

Sex differences in preferences for humor produced by men or women:

Is humor in the sex of the perceiver?

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Address correspondence to:

ABSTRACT

It is a common argument that men are funnier than women. Recently, this belief has received modest empirical support among evolutionary psychologists who argue that humor results from sexual selection. Humor signals intelligence, and women thus use humor to discriminate between potential mates. From this, it follows that in addition to men being skilled producers of humor, women should be skilled perceivers of humor. Extant research has focused on humor production; here we focus on humor perception. In three studies, men and women identified the most humorous professional comedian (Studies 1 and 2) or individual they know personally (Study 3). We found large sex differences. In all three studies, men overwhelmingly preferred humor produced by other men, whereas women showed smaller (study 1) or no (studies 2 and 3) sex preference. We discuss biological and cultural roots of humor in light of these findings.

Sex differences in humor perception:

Is humor in the sex of the perceiver?

Although sex differences in the ability to produce humor have been debated at least since the 17th century (Congreve, 1695/1761; for more recent discussion, see the dialog between Hitchens and Stanley, Hitchens, 2007; Stanley, 2007), surprisingly few empirical studies exist on the topic. Yet understanding any sex difference in humor production or perception is important, since research suggests that humor mediates crucial social, psychological, and physiological processes. Socially, humor performs invaluable roles in persuasion (Mulkay, 1988) and managing personal relationships (Shiota, Campos, Keltner, & Hertenstein, 2004). Psychologically, humor broadens attention (Fredrickson, 2001) and improves cognition (Isen, Daubman, & Nowicki, 1987). Physiologically, humor affects health by increasing pain thresholds (Cogan, Cogan, Waltz, & McCue, 1987) and improving quality of life (Martin, 2001, 2002). If men and women differ in the ability to produce humor, there might be significant negative consequences for the sex exhibiting humor deficiency.

Humor is a notoriously difficult topic to study, as humor is one of those phenomena, like beauty, is “in the eye of the beholder.” What I may find funny you may not, so it is challenging to empirically study humor because of a lack of agreement among individuals over what is humorous. Yet it is not difficult to study the question as to which sex produces better humor. In the present paper, we explore sex differences in humor preferences by asking men and women about their favorite comedians and people they personally know.

There are theoretical reasons to suppose that one sex might influence the ability to produce humor. Recently, evolutionary psychologists have hypothesized that women use humor as a signal of intelligence in selecting mates (Miller, 2000; Kaufman, Kozbelt, Bromley, & Miller, 2007; Greengross & Miller, 2011). Consistent with this sexual selection hypothesis, women find personal vignettes containing humor to be more desirable than those without humor, while the presence of humor does not affect men's ratings (Bressler, Martin, & Balshine, 2006). Furthermore, men use humor more frequently than women, but women seem to act more as appreciative audiences (Lampert & Ervin-Tripp, 1998). Simply by practice and out of necessity to impress women, men might improve or hone their ability to produce humor relative to women (see also Hitchens 2007 for a variant of this argument).

For the sexual selection hypothesis to hold, two facts must be true. First, if men sexually compete in humor production in order to attract mates, they should be more skilled at humor production than women. They may have evolved neural mechanisms for sensing humorous material, such as incongruities in the environment upon which they might capitalize on to produce humor. Alternatively, men might get more practice and experience over time, with the more intelligent men having better cognitive resources to sense humorous material and convert it into commentary. Second, women should perceive differences in humor production among potential mates, but not necessarily in other women. Women should evolve mechanisms for perceiving the humor produced by men in order to differentiate higher quality from lower quality humor.

There is modest empirical support for the first proposition. For example, when people write cartoon captions, blind coders judge men's captions as moderately more

humorous than women's captions (Greengross and Miller, 2011; Mickles, Hoffman, Parris, Mankoff, et al. 2012). In addition, consistent with the sexual selection hypothesis that humor production is an indicator of intelligence, Greengross and Miller (2011) found that participants with higher IQs produced more humorous captions than those with low IQs. The second proposition is difficult to prove, as there is enormous subjectivity in what people find to be humorous. But it is not difficult to come up with a broad measure of who women find funny. According to sexual selection theory, women should prefer humor produced by men.

