Who's Using Verbal Irony? Age and Gender Play a Role

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Background

Sarcasm is a common element of communication that serves a variety of pragmatic and interpersonal goals. Despite this popularity, however, use varies between individuals and situations. The current study built upon past research by Dress et al. (2008) regarding variability in the use of sarcasm (i.e., sarcasm production) across geographic region and gender by recruiting an online sample to examine differences in age, as well.

Past research on gender differences in sarcasm production has produced mixed results, depending on the form of measurement used. Self-report measures tend to show slightly increased rates of sarcasm for males, though these differences may be less pronounced or non-significant using multiple-choice or free response measures. As such, the current study used three measures of sarcasm production, including free response, multiple-choice, and self-report, consistent with the procedures used in Dress et al. (2008).

Age has received little attention in the sarcasm production literature, though it has been shown that older adults comprehend sarcasm more poorly[1]. As Amazon Mechanical Turk (mTurk) allows access to a broader sample, age was also examined.

This study built upon the initial findings reported by Johnson and Kreuz (2018) by recruiting participants from outside the original geographic area (i.e., Pennsylvania) and recruiting a larger sample of older adults.

Predictions

- Males will use and report using sarcasm more across measures.
- Younger participants will use and report using sarcasm more across measures.
- Females and Older adults will define sarcasm as more negative and less humorous.

Method

A total of 184 (96 Female) participants were recruited from mTurk for this study.

- Participants' age ranged from 20-73 (*M* = 39.57, *SD* = 12.73). This was collapsed into three ordinal categories of *Younger* (20-31), *Middle* (32-43), and *Older* (44+).

Participants were given three measures of sarcasm use (see *Materials*) and were asked to define *sarcasm* and *irony*. Free responses were coded by two raters with 93% agreement and definitional data were coded for six characteristics, again with high agreement (95%). Disagreements were resolved through discussion.

Materials

Sarcastic Completions

Provide Completions to 16 Scenarios (8 Intended to Elicit Sarcasm), from Dress et al.[3]

Example

Betty and Jean were on their way to a formal dinner party. "I'll bet I really make a good impression," said Betty. During dinner, Betty managed to spill her soup all over the hostess. As they were leaving the party, Jean said:

Sample Responses

You sure made an impression alright.
Did you say a good impression?
Well, she'll always remember you.
Some impression, huh?

Sarcastic Selections

"Select the comment that you would be most likely to make in these situations"
(8 Multiple-Choice Questions)
Adapted from Pexman and Olineck[5]

You and your best friend, Jim, went to a bar for a drink after work. Jim went to talk to a girl he had noticed earlier. She talked to him politely and then made an excuse to leave. Afterwards, you said:

- You're awkward (*Literal/Direct*)
- That went well (*Sarcastic/Indirect*)
- You're smooth (*Sarcastic/Direct*)
- That went badly (*Literal/Indirect*)

Sarcasm Self-Report Scale (SSS)

Ivanko et al.[4] Scale to Assess Sarcasm Use across Different Situations and Relationships
(8 Likert Ratings)

Examples

What is the likelihood that you would use sarcasm with someone you just met?

1 2 3 4 5 6 7
Not Likely ***Very Likely***

How sarcastic do you think you are?

1 2 3 4 5 6 7
Not at all ***Very***

Figures

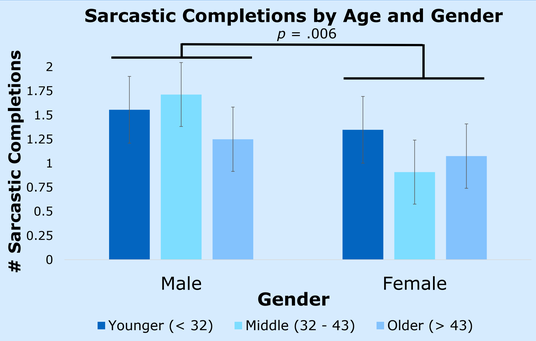

Figure 1. Estimated marginal means for sarcastic completions. Error bars denote 2SE and p-values denote Kruskal Wallis significance.

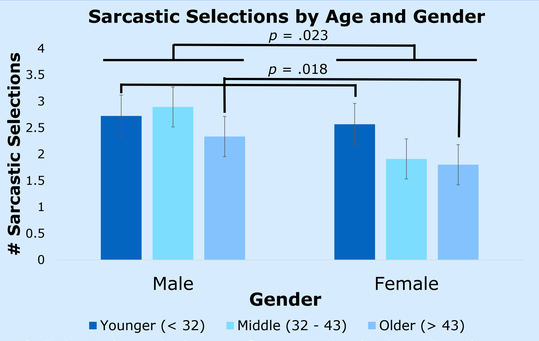

Figure 2. Estimated marginal means for sarcastic selections. Error bars denote 2SE and *p*-values denote Kruskal Wallis or DSCW significance.

