) = 41.74$, $p < .001$, $\eta_p^2 = 0.099$. Viewed another way, both the strong and weak target were perceived as more desirable in STM than LTM, $F_s > 41.74$, $ps < .001$. The effect for strong targets was larger ($\eta_p^2 = 0.190$) than it was for weak targets ($\eta_p^2 = 0.099$).

TABLE 2 Means (and *SDs*) for main effects of perceptions for each big five trait for strong and weak targets employing affiliative and aggressive humor

Variables	Levels	Personality traits				
		E	A	C	N	O
Strength	Strong	6.10 (0.94)	3.85 (1.23)	3.91 (1.20)	3.63 (1.13)	5.23 (1.19)
	Weak	5.85 (1.21)	3.78 (1.25)	3.69 (1.24)	3.62 (1.09)	4.91 (1.36)
Humor	Affiliative	5.89 (1.09)	4.18 (1.21)	4.25 (1.09)	3.35 (1.10)	5.01 (1.38)
	Aggressive	6.06 (1.08)	3.45 (1.16)	3.35 (1.19)	3.91 (1.05)	5.13 (1.18)

Note: E, extraversion, A, agreeableness; C, conscientiousness; N, neuroticism; O, openness.

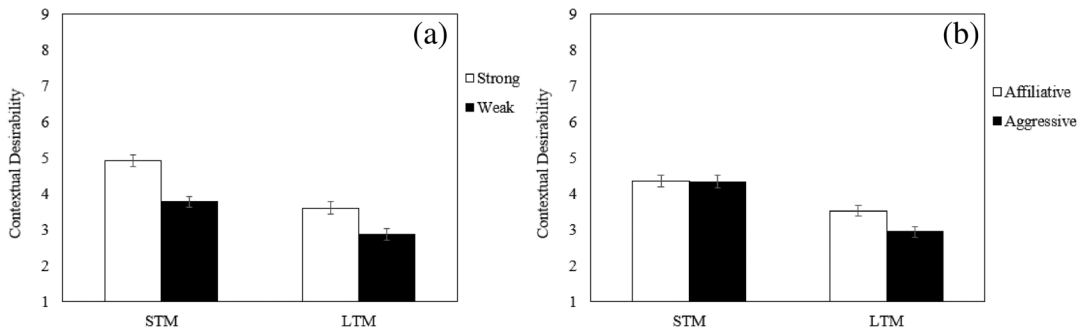


FIGURE 2 Desirability (with *SE* bars) of the strong and weak target (a) and the affiliative and aggressive target (b) in short-term (STM) and long-term mating (LTM)

A Target Humor Style \times Mating Context interaction also emerged, $F(1, 379) = 8.70$, $p = .003$, $\eta_p^2 = 0.022$ (Figure 2b). Simple effects indicated that participants found the affiliative target more desirable in LTM ($M = 3.54$, $SD = 2.22$) than the aggressive target ($M = 2.95$, $SD = 1.99$), $F(1, 379) = 7.68$, $p = .006$, $\eta_p^2 = 0.020$. In STM, no difference emerged between the affiliative target ($M = 4.36$, $SD = 2.34$) and the aggressive target ($M = 4.35$, $SD = 2.40$), $F(1, 379) < 0.01$, $p = .980$, $\eta_p^2 < 0.001$. Viewed another way, both targets were more desirable in STM than LTM, $F_s > 34.57$, $p_s < .001$. The effect for aggressive humor was larger ($\eta_p^2 = 0.208$) than for affiliative humor ($\eta_p^2 = 0.084$). No other interactions emerged ($p_s > .177$).