Though there is some (modest) evidence that men are funnier than women, no research has looked for systematic sex differences in humor perception. Specifically, does a person's sex predict their preferences for humor produced by men or women? There are several possible outcomes. If men are in fact more skilled at producing humor than women, both sexes might prefer male-produced humor. Alternatively, if men produce better humor but women are more skilled perceivers of humor, then we might find that women but not men prefer male-produced humor. Other outcomes would suggest that factors other than sexual selection influence humor perception.

Here we investigate sex differences in humor perception in three studies. Male and female participants either reported their favorite professional comedian or the funniest individuals they know personally, and we examined the relationship between sex of participants and the sex of selected comedians.

Study 1

Participants: 807 people (440 Women, 367 Men) participated. To broaden the sample, research assistants surveyed people in public locations (e.g. bus station, malls,

parks) in urban and suburban areas of Philadelphia and Southern New Jersey. The mean age of participants was 42.60 years (range: 18-103, $SD = 17.63$). For each study, we hoped to obtain over 500 participants in order to have a sufficiently large enough sample to make inferences.

Design and Method: Participants wrote the name of their favorite comedian or comedic actor. They also indicated their own sex, year of birth, and during what year they first watched the comedian (as filler questions).

Results:

Each response was coded for the sex of the comedian. When research assistants were unfamiliar with the comedian, they determined sex through an Internet search. We were able to establish the sex of all named comedians. As demonstrated in Figure 1, both women and men overwhelmingly indicated a preference for male comedians (males: 355/367; females: 382/440, $\chi^2(1) = 23.58$, $p < .0001$, $\phi_c = 0.18$). However, women were about four times more likely than men to prefer female comedians.

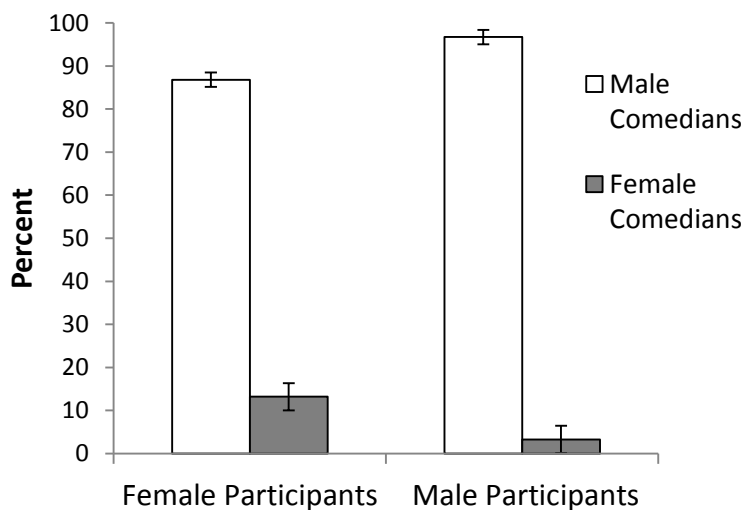


Figure 1: Both men (right bars) and women (left bars) prefer male professional comedians in Study 1. Error bars are 95% confidence intervals.

Discussion

Both sexes exhibited a strong preference for male comedians, though this preference was weaker in women. However, as of January 1, 2013, 84% (925/1097) of professional comedians listed on Wikipedia's comedians page were men. Although not a definitive list, it provides grounds for suspecting base rate sex differences. The overall preference for men might be due to their availability in memory (Kahneman & Tversky, 1974).

To control for base rate differences, in Study 2 we presented a list of 7 male and 7 female comedians and participants chose their favorite from the list. The fact that there are an equal number of male and female options eliminates the base rate difference.

Study 2

Participants: 575 people (354 Women, 221 Men) completed the survey.

Participants were recruited as in Study 1. The mean age was 38.39 years (range: 18-96, SD = 16.82).

<u>Female Comedian</u>	<u>Male Comedian</u>
Bea Arthur	Bill Cosby
Lucille Ball	Rodney Dangerfield
Carol Burnett	Will Ferrell
Ellen DeGeneres	Kevin Hart
Tina Fey	Bob Hope
Chelsea Handler	Red Skelton
Wanda Sykes	Richard Pryor

Table 1: Comedians used in Study 2.

