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Integrating Sexual Objectification With Object Versus Person Recognition: The Sexualized-Body-Inversion Hypothesis

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In the study reported here, we tested the novel sexualized-body-inversion hypothesis. Integrating research and theory on objectification and person versus object recognition, we examined whether sexualized women, but not sexualized men, are recognized in the same way as objects are. According to objectification theory (Fredrickson & Roberts, 1997), female bodies are scrutinized and evaluated to a greater degree than male bodies are, which leads to sexual objectification of women. Defined as viewing or treating an individual as a sexualized body, or as sexualized body parts, available for satisfying the needs and desires of other people (Bartky, 1990), sexual objectification has been recently operationalized by portraying the target wearing underwear or a swimsuit.

Sexual objectification is related to decreased mind attribution (Loughnan et al., 2010), diminished agency perception (Cikara, Eberhardt, & Fiske, 2010), and dehumanization (Vaes, Paladino, & Puvia, 2011). Moreover, Heflick and Goldenberg (2009) have shown that focusing on targets' appearance, rather than on their personality, could diminish the degree of human nature attributed to female targets but not to male targets (attribution of human nature is a critical dimension of social perception that allows people to differentiate humans from objects; Loughnan & Haslam, 2007). Furthermore, sexual objectification generally has more adverse consequences for females than for males (Gervais, Vescio, & Allen, 2011a; Moradi & Huang, 2008; Saguy, Quinn, Dovidio, & Pratto, 2010). However, the cognitive processes involved in the perception of sexualized women remain unclear. Drawing on objectification theory, we suggest that perceivers may view sexualized women as objects and sexualized men as persons at a basic cognitive level.

What is meant by "viewing sexualized women as objects"? The vast cognitive-psychology literature suggests that very different processes are involved in person recognition and object recognition. *Configural processing*, which depends on perceiving relations and configurations among the constitutive parts of a stimulus, is related to person recognition and is involved in both face and body-posture recognition (Maurer, Le Grand, & Mondloch, 2002). By contrast, *analytic processing*, which is involved in object recognition, does not take into account spatial relations among the stimulus parts. One major indicator of configural processing is the inversion effect, which refers to the finding that inverted stimuli are more difficult to recognize than upright ones (Yin, 1969). Because people are perceived configurally, the inversion effect occurs in person recognition and not in object recognition. Indeed, human stimuli (e.g., faces and body postures) are more difficult to recognize when inverted than when upright, whereas object recognition is not affected by inversion (e.g., Reed, Stone, Bozova, & Tanaka, 2003; Reed, Stone, Grubb, & McGoldrick, 2006).

We tested the sexualized-body-inversion hypothesis in the present study: If sexualized women are viewed as objects and sexualized men are viewed as persons, then sexualized female bodies will be recognized equally well when inverted as when upright (object-like recognition), whereas sexualized male bodies will be recognized better when upright than when inverted (person-like recognition).

Method

Seventy-eight university students (41 men, 37 women; mean age = 20.5 years, *SD* = 2.7 years) provided informed consent to participate in the study. We randomly presented 48 sexualized male and female photos to each participant. The stimulus set consisted of 24 photos of men and 24 of women, with 12 photos from each group inverted and 12 upright. In each photo, the target wore a swimsuit or underwear and had a neutral facial expres-

sion.[1] Following the protocol of Reed et al. (2006), we presented each picture for 250 ms, followed by a 1-s blank screen. After each presentation, participants were shown two pictures and asked to identify which one they saw immediately preceding the blank screen. The distractor images on each trial were left-right mirror images of the target picture (Reed et al., 2006). The percentage of correct identifications was calculated for female upright bodies, female inverted bodies, male upright bodies, and male inverted bodies.

Results and Discussion

We conducted a 2 (position: upright, inverted) × 2 (target gender: male, female) × 2 (participant gender: men, women) mixed-model analysis of variance. The predicted interaction between position and target gender emerged, $F(1, 75) = 15.07$, $p < .001$, $\eta_p^2 = .167$. Consistent with our hypothesis, our results showed that people recognized upright males ($M = .85$, $SD = .17$) better than inverted males ($M = .73$, $SD = .17$), $t(77) = 6.29$, $p < .001$, but this pattern did not emerge for females, $t(77) = 1.38$, $p = .17$ (see Fig. 1). Additionally, participants recognized inverted females ($M = .83$, $SD = .16$) better than inverted males ($M = .73$, $SD = .17$), $t(77) = 5.42$, $p < .001$. This effect was not found for upright males and females, $t(77) = 0.54$, $p = .59$. Neither the two-way nor the three-way interaction was significant (ps > .22).[2]

Consistent with our hypothesis, our findings showed that the inversion effect emerged only when participants saw sexualized males. This suggests that, at a basic cognitive level, sexualized men were perceived as persons, whereas sexualized women were perceived as objects. Future research should examine why people perceive sexualized women as objects. One may expect that object-like recognition of women could be explained by a lack of identification with sexualized women among female participants and by sexual attraction among male participants (Vaes et al., 2011).

