Objectification in Action: Self- and Other-Objectification in Same-gender Interactions

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Abstract

 Empirical evidence has only found links between objectification, self-objectification, and negative outcomes for woman within interpersonal interactions between male-female pairs. The purpose of the present study was to extend past research and consider the relationships between such valuable phenomena and their effects on authenticity within interactions between female pairs. Woman were brought into the laboratory and interacted in same-sex dyads. Dyadic analysis was utilized to detect whether partners' objectification of each other affected state self-objectification, and the resulting feelings of comfort and authenticity during the interaction. After the interaction, participants completed a questionnaire which measured many constructs including cognitive performance, career aspirations, and relationship agency. Results revealed no significant relationship between self-objectification and authenticity. Further, although there were significantly negative effects on career aspirations and relationship agency resulting from a lack of relationship authenticity, there was no evidence that this is due to feelings of sexual objectification. The significant partner effect of objectification on actor self-objectification suggests that women being objectified by other women still results in feelings of self-objectification, and such research has powerful implications for the ways that women interact in both sexual and non-sexual settings. AUTHOR NOTE: mention Clark trigram coders Hannah et al.

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Theorists across diverse disciplines have explored the multiple ways that the body conveys social meaning, as well as how these meanings shape gendered experiences, especially during interpersonal interactions with members of different social groups ("Engendered lives," 1993, Garcia, Earnshaw, and Quinn (2016)). Objectification theory, a valuable theoretical framework proposed by Roberts and Fredrickson (1997) which works to contextualize female bodies as socio-cultural constructions, can be employed to illuminate the gender oppression and negative lived experiences of girls and women. Empirical evidence illustrates how women continue to be objects of interpersonal discrimination and expereince daily sexist hassles (Swim, Hyers, Cohen, & Ferguson, 2001). One form of interpersonal discrimination women face is the process by which their whole being is viewed as a collection of sexualized body parts valued predominantly for commodification, a phenomena termed sexual objectification (Bartky, 1990). Sexual objectification occurs with both "endless variety and monotonous similarity," and is thus mediated by unique combinations of race, ethnicity, sexuality, age, and class (Fredrickson, Hendler, Nilsen, O'Barr, & Roberts, 2011; Rubin, 1975, cited in Fraser and Nicholson (1989), p. 28). Amid such heterogeneity though, "having a reproductively mature female body" proposed by Roberts and Fredrickson (1997) is likely to create a shared vulnerability to sexual objectification and a variety of shared negative experiences as a result.

Self-objectification is a multidimensional process that accounts for the cognitive mechanism that translates experiences of sexualization at the cultural level to psychological (e.g., anxiety, self-esteem, authenticity, motivational states) and behavioral (cognitive performance, body monitoring) features of mental health and well-being at the individual level (Calogero, Tantleff-Dunn, & Thompson, 2011; Moradi & Huang, 2008). Calogero et al. (2011) proposes that the construct of self-objectification can be conceptualized as a learned trait. Furthermore, it can also be elicited momentarily, through the media, for example, with

sexualized images in movies and magazines, which can lead to a state of self-objectification (Calogero et al., 2011, Moradi and Huang (2008)). Being objectified by another person and possessing trait-level self-objectification (TSO) may interact to influence experiences of feeling like a body, or state self-objectification (SSO) (CITE swimsuit sweater, Garcia et al., 2016).

Studies have shown that within social encounters women are gazed at more than men (Briton & Hall, 1995, CITE saguy skype study, calogero video walking study), often times feel "looked at" within interpersonal interactions (Argyle & Williams, 1969), and will more than likely internalize the objectifying gaze on physical self (Young, 1979). Moreover, perhaps the most adverse effect of objectifying treatment is that it effectively socializes girls and women to treat themselves as objects to be looked at and evaluated, an effect termed self-objectification (Bartky, 1990; Berger, Cohen, & Zelditch Jr, 1972; L. Fredrickson, Roberts, M. Noll, Quinn, & Twenge, 1998).

ENTIRE PARAGRAPH ON MODERN (POST-2016) STUDIES OF INTERPERSONAL OBJECTIFICATION.

Empirical evidence reveals that objectification manifests through inauthenticity in romantic relationships (Brunell et al., 2010), adverse attitudes in regard to career aspirations, and a decrease in concentration and impairment in female cognitive performance (D. M. Quinn, Chaudoir, & Kallen, 2011).