7 | DISCUSSION

This study provided partial support for hypotheses to clarify the intersecting signal values of humor style and upper body strength in mating domains for women. First, in replicating previous findings (e.g., DiDonato et al., 2013), women indicated that the affiliative target was more desirable in LTM than the aggressive target. This preference is functional insofar as women have identified a prospective mate with greater prosocial tendencies, a behavioral repertoire women prioritize in LTM (Brown, Keefer, & Sacco, 2020; Brown, Westrich, et al., 2020; Li et al., 2002, 2013). Such prosociality would further implicate an affiliative humorist as having investment potential with less proclivity toward infidelity (e.g., Brown, Keefer, Sacco, & Brown, 2022; Brown & Sacco, 2019). Aggressive humorists were conversely undesirable in LTM, an aversion that coincided with perceived hostility.

Nonetheless, in STM, the aggressive and affiliative targets were of similar desirability. This similarity could reflect an awareness of the costs and benefits afforded by both humor styles in the context. Although kindness is desirable in STM (Li et al., 2002), the monogamous intention of affiliative individuals could undermine their attractiveness as short-term mates due to perceptions of them as unwilling to dissolve these pairbonds for additional mates (Jonason & Buss, 2012). The heightened desirability of aggressive humor in STM, relative to LTM, suggests that the potential costs are less salient due to the relatively short length of that pairbond, particularly with a mate who appears similarly interested in promiscuous strategies. An additional comparison indicated that the preference for aggressive humor in STM was substantially larger, which would suggest that the benefits of this humor style were particularly salient in that context. Alternatively, the benefits of affiliative humor in LTM could be less relevant to satisfying STM goals. Affiliative humor could implicate men as capable of investing in offspring, which would not be germane to women's goals in short-term contexts. These findings could suggest that the mere display of humor toward which a prospective mate appears receptive is sufficient for STM, wherein the long-term consequences of a given humor style are not relevant.

Contrary to predictions, women's preference for strong men was not influenced by their concomitant humor styles. This finding could reflect the considerable attractiveness of strength in men which could be more salient to women (Sell et al., 2017). Strong men were more desirable in STM and LTM than weak men, though evidence of the tradeoff likely emerged through the effect being larger in STM due to the potential salience of LTM costs for strength (Frederick & Haselton, 2007). Women appeared sensitive to the costs and benefits of a strong mate in LTM in this study, which provides additional evidence for conflicting findings in the literature on the signal value of masculinized features across various cultures (e.g., Borrás-Guevara et al., 2017; DeBruine et al., 2011; Dixson et al., 2017). As data were collected in the United States, the benefits of masculinized features could have been more salient than the

threats across contexts, whereas effects could have been more pronounced in ecologies where the costs are more consequential.

Participants' trait inferences of the prospective mate's personality provide additional insight into the competing signal values of strength and humor style in mating domains. Strong men were perceived as more extraverted and open to experiences. These results could reflect the dual signal value of men's strength as connoting an affiliative opportunity and an increased physical threat if conflict were to arise (Brown, Sacco, Barbaro, & Drea, 2022; Geniole & McCormick, 2013).

In addition, and also consonant with research reflecting an interest in LTM among those exhibiting higher levels of these traits (Schmitt & Shackelford, 2008), affiliative targets were perceived as more agreeable and conscientious. The overt friendliness of this target could reflect an interest in LTM. Aggressive humorists were further perceived as more neurotic, a perception that could reflect an implicit understanding of aggressive humor's covariation with neuroticism (Greengross et al., 2012; Martin et al., 2003). Taken together, mate selection could be rooted in identifying personalities associated with consonant mating strategies.

7.1 | Limitations and future directions

Several limitations emerged in the current study that necessitate future research. The lack of interactive effects between humor style and strength could reflect stimuli with additional signal values that would impede our ability to identify effects. Physically strong bodies are more attractive than weak men, even using the same unique identity with different bodies (Lukaszewski et al., 2016). Future studies could employ targets that vary in facial width-to-height ratio (fWHR), a relatively sexually dimorphic facial feature connoting men's formidability (Caton et al., *in press*), with stimuli holding physical attractiveness constant (Brown, Sacco, Barbaro, & Drea, 2022). Recent findings suggest that men with formidable fWHRs are both more desirable in STM and perceived as especially aggressive (Durkee & Ayers, 2021; Valentine et al., 2014). These salient affordances could suggest that the tradeoffs for strong mates are driven more readily by facial cues of strength than those in the body.

