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## **Review of ‘It’s Not What Was Said But Who Said It To Whom: Interactant Sex Affects Attributions of Sexism in Ambiguous Situations’**

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The paper reports three experiments, each of which asks participants to judge, based on a description of an encounter between a banker and a customer, to what degree the banker displayed sexism toward the customer (all three studies), as well as how professional and pleasant the banker was toward the customer (studies 2 & 3). The key independent variables were the genders of each interactant, which were randomly assigned to be either men or women, creating four cells of a 2 (banker gender: male or female) x 2 (customer gender: male or female) between subjects design. In each study, the authors also measured and tested a number of potential individual-difference moderators of the effects of banker and customer gender, including concerns for political correctness, social justice attitudes (study 1), ambivalence towards men (study 2), and neosexism (study 3).

In each study the authors found a strong interaction effect between sender and receiver sex, such that the banker was judged most sexist, and the interaction judged least professional/pleasant (these were combined into a single ‘interaction favorability’ score) when the banker was a man and the customer was a woman. By contrast, they did not find much evidence of moderation by individual-level difference variables – the only moderator that showed suggestive effects was neosexism. Specifically, individuals high in neosexism (a novel construct to me, but defined as ‘manifestation of a conflict between egalitarian values and residual negative feelings toward women’; an example item is ‘In order not to appear sexist, many men are inclined to overcompensate women’) were less likely to perceive greater sexism depending on the genders of the banker and customer.

Overall, I am convinced that the central effect demonstrated is robust, and I think the authors conclusions were mostly measured and appropriate. I agree that they showed that “...slight variations in situational cues may alter attributions people make about others when intentions are ambiguous, even if those cues do not provide any overt evidence for those attributions” (p. 25), and that “...when situations are ambiguous in nature, what is perceived to be sexist may be

based more on heuristic responses primed by interactant sex composition than by actual message content (p. 29)."

I did have a few concerns, however, three larger issue and then a handful of miscellaneous lesser issues. First, my larger concerns:

**1. The scenario describes events which really only fit the paradigm of sexism perpetrated by men on women.**

This is a limitation that the authors acknowledge, but which I think probably deserves a bit more attention. They wrote "...given that men and women likely experience sexism quite differently, some scenarios may be more capable of capturing perceptions of male-experienced sexism whereas others, such as the one employed here, may be better for detecting perceptions of female-experienced sexism" (p. 28).

This is a key point in my view. The scenario used in the study contained a number of ambiguous cues that could be interpreted as sexist (e.g., the banker complementing the customer's appearance, the banker commenting that the customer is lucky to have so much money, the banker dismissing the customer's investment ideas, the banker putting their arm around the customer (see the scenario on page 11). But although all of these cues are ambiguous, I would argue that they are also all much more suggestive of sexism perpetrated by men toward women than the opposite: women are more often judged according to their appearance, women have traditionally had less control of financial resources, women have traditionally been seen as less competent in areas such as business and finance, and women are more often victims of unwelcome touching. It is therefore not surprising that for this particular scenario, the banker = man, customer = woman condition resulted in the strongest attributions of sexism. Because each of these ambiguous/possibly sexist occurrences seems much more like the sexism men tend to perpetrate on women.

I recognize that this is largely the point of the paper – people observe situations armed with priors and heuristics about things like what sexism from men toward women looks like that make them respond differently to the same social cues depending on the genders of the interactants. But I can't help but think that this point deserves a bit more acknowledgment. It wasn't just that the scenario was ambiguous, it was ambiguous in such a way as to suggest that if the banker was displaying sexism, then they were displaying sexism highly paradigmatic of sexism perpetrated by men toward women. Perhaps, as the authors' state, there are other scenarios where people would be more likely to perceive sexism by a woman. Or perhaps not. I personally don't find it easy to think of such a scenario, and I think it is at least possible that people have strong enough priors that sexism is almost always perpetrated by men toward women that it could be difficult to demonstrate the effect working in the opposite direction.

**2. The moderation by neosexism is explained in a confusing way.**

Another issue is that it seems to me that in places the authors are discussing the evidence for the moderating effect of neosexism in a confusing way. In the abstract they state 'neosexism levels resulted in stronger sexism ratings in the male sender-female receiver condition' (p. 2). And in their discussion they write "this effect was especially prominent when people possessed greater belief that women were treated disparately in contemporary society." (p. 29). Yet I think both these sentences are quite confusing, because the neosexism moderation effect, as it is described

on page 24, is that ‘when respondents were low to moderate in neosexism, the effects of interaction sex composition were more pronounced than when neosexism was high’, (see also Figures 3b & 3c on pages 50 & 51). So in fact, it was people high in neosexism who were relatively insensitive to the genders of the banker and customer in making judgments about sexism. As mentioned above, the authors define neosexism as “manifestation of a conflict between egalitarian values and residual negative feelings toward women.” I don’t know how best to think about people low in this construct, but it doesn’t seem clear to me that they are well described as people who believe “...that women were treated disparately in contemporary society.” In fact, given the example item for the neosexism scale (“In order not to appear sexist, many men are inclined to overcompensate women”), it actually seems to me that this could be used as a description for people high in neosexism. I.e., they believe women are treated disparately well in modern society. As such, the way this interaction is described in the sentences I quoted above makes it seem to me like the opposite is happening from what actually did happen (people high in neosexism showed the lowest effects of the gender manipulations). I therefore think this language needs to be amended, and probably the definition of neosexism also tightened up, to make it clearer for readers what is happening here.