In the current study, we sought to examine what occurs during an interaction in which one or both partners are objectifying each other, similarly to Garcia et al. (2016), but between same-sex female interpersonal interactions. Moreover, the current study uses a face-to-face interaction paradigm and dyadic data analysis techniques to examine the effects for both women simultaneously. We expected to replicate the results found in Garcia et al. (2016). We predicted that being objectified by one's interaction partner would lead to

self-objectification, which in turn would lead to feelings of inauthenticity, then reduced feelings of agency in romantic relationships, reduced career aspiration, and reduced cognitive performance. Specifically, we expected to find a positive relationship between other-objectification by one's partner and state self-objectification. We also expect to find a negative relationship between self-state objectification and interaction authenticity, and that interaction authenticity will be positively related to cognitive performance, relationship agency, and career aspirations.

Methods

Procedure

The procedure used was identical to that in Garcia et al. (2016), except for the instructions that the participants were given. In brief, that methodology is that each participant arrived at the laboratory and were then led into separate cubicles to prevent any communication between the participants before the interaction. In addition, each participant was screened for prior acquaintance to confirm that they had not met prior to the study. They were asked to sign the consent form to participate, and the study was described as follows: "This is a study looking at how students form different types of relationships at college." A prompt on the computer screen told the participants that they were assigned to the "College Relationships" condition and gave the following instructions:

There are many types of relationships people form in college. During the interaction, please think about your partner's potential as a romantic partner. Even if they are not the gender you are attracted to, you can still judge their potential as a romantic partner. After the interaction you will be asked to evaluate how dateable your partner is. In other words, we would like to know if you think someone would date your interaction partner. Also, your interaction partner will be evaluating you in the same manner.

Two participants were then brought into a larger interaction room where they sat on stools prearranged to be 36 inches apart. The experimenter instructed the participants to "get to know each other" for 10 minutes and then left the room. After 10 minutes, the experimenter came back into the room and stopped the interaction. The participants then went back to their individual cubicles and completed a set of post-interaction measures. Participants were then thanked for their participation and debriefed Garcia et al. (2016). The full methodology used is found in Garcia et al. (2016)'s study.

Combining Samples

Data from two different, but demographically equivalent, samples were combined to create the final analysis sample ($N = 64$) used in this study. In the measures section that follows we refer to them as Sample 1 and Sample 2. Sample 1 ($N = 24$) is from a co-ed liberal arts college in the northeast US and Sample 2 ($N = 40$) is from a women's liberal arts college in the northeast US. The results section contains more detail about equivalence analyses to support the decision to combine these two samples.

Post interaction Measures

The following measures were collected in the order they are presented following the interaction. Correlations appear in Table 1, and descriptive statistics appear in Table 2.

Cognitive Performance. Trigrams from the Remote Associates Task (McFarlin & Blascovich, 1984) were utilized to assess cognitive performance after the interaction. Ten items were selected and presented to participants. For example, the correct answer for the trigram "Quack: Pond: Waddle" would be "Duck". Participants are limited to 30 seconds. For every correct answer, 1 point is given. The mean score was 5.03 (SD = 2.29). Cognitive performance was measured first in order to measure potential immediate detriments to

performance (Garcia et al., 2016).

State Other-Objectification.   To measure the participant's objectification of their partner in the interaction, participants were asked a series of questions about the frequency of thoughts in relation to multiple characteristics of their partner Garcia et al. (2016). Questions included aspects of their partner's internal traits such as personality, friends, family, and extracurricular interests, as well as external traits such as body, appearance, clothing, and body parts. All questions were to be rated on a scale from 1 (not at all) to 7 (constantly). Objectification was measured by getting the difference between the average frequency of thought about their partner's external traits ($\alpha = 0.79$ for Sample 1, $\alpha = 0.79$ for Sample 2) and frequency of thought about their partner's internal traits ($\alpha = 0.79$ for Sample 1, $\alpha = 0.76$ for Sample 2). A positive score in this scale would indicate that the participant thought about their partner's external traits more than the partner's internal traits, and a negative score would indicate the opposite.