It should be noted that the protagonist in each vignette was described as being receptive to the target's advances despite one target being rather aggressive. Participants could have perceived the aggressive humorist as ultimately friendly, given the function of humor in shaping pairbonds (Li et al., 2009). Additional studies could amplify the relative threat of aggressive humorists to reflect antagonistic social targets more readily (e.g., Betz & DiDonato, 2020; Medlin et al., 2018). A future study could present vignettes wherein the protagonist grows increasingly uncomfortable with the advances of an aggressive humorist, though does not necessarily communicate aversiveness itself. To disambiguate these effects from potential priming, other work could provide open-ended scenarios for participants to interpret themselves. Furthermore, it could be possible that participants viewed the protagonist as sufficiently humorous, as evidenced by the similar ratings of the target as funny. The sexually selected component of humor could prompt future studies that vary the quality of the humor display to determine when women invoke the tradeoffs for strong men (e.g., Greengross et al., 2020).

The various tradeoffs identified in this study provide impetus to consider more granular aspects of STM and LTM. Future studies could task participants with indicating the targets' suitability for different components of either context. For example, it could be possible that participants would consider an aggressive humorist more readily for a one-night stand than for

prolonged casual dating due to the potential costs being lower for the former than the latter (Jonason et al., 2011). The potential concern over infidelity from a prospective mate could further necessitate research comparing responses between individuals in monogamous pairbonds versus those engaging in consensually non-monogamous relationships (Cunningham et al., 2022). That is, the potential costs of a promiscuous partner could be more relevant to monogamous women's preferences, which could clarify which costs are salient across different relationships. Our study's consideration of different contexts also presents an opportunity to address mate preferences to satisfy motives relevant to kin care (Ko et al., 2020). Women outside of typical reproductive windows could have shifted their mating goals to identify men capable of investing in stepchildren or grandchildren (Hofer et al., 2019; Krems et al., 2017).

Despite women's considerable emphasis on men's humor (Wilbur & Campbell, 2011), the evolutionary function of humor has many similarities across sexes (Li et al., 2009). It would be advantageous to consider the physical features of women that lead men to invoke a tradeoff in selecting mates using aggressive humor. Physically attractive women are more likely to endorse competitive bargaining strategies (Lukaszewski, 2013), possibly rooted in the considerable indirect aggression they face (Reynolds, *in press*). This could implicate them as interested in employing aggressive humor strategies toward rivals successfully. Men could view these strategies as desirable in STM similarly to women. For example, future studies could manipulate women's breast size to determine when men would be interested in aggressive humor based on heuristic associations between these traits (Brown, Donahoe, & Boykin, 2022).

8 | CONCLUSION

Women's mate selection is a complicated process of weighing various costs and benefits in different contexts. This study contributes to this discussion by demonstrating how humor styles and upper body strength provide unique signal values of men's desirability in various mating contexts. Namely, we demonstrated that women are willing to incur various costs associated with highly desirable mates if certain benefits are possible.

DATA AVAILABILITY STATEMENT

In accordance with IARR standards, we report our data as publicly available through a link provided in the manuscript.

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ENDNOTES

¹ We report all measures, manipulations, and exclusions in this manuscript. Data and materials are provided here: <https://osf.io/k5fx2>.

² Inclusion of relationship status in the model did not meaningfully change results, nor were there interactive effects.

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How to cite this article: Brown, M., Brown, M. R., & O'Neil, B. A. (2022). Contextual desirability of strong men employing affiliative and aggressive humor. *Personal Relationships*, 1–16. <https://doi.org/10.1111/per.12456>