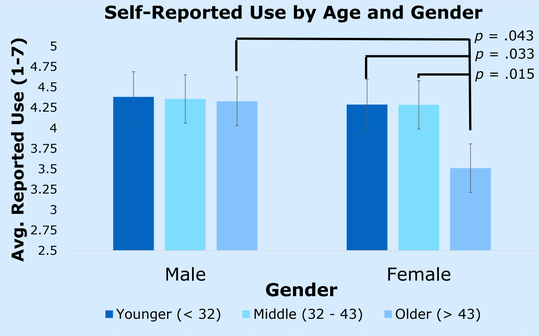

Figure 3. Estimated marginal means for self-reported sarcasm use. Error bars denote 2SE and p-values are Bonferroni post-hoc significance values.

Table 1

Characteristics of Sarcasm in Participant Definitions, by Gender and Age Group (in Percent Present)

	Gender		Age Group		
	Male	Female	Younger	Middle	Older
Verbal	76	75	78	80	69
Counterfactual	41	40	42	43	36
Tone of Voice	9	8	10	10	6
Negative	35 *	53 *	32 *	43 [a]	58 *[a]
Humorous	30	25	32	31	19
Unexpected	0	0	0	0	0

*Denotes significant Chi-Square ($p < .05$); [a]Denotes marginal difference ($p < .10$)

Results

Several patterns were observed across measures (see **Table 2**). Due to skewness, non-parametric tests (i.e., Kruskal Wallis; KW) were used for both *Completions* and *Selections*, while ANOVA was used for *Self-Report*.

- Males provided significantly more sarcastic Selections and Completions, and self-reported using sarcasm marginally more.
- The Younger group made significantly more sarcastic selections and Older females self-reported using sarcasm significantly less than all other groups.
- The interaction could only be interpreted simply for self-reported use, where older females reported significantly lower use, as KW does not permit *n*-way ANOVA designs.
- A dummy coded interaction term was tested using the KW test and revealed a marginal effect for Selections and a significant effect for Completions, though these effects may be influenced by underlying main effects.

Definitional data (**Table 1**) showed that females and older individuals, who report using sarcasm less, were more likely to define it as negative.

Table 2

*Summary of Effects of Age, Gender, and Age*Gender on Sarcasm Use across Measures*

	Completions		*Selections*		*Self-Report*	
Source	X^2	*p*	X^2	*p*	*F*	*p*
Age	1.36	.506	7.54	.023	2.48	.086
Gender	5.44	.020	7.66	.006	3.57	.061
Age*Gender	7.44	.059	9.30	.026	2.01	.137

Completions and *Selections* refer to Kruskal-Wallis X^2 values. *Self-Report* results refer to ANOVA results. Using ANOVA on the skewed variables produced similar results, though interactions cannot be compared.

Conclusions

Consistent with past research, sarcasm use appears to vary with gender, with males using sarcasm more frequently; though, this varies by measure. This difference is numerically smaller among younger adults. Age itself is also related to differences in sarcasm use, with a tendency for older individuals to use it less. These patterns are consistent with definitions of sarcasm as negative, as well. Together, these findings suggest that sarcasm use varies with gender and age, though the measure used also affects this pattern.

References

1. Phillips, L. H., Allen, R., Bull, R., Hering, A., Kliegel, M., & Channon, S. (2015). Older adults have difficulty in decoding sarcasm. *Developmental Psychology*, *51*(12), 1840–1852.
2. Johnson, A. A., & Kreuz, R. J. (2018). *"Still feeling lucky?" Features of sarcasm in the context of failed predictions*. Poster presented at the 59th annual meeting of the Psychonomic Society, New Orleans, LA.
3. Dress, M. L., Kreuz, R. J., Link, K. E., & Caucci, G. M. (2008). Regional variation in the use of sarcasm. *Journal of Language and Social Psychology*, *27*, 71-85.
4. Ivanko, S. L., Pexman, P. M., & Olineck, K. M. (2004). How sarcastic are you? Individual differences and verbal irony. *Journal of Language and Social Psychology*, *23*, 244-271.
5. Pexman, P. M., & Olineck, K. M. (2002). Understanding irony: How do stereotypes cue speaker intent? *Journal of Language and Social Psychology*, *21*(3), 245-274.