Interaction Authenticity.   To assess the magnitude to which individuals felt comfortable in the interaction and perceived the interaction to be authentic, we asked participants to rate the extent to which they felt comfortable, happy, friendly, warm, easygoing, sincere, and authentic on a scale ranging from 1 (not at all) to 7 (very much), much alike (Garcia et al., 2016). Participants were additionally asked to rate their interaction partner's authenticity as well as their own: "'Do you think your partner was authentic during your interaction?"' and "'Were you authentic during your interaction?"' These questions were ranked on a scale from 1 (not authentic at all). These were combined to form the authenticity scale ($\alpha = 0.91$ for Sample 1, $\alpha = 0.91$ for Sample 2).

State Self-Objectification.   To assess state self-objectification, we used an average of two items from Saguy, Quinn, F Dovidio, and Pratto (2010) that were also used in Garcia et al. (2016). Participants were asked to rank how much they agreed with the following statements: "During the interaction I felt more like a body than a full self" and "I felt more

like a body than as a real person in the interaction". Originally, Saguy et al. (2010) used 3 items, but in both samples the reliability of the scale was higher once the third item was removed, so we chose to only use the first two for our measure of SSO, leaving us with a reliable scale ($\alpha = 0.84$ for Sample 1, and $\alpha = 0.85$ for Sample 2.)

Relationship Agency. A scale was used from Garcia et al. (2016) to assess how much agency an individual believes they would possess in future romantic relationships. Participants were asked how likely it was that they would do the following: "'ask someone out on a date,"' "'open the door for your date,"' "'pay for a date,"' "'ask your boyfriend/girlfriend to marry you,"' "'initiate sex with your girlfriend/boyfriend,"' "'initiate condom use during sex,"' "'surprise your boyfriend/ girlfriend with a gift,"' and "'ask your girlfriend/boyfriend to move with you to a new place."' Responses were measured on a scale ranging from 1 (not at all likely) to 7 (extremely likely). The scale originally had 9 items, but the 9th item had low correlations with the remaining items, ranging from .02 to .30 for the first sample, and .04 to .30 for the second sample. The item was intended to be reverse coded, but correlations were still low enough to make the scale unreliable. Therefore, the ninth item was removed. As a result, the scale had moderately high reliability for both samples ($\alpha = 0.72$ for Sample 1, ($\alpha = 0.74$ for Sample 2).

Career Aspirations. To conceptualize participants' career aspirations after the interaction, we used the 10-item adaptation of P. Gray and M. OBrien (2007)'s Career Aspiration Scale employed in Garcia et al. (2016), which asked participants to consider how true 10 statements were in regard to their future careers on a scale from 0 (not at all true of me) to 4 (very true of me). Items include "I hope to become a leader in my career field" and "I hope to move up through any organization or business I work in." Items were fairly reliable ($\alpha = 0.73$ for Sample 1, $\alpha = 0.80$ for Sample 2).

Trait Self-Objectification. Trait self-objectification (TSO) was assessed using the Self-Objectification Questionnaire (L. Fredrickson et al., 1998; M. Noll & L. Fredrickson,

1998), which evaluates the extent to which individuals view their bodies in observable versus nonobservable ways. The questionnaire asked participants to rank order both appearance and functional aspects of their bodies, from 1 (least important) to 10 (most important), with respect to physical self-concepts. Of the ten body attributes, five of the items were appearance-based (weight, sex appeal, physical attractiveness, firm/sculpted muscles and body measurements), and five of the items were competence-based (strength, physical coordination, energy level, health and physical fitness). Difference scores were computed by subtracting the sum of the 5 functional aspects/competence attributes (e.g., health, strength) from the sum of the 5 physical self-concepts/appearance attributes (e.g., physical attractiveness, weight), and all measures were multiplied by -1, as was done in Garcia et al. (2016), so that positive scores indicated greater TSO.

Description of the Samples.   Thirty-two previously unacquainted self-identifying female-sex dyads (64 total participants) from two liberal arts institutions in the Northeast of the United States participated in this study. More specifically, twelve of the pairs, which derived from Sample 1, were students at a co-ed liberal arts college, while the remaining twenty pairs who came from Sample 2 attended a women's liberal arts college. Initially, data was collected from same-sex and mixed-sex dyads that comprised of male and female gendered individuals. Sample 1 originally consisted of twenty-two pairs, twelve men and thirty-two women. Twenty-three pairs made up of forty-three women and one man, as well as two participants who did not identify with either gender category, formed Sample 2. Due to similarities across samples in regard to correlation patterns between significant variables within this study, the two datasets were combined. For consistency, we limited participant data to same sex female pairs at the two colleges. These participants were mostly first-year college students, with an average age of 18.85 (SD = 1.04). The sample was 48.44% White/European American, 9.38% Black/African-American, 28.12% Asian/Pacific Islander, 9.38% Latinx, and 4.69% mixed-race. There were 8 White/White pairs and 4 same race racial minority pairs, for a total of 12 same-race pairs. The remaining 20 were mixed race

pairs, of which 15 were White/racial minority pairings and 5 were cross-racial minority group pairs. 64.06% of the sample identified as heterosexual, and 25% identified as gay, lesbian or bisexual.