Design and Method: Participants were provided with a list of 14 comedians in alphabetical order and indicated their favorite, when they first started watching the comedian and their own age (as a filler), and their own sex. Participants could also indicate that they preferred none of the listed comedians. The list of comedians is provided in Table 1, and it was constructed by selecting 7 female and 7 male comedians from the responses in Study 1 that were named by at least 7 participants in Study 1.

Results

Twelve participants did not indicate a preference and were removed from the analysis. A substantial majority (78%; 169/214) of men selected a male comedian as their favorite (Figure 2, right bars). As in Study 1, the percentage of women selecting a male comedian was smaller (46%, 160/349). In fact, the 95% confidence intervals for women overlap, which suggests that women as an aggregate do not have a clear sex preference. This interaction between the gender of the participant and that of the comedian was significant $\chi^2(1) = 58.58, p < .0001, \phi_c = 0.32$.

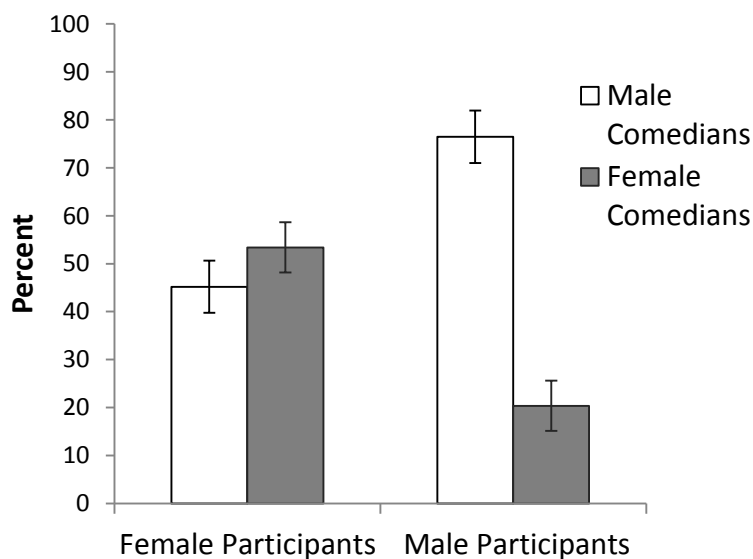


Figure 2: When choosing from a sex-balanced list (Table 1) of professional comedians in Study 2, men prefer male comedians (right bars), and women show no sex preference (left bars). Error bars are 95% confidence intervals.

Discussion

When base rates are controlled by providing people with an equal number of male and female choices, men continue to prefer male comedians, whereas women exhibit no sex asymmetry. Thus, the overall preference for male comedians in Study 1 is likely related to the base rate differences in the frequency of male and female comedians.

It is important to note that professional comedians are only one source of comedy, and may be a problematic source of data in that people only know professional comedians from what is filtered through the media. People likely have far more everyday experiences with humor with others with whom they share their lives. In Study 3, we examined whether sex differences persisted in everyday life by asking participants to report the three funniest people they knew personally. Because there are an approximately equal number of men and women in the general population, base rates are not a concern.

Study 3

Participants: 515 people (300 Women, 215 Men) completed the survey, and their mean age was 32.58 years (range: 18-85, $SD = 14.93$).

Design and Method: Participants reported the first name of the funniest, second funniest, and third funniest person they personally knew, the age when they first met this person and their relation to the participant (as filler questions), and the sex of each named individual.

Results

Consistent with Study 1 and Study 2, men predominately named other men, whereas women named men and women in approximately equal proportions. Overall, 91% (195/215) of individuals named by men were also men, whereas only 54% (164/300/840) of individuals named by women were men. This was true for funniest, second funniest, and third funniest rankings (see Figure 3). This difference was highly significant $\chi^2(1) = 171.26, p < .0001, \phi_c = 0.33$.

