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Review of Lauritsen (2024)

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I find this critique unpersuasive. With respect to the Schein Descriptive Index, I agree with the author's opinion that it is not an ideal measure to determine the similarity of women and men to managers. Ideally, it would be perfectly balanced between male-favoring and female-favoring items. Unfortunately, it is slightly imbalanced with more male-favoring and female-favoring items, that is, 37 male and 33 female. That imbalance would tend to enhance male-manager similarity and diminish female-manager similarity somewhat.

In evidence of the effects of the imbalance, the authors report ICCs of .62 (male) and .06 (female) for the Schein index. Balancing to a more ideal scale with equal numbers of male-favoring and female-favoring items creates ICCs of .63 (male) and .32 (female). So, these results with a balanced scale also show greater male-manager than female-manager similarity, just somewhat less extreme. It seems that the effect is intact with a more ideal, balanced scale.

In our meta-analysis of think-manager, think-male effect sizes, Koenig et al. (2011) found 51 such male-managers ICCs and 49 female-managers ICCs, mostly using the Schein Descriptive Index (7 used another, usually more balanced version of the inventory). Here are our meta-analytic findings:

The weighted mean effect for the 51 men-leaders ICCs was .62 ($T = 0.26$; 95% CI [.57, .66]; 90% PI [.27, .82]). There was a large amount of variability within the effect sizes, $Q(50) = 321.65$, $p < .001$; $I^2 = 84.46$. The weighted mean effect for the 49 women-leaders ICCs was .25 ($T = 0.22$; 95% CI [.19, .32]; 90% PI [-.12, .56]). There was also a large amount of variability within these effect sizes, $Q(48) = 241.77$, $p < .001$; $I^2 = 80.15$.

Thus, the meta-analytic ICCs were .62 (male) and .25 (female), values that are similar to and between the values reported in this manuscript for the Schein items and the perfectly balanced items. In summary, the think-manager, think male effect is fully intact with the balanced items, just somewhat diminished. Moreover, our meta-analytic results for studies with most using the Schein Index are in line with these findings.

Concerning the statistical appropriateness of the ICC analyses, it is true that most researchers reported less-than-ideal separate ICCs for the male-managers and female-managers analyses. For our meta-analysis, we therefore consulted with Professor McGraw, perhaps the world's greatest expert on ICCs, and derived the following strategy with his help:

Calculation of effect sizes. In the think manager–think male paradigm, researchers reported intraclass correlation coefficients (ICCs) for the men–leaders and women–leaders relationships. In all cases in which ICCs were not reported, the researchers provided additional information that allowed us to produce intraclass correlations. The ICCs used in the primary data reports were computed using a one-way, single-rater, random effects model, which assesses absolute agreement among measurements (Case 1 in McGraw & Wong, 1996). However, the more appropriate ICC would have been the 2-way ICC(A,1), which is also a measure of absolute agreement, but which takes the fixed column factor (leaders vs. women; leaders vs. men) into account. Thus, the ICC provided by researchers in the primary studies would be biased downward somewhat but quite close to the calculations for ICC(A,1) (K. O. McGraw, personal communication, January 8, 2003). We used the one-way, single-rater, random effects ICC because it was available for all data sets, providing a common metric for the studies. The men–leaders and women–leaders similarities, or ICCs, were analyzed separately as Fisher's Z, using the conversion

$$\frac{1}{2} \log \frac{1+(k-1)r}{1-r},$$

where k is the number of observations made on each object of measurement, and given an inverse variance within-study weight of

$$\frac{k}{2(n-2)(k-1)},$$

where n is the number of items (see formulas in Appendix B of McGraw & Wong, 1996). The Zs were transformed back to ICCs for presentation of the results. In the random-effects models, the variances in these study weighting terms consisted of the sum of the within-study variance and the between-studies variance (see Borenstein et al., 2009, p. 72).

I believe that our strategy was appropriate for the meta-analysis. In a meta-analysis, given a range of analysis techniques in the primary studies, some compromises are often required when the ideal analyses were not performed. However, the results were not much affected by having to use a less-than-ideal version of the ICC, according to Professor McGraw.

Whether ICCs are appropriate at all for these data is another matter. I think that they are a legitimate way of analyzing the data, and Professor McGraw agreed, as did the statistical experts that Professor Schein consulted when she produced her first studies (it was her PhD dissertation, I think). Perhaps the regression-based analysis recommended by the author of this paper is more appropriate but using the ICCs can be defended. I don't believe that results of the regression analysis are presented in this manuscript to show that they fail to produce the think-manager, think-male effect.

Therefore, I do not think that the analysis in this manuscript shows that the think manager-think male effect is artifactual. Rather, these analyses show quite the opposite. The effect is intact with a more balanced scale than the Schein Descriptive Index.

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