Results

Data analysis

We used R (Version 3.5.2; R Core Team, 2017) and the R-packages *apaTables* (Version 2.0.5; Stanley, 2018), *devtools* (Version 1.13.5; Wickham, Hester, & Chang, 2018), *dplyr* (Version 0.8.3; Wickham, François, Henry, & Müller, 2018), *forcats* (Version 0.3.0; Wickham, 2018), *ggformula* (Version 0.7.0; D. Kaplan & Pruim, 2017), *ggplot2* (Version 3.2.1; Wickham, 2016), *haven* (Version 2.1.0; Wickham & Miller, 2019), *irr* (Version 0.84.1; Gamer, Lemon, & <puspendra.pusp22@gmail.com>, 2012), *knitr* (Version 1.25; Xie, 2015), *kutils* (Version 1.70; Johnson, Kite, & Redmon, 2019), *lattice* (Version 0.20.38; Sarkar, 2008), *lavaan* (Version 0.6.1; Rosseel, 2012), *lpSolve* (Version 5.6.15; Berkelaar & others, 2015), *Matrix* (Version 1.2.15; Bates & Maechler, 2017), *mosaic* (Version 1.2.0; Pruim, Kaplan, & Horton, 2017, 2016), *mosaicData* (Version 0.17.0; Pruim et al., 2016), *nlme* (Version 3.1.137; Pinheiro, Bates, DebRoy, Sarkar, & R Core Team, 2017), *papaja* (Version 0.1.0.9842; Aust & Barth, 2018), *psych* (Version 1.8.4; Revelle, 2017), *purrr* (Version 0.3.2; Henry & Wickham, 2019), *readr* (Version 1.1.1; Wickham, Hester, & Francois, 2017), *stringr* (Version 1.4.0; Wickham, 2019), *tibble* (Version 2.1.3; Müller & Wickham, 2019), *tidyr* (Version 1.0.0; Wickham & Henry, 2019), *tidyverse* (Version 1.2.1; Wickham, 2017), *usethis* (Wickham & Bryan, 2018), and *xtable* (Version 1.8.3; Dahl, Scott, Roosen, Magnusson, & Swinton, 2019) for all our analyses.

Analysis Strategy

This study sought to replicate the results of Garcia et al. (2016)'s study, done with male-female pairs, which used a dyadic path analysis to detect whether partners' objectification of one another affected state self-objectification (SSO). See Figure 2 for the results of the analysis from this previous study. We hope to investigate how the central effects found in the previous study relate to interactions between two women. Specifically, we are interested in testing the relationship between state-other objectification and SSO, and how SSO in turn, affecs feelings of inauthenticity during the interaction. In addition, we will also test if the effect of other-objectification in an interaction on SSO is only present for those women who are high in trait self-objectification, as in Garcia et al. (2016). Further, we will investigate the realtionships between experiencing interaction inauthenticity and relationship agency, career aspirations, and cognitive performance.

While Garcia et al. (2016) used dyadic path analysis, we will conduct our dyadic analyses using multilevel modeling. Dyadic analyses for distingishable dyads (e.g., mixed-gender interacting pairs) is more natural in Structual Equation Modeling (SEM) than it is for indistinguishable dayds (e.g., same-gender interacting pairs) (Garcia, Kenny, & Ledermann, 2015; Ledermann & Kenny, 2017). One reason for this asymmetry is that, due to the arbitrary distinctions made bewteen "partner 1" and "partner 2" in indistinguishable dyads, many estimates need to be fixed to be equal (i.e., paths, variances, covariances, endogenous intercepts, and exogenous means) for indistinguishable dyads but these equality contraints should not then be considered in the degrees of freedom calculations for fit estimations (Olsen & Kenny, 2006). Further, Olsen and Kenny (2006) detail how a new independence model and the corresponding fit measure should be re-calculated for indistinguishable dyads models. The current study uses dyadic multilevel modeling (MLM) to test all relationships and mediation paterns. See Ledermann and Kenny (2017) for a more complete discussion of the considerations for using SEM versus MLM for dyadic analysis.