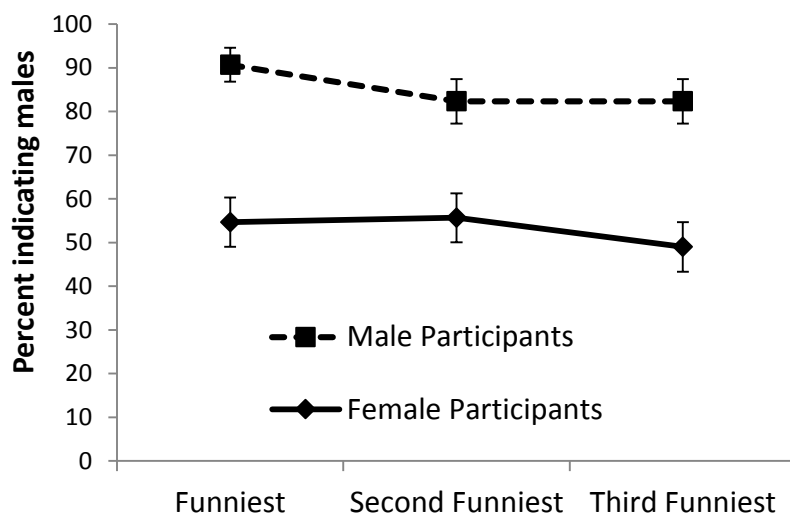


Figure 3: In Study 3, sex differences in humor preferences persist to everyday life. Men almost always chose men as the first, second, and third funniest individuals they knew (square symbols, dashed lines), while women exhibited no such sex asymmetry (diamond symbols, solid lines). Lines connect data points. Error bars are 95% CI.

Discussion

The results from study 3 demonstrate that sex differences in perception of humor generalize from professional comedy to humor found in everyday life. Once again, women nominated men and women with equal frequency, while men nominated other

men on the order of 10 men to every 1 woman. This is a large sex difference in preference for male produced humor among men, but not women.

General Discussion

The results from these studies suggest an interaction between the sex of the producer and perceiver of humor. Across three experiments we show a consistent male preference for male-produced humor. However, women find other women to be the funniest comedians and people they know with equal frequency as men when the base rate difference in the natural frequency of male or female comedians is controlled for (Experiment 2) or where none exists (Experiment 3). More colloquially, humor is in the sex of the perceiver.

Our results complicate the emerging view of the sexual selection hypothesis for humor. Consider that if men are actually more skilled *producers* of humor, as the sexual selection hypothesis would suggest, then our data can only be accounted for if women are also less skilled *perceivers* of humor. However, this also presents a challenge: women must be skilled perceivers of humor to discriminate among potential mates. Rather than showing a preference for male humor, which would be the case if the sexual selection hypothesis were true, they show no preference for male-produced humor at all when controlling for base rates. Rather, it is men that prefer humor produced by men.

Alternatively, men and women may be equally skilled at producing humor. If so, then our data suggest men are biased against perceiving women as humorous. Consistent with this, Mickles et al. (2012) reported that men suppress memories of funny women. Women could suppress their humor around men, perhaps because humor may be a trait associated with being a male. For the same reason, men might be biased against

perceiving women as funny. If humor serves to aid mate selection of men by women (Miller, 2002), then perhaps humor joins assertiveness and dominance as traits that men judge positively in men, but negatively in women (Costa, Teranccino, & McCray, 2001). But there are other possibilities: women might produce humor that specifically appeals to other women, but not to men. A joke about a menstrual period or the challenges of motherhood might simply pass over a male's head, but would be clearly evident to another woman. At present, the data we provide are only correlational rendering it difficult to understand the cause of this large sex difference. Yet ongoing experiments from our laboratory will address these different possible causes experimentally (X, Y & Z, in preparation). Other possible future directions include studying the effects of masculinity or sexual orientation, as well as developmentally exploring at what age this sex difference emerges in childhood.

It is important to stress this finding is not trivial in that the effect sizes reported here are very large and that humor performs such enormously significant roles in our biology, psychology, sociology, and economy. People continually search for humorous experiences when they go online or turn on their television sets. Across the globe, people use humor at work or at home to negotiate the challenges of work and the stresses of life (McGraw & Warner, 2014). If there is a sex difference this large in preferences for humor produced by men or women, it is a phenomenon that should be further studied and discussed. The underlying cause of this sex difference will likely explain why in our general culture there is a pervasive belief that men are funnier than women. Perhaps it is because men are often given the last word in many venues of public discourse, which if true, should be remedied.

We finally note that this study is embedded in a specific moment in our cultural history. In the past, professional comedy may have been dominated by men, but this is changing. For example, in 1975, the popular sketch comedy show *Saturday Night Live* was 70 % male, and that percentage has decreased to 50% in 2014. As more women break through the laughter glass ceiling, it is possible that these effects may change over time.

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