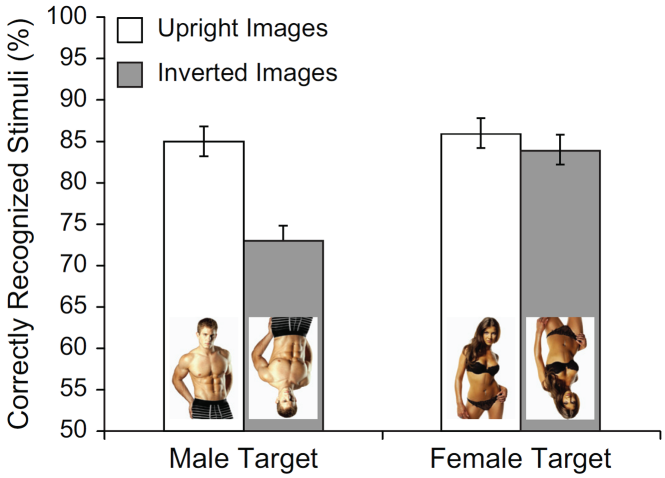

Figure 1. Percentage of correctly recognized stimuli as a function of target gender and target orientation. Error bars indicate ±1 *SEM*.

Future research should address whether this finding could generalize to nonsexualized bodies. Given that sexualization triggers a focus on the appearance rather than on the personality of the target (e.g., Vaes et al., 2011), one may expect that object-like recognition of women should be stronger for sexualized female bodies than for nonsexualized ones. However, in line with the results of previous research (e.g., Gervais, Vescio, & Allen, 2011b; Gervais, Vescio, Maass, Förster, & Suitner, 2012; see also Heflick, Goldenberg, Cooper, & Puvia, 2011), our findings showed no differences related to participant gender, which suggests that cultural beliefs that women are sex objects are shared by both men and women at a basic cognitive level.

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Additional supporting information and Supplemental Material is presented following the References.

Notes

1. Details about the selection of the photos are available in Pretest Details in the Supplemental Material.
2. Additional analyses are available in the Supplemental Material.

References

Bartky, S. L. (1990). *Femininity and domination: Studies in the phenomenology of oppression*. New York, NY: Routledge.

Cikara, M., Eberhardt, J. L., & Fiske, S. T. (2010). From agents to objects: Sexist attitudes and neural responses to sexualized targets. *Journal of Cognitive Neuroscience*, *23*, 540–551. doi:10.1162/jocn.2010.21497

Fredrickson, B. L., & Roberts, T.-A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, *21*, 173–206. doi:10.1111/j.1471-6402.1997.tb00108.x

Gervais, S. J., Vescio, T. K., & Allen, J. (2011a). When what you see is what you get: The consequences of the objectifying gaze for women and men. *Psychology of Women Quarterly*, *35*, 5–17. doi:10.1177/0361684310386121

Gervais, S. J., Vescio, T. K., & Allen, J. (2011b). When are people interchangeable sexual objects? The effect of gender and body type on sexual fungibility. *British Journal of Social Psychology*. Advance online publication. doi:10.1111/j.2044-8309.2010.02016.x

Gervais, S. J., Vescio, T. K., Maass, A., Forster, J., & Suitner, C. (2012). *When her whole = the sum of her parts: Seeing women as sexual objects*. Manuscript submitted for publication.

Heflick, N. A., & Goldenberg, J. L. (2009). Objectifying Sarah Palin: Evidence that objectification causes women to be perceived as less competent and less fully human. *Journal of Experimental Social Psychology*, *45*, 598–601. doi:10.1016/j.jesp.2009.02.008

Heflick, N. A., Goldenberg, J. L., Cooper, D. P., & Puvia, E. (2011). From women to objects: Appearance focus, target gender, and perceptions of warmth, morality and competence. *Journal of Experimental Social Psychology*, *47*, 572–581. doi:10.1016/j.jesp.2010.12.020

Loughnan, S., & Haslam, N. (2007). Animals and androids: Implicit associations between social categories and nonhumans. *Psychological Science*, *18*, 116–121. doi:10.1111/j.1467-9280.2007.01858.x