Testing the Garcia et al. (2016) model on the current, same-gender, sample, involves using the Actor-Partner Independence Model (APIM) approch for each outcome variable (i.e., endogenous variable in Figure 2). Thus, we ran five APIM's to test all the hypothesized relationships. See Figure 1 for a basic APIM model. The APIM includes effects due to one's own, as well as one's partner's, predictor variables (X's) on the one's own outcome variable (Y). Unlike the original Garcia et al. (2016) study, our study deals with indistinguishable dyads, meaning the designation of who is designated as "actor" and who is designated as "partner" is arbitrary. Recall that the indistinguiahble nature of the dyads in the current study led us to choose the MLM approach over SEM. These analyses are considered exploratory, given the lack of prior research theorizing about these linkages.

Before moving to the main analyses, we discuss statistical equivalence test that provide support for combining Sample 1 and Sample 2 in one analysis sample. The online supplemental material contains the main analyses separated by samples.

Combining Samples.   The correaltions between study variables is similar across samples. The realibialities for the study scales were also equivalent. (Note that the two samples were two small to conduct formal measurement equivalence tests for scales.) There are no statistically significant differences between samples in demographics including age, STATS, and ethnicity, STATS.

Main Results

All model estimates and p-values are found in Table **??** and the relationships with estimates included are depicted in Figure 3.

The most important finding from Garcia et al. (2016) was the significant partner effect of other objectification and SSO (specifically men's objectification of women and women's SSO). As expected, the partner effect of other-objectification on SSO in the current

all-women sample was statistically signficant, $b = 0.29$, $SE = 0.12$, $p = .017$, replicating Garcia et al. (2016)'s fiding. One's own other objectification had no effect on SSO, $b = $ -0.16, $SE = 0.12$, $p = .193$. Contrary to past finding however, there was no statistically significant interaction of partner's other objectification and the person's trait self-objectification on SSO, $b = $ -0.02, $SE = 0.04$, $p = .589$. There was also no significant main effect of trait self-objectification on SSO $b = 0.07$, $SE = 0.05$, $p = .170$.

Contrary to expectations, there was no significant effect of SSO on interaction authenticity, although the estimate of this effect was in the hypothesized negative direction, $b = $ -0.09, $SE = 0.11$, $p = .415$. Because authenticity was a composite score of 9 items, two of which were interaction specific authenticity items, we also tested the effect of SSO on these items individually. . . ADD ANALYSIS. . . Although we hypothesized that SSO would mediate the relationship between partner's other objectification and interaction authenticity, after finding no relationship bewteen SSO and authencity, we also tested if the partner's other objectification had a direct effect on authenticity, but this effect was not significant, $b = 0.05$, $SE = 0.11$, $p = .662$ (nor was the total effect of partner's other objectification on authenticity, $b = 0.02$, $SE = 0.1$, $p = .855$).

Lastly, althought there was no evidence that SSO was related to interaction authenticity in the current sample, we tested if interaction authenticity (composite of nine items) had effects on cognitive performace, career aspirations, and relationship agency, as it did in Garcia et al. (2016). We again used MLM and thus, these efefcts were tested in three separate models. There was no significant effect of interaction authenticity on cognitive performance, $b = 0.31$, $SE = 0.28$, $p = .262$, but authenticity was significantly positively related to both career aspirations, $b = 0.19$, $SE = 0.07$, $p = .009$, and relationships agency, $b = 0.23$, $SE = 0.12$, $p = .048$. There was no direct effect of SSO on cognitive performance, $b = 0.05$, $SE = 0.25$, $p = .846$, and no direct effect of partner's other objectificaiton on cognifitve performance, $b = 0.03$, $SE = 0.26$, $p = .900$. There was no direct effect of SSO on

career aspirations, $b = 0.03$, $SE = 0.06$, $p = .653$, and no direct effect of partner's other objectificaiton on career aspirations, $b = -0.05$, $SE = 0.06$, $p = .405$. There was no direct effect of SSO on relationship agency, $b = -0.04$, $SE = 0.11$, $p = .699$, and no direct effect of partner's other objectificaiton on relationship agency, $b = -0.07$, $SE = 0.1$, $p = .474$.