### **3. The reporting of analyses could be a lot clearer.**

A third issue concerned the way the analyses were reported, which came across as quite opaque to me. In general, the authors should be aware that not everyone used PROCESS, so simply saying ‘we used model 3 from PROCESS’ (p. 13) and describing which variables you inserted as X, Y, W, and Z will leave a lot of readers confused. As far as I can see from the Tables included, this just means a multiple regression with two categorical and continuous predictors, and a three-way interaction between banker gender, customer gender, and the individual-level moderator, as well as all subsumed two-way interactions. I think just saying something like this, or writing out the statistical model, would be less confusing than using PROCESS specific jargon about X, Z, and W variables.

The way the mediation analysis was run and reported is particularly confusing. If you look at Tables 5 and 7 (pages 43 and 45), it is pretty clear what at least appears to be going on. If we assume that sexism judgments occur before and subsequently affect favorability judgments (which seems a reasonable assumption to me), then we see that in both Tables/studies there is a strong interaction effect between banker and customer gender predicting sexism ratings, and that in turn, these sexism ratings have a strong predictive effect on favorability ratings. Moreover, after controlling for sexism ratings, the banker/customer gender interaction has no direct effect on favorability ratings. This is also compatible with a mediation story.

But the authors have tested for this mediation in what seems to me a pretty strange way. What they’ve done is divide the data up into two halves, according to customer gender, and then run separate mediation models in each dataset to test if the effect of banker gender on favorability ratings is mediated by sexism ratings. I’m not sure why this was done, and the authors don’t really explain it, but the mediation models run are therefore testing two different indirect effects: banker gender -> sexism ratings -> favorability ratings | customer = a man, and banker gender -> sexism ratings -> favorability ratings | customer = a woman. But this leads to some strange wording when their mediation models are explained, such as this sentence on page 25: “The indirect effects of the sender sex × receiver sex interaction demonstrated consistency between Studies 2 and 3 when the receiver was female but not when the receiver was male.”

It is pretty confusing for readers to talk about the indirect effects of a sender sex  $\times$  receiver sex interaction when the receiver (the customer) is female, because there is no sender sex  $\times$  receiver sex interaction when the data has been divided by receiver gender. Once the data has been divided, the indirect effect becomes an indirect effect of 'sender (banker) gender.

I don't use mediation models, so I am not sure, but I'd be surprised if there wasn't a way to test an indirect interaction effect that didn't require splitting datasets up into two. Personally, I'd likely be as convinced as I could be about this mediation if the authors just showed another model in Tables 5 and 7 displaying that the sender sex  $\times$  receiver sex interaction effect was significant in the 'favorability' model prior to including the sexism ratings as a predictor. But if the authors insist on doing it their way with split datasets, I would just ask that (a) this process is made a lot clearer and more transparent when the mediation models are discussed (b) the authors include in Tables all the results normally included when mediation models are run, including the a and b path coefficients, the c and c' direct and total effect coefficients.

#### Miscellaneous smaller concerns:

1. I felt the intro was a bit too focused on Error Management Theory at the expense of other relevant theoretical material. I feel there are a lot of good theoretical explanations for the observed effect, which the general discussion does a good job covering (Bayesian reasoning with strong priors, confirmation bias, heuristics, and EMT), but I felt these could have been mentioned at the outset.
2. All y axes of plots should have a label, and plots should be formatted in a matching way. E.g., don't make the moderator the x axis in some plots (Figure 1b) but the legend variable in others (Figures 3b & 3c).
3. H2 is a bit under-specified (p. 9), because strength of attitude is not directional. I understand that it is probably obvious what directional predictions one would make based on each scale, but at this point we don't really know what these scales are measuring, and 'stronger attitudes about sexism' is very vague. Someone could have strong positive or negative feelings about sexism.
4. Not really an actionable critique at this point, but participants were paid \$0.25 for a 10-minute experiment. That's \$1.50 per hour. That seems borderline unethically low.
5. The description of the power analysis could also be a lot clearer on page 10: "Power analyses, calculated using the current study's alpha, indicated that identification of a medium-sized effect at power of .80 required 328 respondents." This was confusing to read because at this point the authors hadn't mentioned the study's alpha. It's also not clear what you are defining as a medium sized effect. Or, for that matter, how the power analysis was run.
6. Also on page 10: "78 of them (9.9%) failed one or more of the three attention check items embedded in the survey." This is pretty stringent exclusion criteria, but with MTurk data I can understand the need to exclude a large proportion of participants. A supplement including results without excluding these people would be good, though,

especially considering the lack of pre-registration of these exclusion criteria.

7. I think the expected practice in scientific writing is to use a multiplication symbol  $\times$  not the letter x when writing things like “sender sex  $\times$  receiver sex”. It’s an easy fix with copying and pasting even if the keyboard shortcut for multiplication symbol is a mystery.
8. p. 13 I think readers would appreciate keeping acronyms to a minimum. I don't think it's necessary for CPC and SJ.
9. When discussing indirect effects, the authors use ‘B’ to give a single coefficient for indirect effects. If this B value is the  $a \times b$  path, it would be helpful to make that clear.
10. Another way to make the manuscript easier to read would be to clearly define all the relevant concepts as they are mentioned. For example, I believe neosexism was mentioned a number of times before it was finally defined.
11. On page 11 the authors state that “We set  $\alpha$  of .005 as the threshold for statistical significance and .01 as the threshold for suggestive results” – yet when the neosexism moderating effect fell into this suggestive range, I feel that it was more or less just treated as significant. For example, in the abstract, and on page 24: “In Study 3, we found that the effects of sender sex and receiver sex on attributions differed as a function of people’s level of neosexism.” I feel like if you are going to set alpha at non-traditional levels that is fine, but you need then to stick to your established standards. If the neosexism moderation is merely suggestive, it probably needs to be discussed in a more tentative way.