Loughnan, S., Haslam, N., Murnane, T., Vaes, J., Reynolds, C., & Suitner, C. (2010). Objectification leads to depersonalization: The denial of mind and moral concern to objectified others. *European Journal of Social Psychology*, *40*, 709–717. doi:10.1002/ejsp.75510.1002/ejsp.755

Maurer, D., Le Grand, R., & Mondloch, C. J. (2002). The many faces of configural processing. *Trends in Cognitive Sciences*, *6*, 255–260. doi:10.1016/S1364-6613(02)01903-4

Moradi, B., & Huang, Y.-P. (2008). Objectification theory and psychology of women: A decade of advances and future directions. *Psychology of Women Quarterly*, *32*, 377–398. doi:10.1111/j.1471-6402.2008.00452.x

Reed, C. L., Stone, V. E., Bozova, S., & Tanaka, J. (2003). The body-inversion effect. *Psychological Science*, *14*, 302–308. doi:10.1037/0096-1523.32.1.73

Reed, C. L., Stone, V. E., Grubb, J. D., & McGoldrick, J. E. (2006). Turning configural processing upside down: Part and whole body postures. *Journal of Experimental Psychology: Human Perception and Performance*, *32*, 73–87. doi:10.1037/0096-1523.32.1.73

Saguy, T., Quinn, D. M., Dovidio, J. F., & Pratto, F. (2010). Interacting like a body: Objectification can lead women to narrow their presence in social interactions. *Psychological Science*, *21*, 178–182. doi:10.1177/0956797609357751

Vaes, J., Paladino, M. P., & Puvia, E. (2011). Are sexualized females complete human beings? Why males and females dehumanize sexually objectified women. *European Journal of Social Psychology*, *41*, 774–785. doi:10.1002/ejsp.824

Yin, R. K. (1969). Looking at upside-down faces. *Journal of Experimental Psychology*, *81*, 141–145. doi:10.1037/h0027474

Additional analyses

We examined whether the inversion effect for sexualized male targets could be due to target gender differences in terms of attractiveness (cf. pretest). For each target gender, we created two groups in function of attractiveness (i.e., attractive vs. less attractive targets). Interestingly, results suggest that attractive male and female targets are recognized better than less attractive targets ($p < .01$ and $p < .05$, respectively). Because attractiveness is positively related to recognition accuracy and female targets were evaluated as more attractive than their male counterparts, one may expect that both upright and inverted female targets would have been recognized better than their male counterparts. Thus, given that this pattern did not emerge, target gender differences in terms of recognition did not seem to occur because female bodies were rated as more attractive than male bodies.

Pretest details

Sixty-five high-definition pictures (33 females) were selected from the internet and advertisements. All targets were young (around 25), clothed in suggestive underwear revealing large parts of their bodies (but not their breasts or genitals), they gazed at the camera (and hence the spectator) and displayed "open postures", signs that are consensually interpreted as conveying (sexual) intimacy (cf. Burgoon, 1991).

Original picture's background was replaced with a white background. Clothing colors were standardized in white, black and grey. The pictures size was standardized (500 × 750 pixels). Forty-eight pictures (24 males, 24 females) were selected for the experiment. Twenty-three participants (12 women; $M_{age} = 24.74$, $SD = 3.53$) rated how often they saw the targets (i.e., familiarity) on a 7-point scale (1-*Never*, 7-*Very often*). Participants rated that they never saw neither the male ($M = 1.06$, $SD = .18$), nor the female targets ($M = 1.27$, $SD = .55$). They also rated the targets' physical attractiveness (1-*Not at all*, 7-*Very*). We conducted a mixed-

model 2 (Target Gender [Female, Male]) × 2 (Participant Gender [Women, Men]) Analysis of Variance (ANOVA) for ratings of Physical attractiveness. An effect of Target Gender emerged ($F(1, 21) = 9.84$, $p = .005$, $\eta_p^2 = .319$): Participants rated sexualized females ($M = 3.70$, $SD = .31$) as more attractive than their male counterparts ($M = 3.04$, $SD = .27$). We did not find a main effect of Participant Gender ($F(1, 21) = .042$, $p = .84$, $\eta_p^2 = .002$), nor Participant Gender × Target Gender Interaction ($F(1, 21) = .44$, $p = .516$, $\eta_p^2 = .020$). In sum, sexualized female targets were rated as more attractive than sexualized male targets. However, men and women perceived sexualized female and male targets similarly.

Additional Reference

Burgoon, J.K. (1991). Relational message interpretations of touch, conversational distance, and posture. *Journal of Nonverbal Behavior*, *15*, 233-259. doi: 10.1007/BF00986924