The results were similar for analyses conducted on Sample 1 and Sample 2 individually. See the online supplemental material for more detail on these analyses.

Discussion

As stated previously, we did not find a significant effect between actor SSO and actor authenticity ($\beta = -.10$, $p = .38$), which suggests that there is not sufficient evidence to support the claim that partner objectification is the cause for the diverse range of negative effects related to relationship inauthenticity. However, we did observe a significant partner effect of objectification on actor self-objectification, which does align with our hypothesis that theorized objectification from other women can also cause women to self-objectify just as they do within interactions between male-female pairs. The results of this study demonstrate the complex and ambivalent nature of female sexual objectification and additionally highlight the psychological and social consequences of such objectification processes on women's social relationships and well-being. The sample of the current study was comprised of Western women, being that sexual objectification is most prevalent in this culture (Loughnan et al., 2015), and research on objectification conducted outside of Western or Westernized countries is scarce (Moradi & Huang, 2008). Because "bodies exist within social and cultural contexts, and hence are also constructed through sociocultural practices and discourses" (Roberts & Fredrickson, 1997, p. 174), it is important to consider how diverse social identities within unique cultural contexts may inform sexual objectification phenomenon to test the cross-cultural applicability of theoretical frameworks (Loughnan et al., 2015). Further, sexualzing experiences and self-objectification are thought to begin a

very young age, and thus, researchers have only recently begun to examine such experiences among children (Bury, Tiggemann, & Slater, 2016; e.g., Holland & Haslam, 2016; Jongenelis, Byrne, & Pettigrew, 2014). Considering the fact that the average mean age of the investigated participants of this current study was 18.85 years, research among younger and older individuals is needed, especially because self-objectification may change over time (Roberts & Fredrickson, 1997). It may be valuable to question the extent to which children, adolescents, or emerging adults of different races or ethnicities are exposed to varied amounts of sexulizing content. Also, future experiments or longitudinal studies should explore the external validity of the notions of self-objectification and how the operalization of self-objectification may be improved. Regardless, the results from the current analysis highlight how subtle forms of sexist discrimination operate to inform prevention and intervention efforts in both clinical and educational contexts. These results are quite useful for promoting mental health and within early action programs for girls and young women, where scholars and practitioners might provide the tools necessary to circumvent or mitigate negative effects on self-objectification, and combat such experiences.

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Table 1

Correlations among study variables.

	M	SD	1	2	3	4	5
Actor's trait self objectification (TSO)	-0.35	2.64					
Actor's authenticity of interaction	5.23	1.02	-.02				
Actor's objectification of partner	-1.58	1.21	.20	-.07			
Actor's state self-objectification	1.92	1.13	.13	-.10	-.09		
Actor's future relationship agency	4.69	0.96	.04	.23+	.09	-.09	
Actor's cognitive performance	5.03	2.29	.08	.11	.11	.02	.07

Table 2

Descriptive Statistics for Study Variables

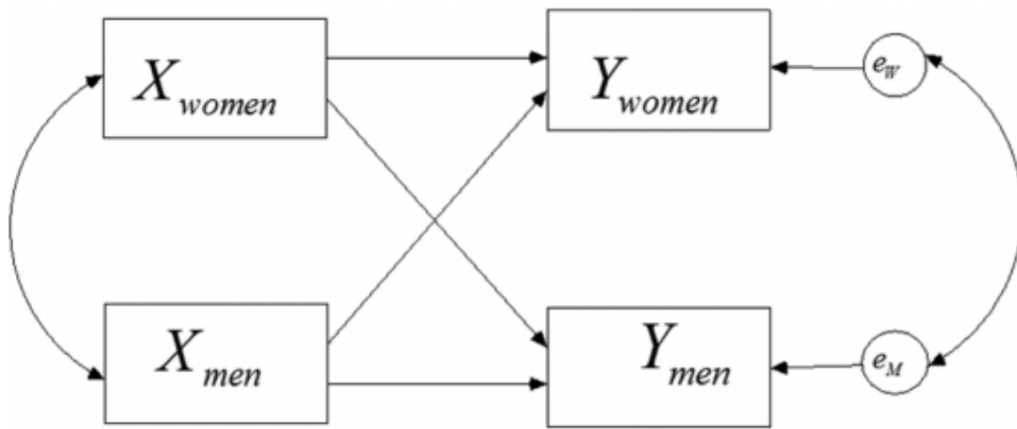|	M	SD
Actor's trait self objectification (TSO)	-0.35	2.64
Actor's authenticity of interaction	5.23	1.02
Actor's objectification of partner	-1.58	1.21
Actor's state self-objectification	1.92	1.13
Actor's future relationship agency	4.69	0.96
Actor's cognitive performance	5.03	2.29

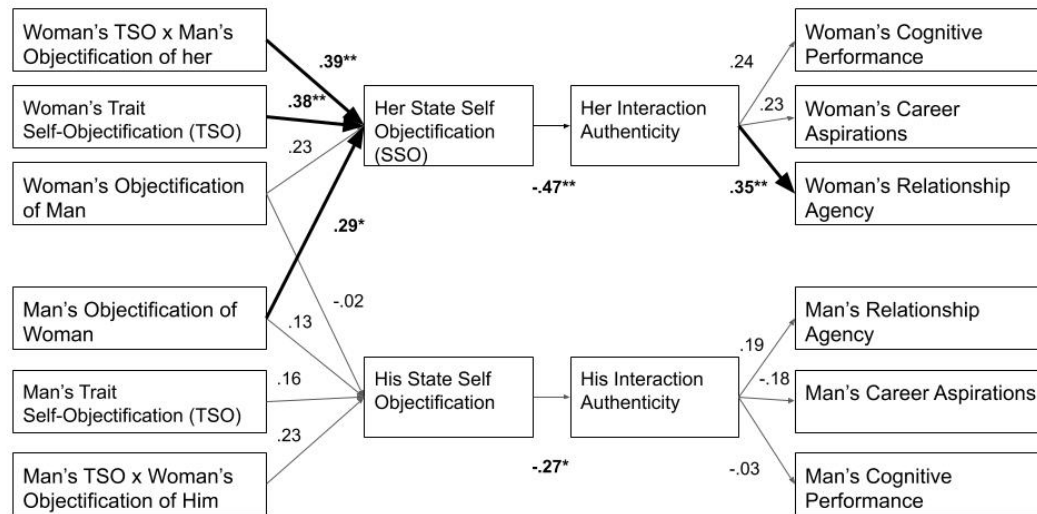*Figure 1*. Basic actor-partner interdependence model (APIM) depiction.

Figure 2. Path Analysis Model from Garcia et al. (2016) study with distinguishable dyads.
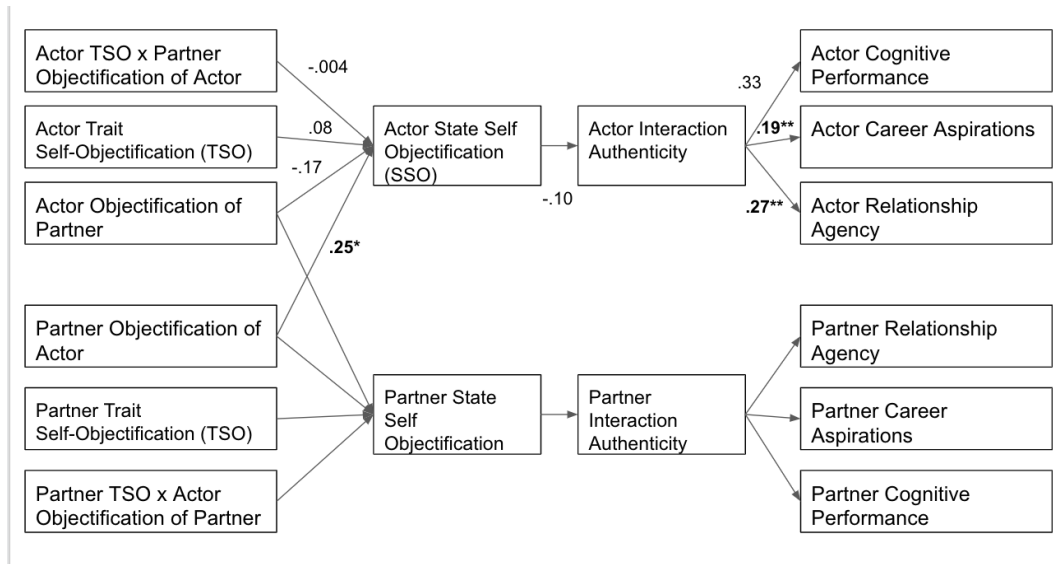
Figure 3. Path Analysis Model with Estimates