

# Domination and Objectification: Men's Motivation for Dominance Over Women Affects Their Tendency to Sexually Objectify Women

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## Abstract

In the present research, we examined the association between heterosexual men's motivation for dominance over women and their sexual objectification of women. We found that men's social dominance orientation (SDO) correlated with their tendency to sexually objectify women (Study 1). Inducing threat to men's dominance over women by assigning men to work under the supervision of women bosses—versus jointly with women partners (Study 2a) or under men bosses (Study 3)—led to increased sexual objectification of women among high-SDO participants. These results persisted when controlling for mood. Examining the corresponding effects among heterosexual women revealed that the correlation between SDO and the sexual objectification of men was non-significant (Study 1) and that working under men bosses did not affect women's sexual objectification of men (Study 2b). These findings support feminist theorizing that men (re)assert their dominance over women by sexually objectifying them. Increased awareness of the motivations underlying women's sexual objectification can help professionals plan useful interventions to reduce this phenomenon, hopefully limiting its negative effects on women's well-being.

## Keywords

sexual objectification, gender, social dominance orientation, feminist theorizing, motivation for dominance, backlash

In line with the famous feminist saying that “the personal is political” (Hanisch, 1970), patriarchal arrangements (i.e., a social structure in which men are the dominant group) manifest both in the broad social level (e.g., men's overrepresentation in power centers such as governments; Catalyst, 2018) and in the interpersonal level (e.g., men's aggressive behavior is penalized less than identical behavior among women; Tinsley, Cheldelin, Schneider, & Amanatullah, 2009). A key characteristic of such arrangements is that women's bodies are objectified, namely used as a commodity to serve men's needs and pleasure (MacKinnon, 1987). Women's sexual objectification means that they are represented and judged by the sexual parts or functions of their body alone, while ignoring their personality and subjectivity (Bartky, 1990; Langton, 2009). According to feminist theorizing (Dworkin, 1974, 1981, 1985; S. Jeffreys, 2005; MacKinnon, 1987), the sexual objectification of women not only reflects the existing gender hierarchy (in which the subordinate group is at the dominant group's service) but also reinforces it by promoting the subjugation of women and derogation of their value.

This feminist argument is consistent with empirical social psychological research within the framework of social role theory (Eagly, 1987), which demonstrates how prescriptive gender stereotypes about women's role of the

“fairer sex,” and men's role of the “stronger sex,” lead men and women to behave in ways that perpetuate men's social dominance. It is also consistent with objectification theory (Fredrickson & Roberts, 1997), whose extensions demonstrate how the sexual objectification of women leads them to adopt a submissive role (e.g., justify the existing gender system; Calogero, 2013), and fosters male supremacy beliefs among men (Wright & Tokunaga, 2013). In the present research, we integrate this feminist theorizing, which views women's sexual objectification as a subtle form of oppression, with two bodies of social psychological literature—social dominance theory and backlash theory—to derive two hypotheses.

First, based on social dominance theory (Sidanius & Pratto, 1999)—according to which members of dominant groups who are high on social dominance orientation (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994) wish to reinforce the existing social hierarchy and behave in ways that

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promote this goal—we argue that men who are high on SDO are motivated to subordinate women. Because one strategy to satisfy this motivation is by objectifying women, we hypothesized that men's SDO would correlate with their tendency to sexually objectify women. We tested this hypothesis in Study 1.

Second, building on backlash theory (Rudman, Moss-Racusin, Glick, & Phelan, 2012), we argue that in situations that challenge the gender hierarchy, high-SDO men would use various strategies in an attempt to restore it. Because one strategy for putting women “back in place” is to sexually objectify them, we hypothesized that the tendency of high-SDO men to sexually objectify women would be heightened in the face of threat to their dominance over women. We tested this hypothesis in Studies 2 and 3.

Taken together, the present studies examined whether men who are dispositionally or situationally induced with the motivation for dominance would engage more in the sexual objectification of women. Notably, we also theorized that because of the asymmetrical power relations between the genders, men can assert dominance by sexually objectifying women, whereas women cannot assert dominance by sexually objectifying men. Thus, as we explain in greater detail below, in Study 1 and Study 2b, we examined heterosexual women's motivation for dominance and sexual objectification of men—but did not expect to find a link between them.

### *Sexual Objectification Reinforces the Existing Gender Hierarchy*

According to social role theory (Eagly, 1987; Eagly & Wood, 2012), prescriptive gender role stereotypes about how women and men “should” be reflect and rationalize the existing gender hierarchy (Koenig & Eagly, 2014) and guide individuals' behaviors (Wood & Eagly, 2015). Hence, in a society that objectifies women's bodies, women learn to assume the role of the fairer and weaker sex, which defines their value mostly by their physical appearance and encourages them to endorse a submissive role (Bartky, 1990; Wolf, 1991). At the same time, men learn to assume the role of the stronger sex and are consequently encouraged to endorse a forceful position toward women and treat them as instruments for their own use (Connell, 2005; Dworkin, 1981).

Findings of empirical research show that when women feel sexually objectified by men, they show more submissive behavior. In particular, when women learned that a man (vs. a woman) was looking at their bodies (vs. faces, or not looking at all) they “narrowed their presence” and spoke less when introducing themselves; men did not exhibit a corresponding narrowed presence when a woman was looking at their bodies (Saguy, Quinn, Dovidio, & Pratto, 2010, p. 181). Being sexually objectified also impaired women's cognitive performance in negatively stereotyped domains (e.g., math; Gervais, Vescio, & Allen, 2011) and reduced their willingness to act for changing the existing gender-

system (Calogero, 2013). It seems, thus, that the sexual objectification of women shapes their behavior in ways that perpetuate their inferior social status (O. Klein, Allen, Bernard, & Gervais, 2014).

Previous researchers (for a review, see Heflick & Goldenberg, 2014) have focused on the perception of sexually objectified targets (e.g., women wearing revealing clothes), demonstrating that such targets are attributed with object-like qualities to a higher degree than non-objectified targets. Participants associated sexualized women targets with lesser mental states and need for moral consideration (Holland & Haslam, 2013), perceived them as more responsible for being raped (Loughnan, Pina, Vasquez, & Puvia, 2013) and as less intelligent (Loughnan et al., 2010), agentic (Gray, Knobe, Sheskin, Bloom, & Barrett, 2011), and competent for leadership (Smith et al., 2018). These attributions directly relate to women's inferior social status. Moreover, exposure to sexually objectified women increased men's endorsement of beliefs that support men's superiority (Wright & Tokunaga, 2013), acceptance of sexual harassment behaviors (Aubrey, Hopper, & Mbure, 2011; Yao, Mahood, & Linz, 2010), and sexist and inappropriate behavior toward women (Rudman & Borgida, 1995). In sum, the sexual objectification of women implicitly reinforces the existing gender hierarchy by supporting men's dominance and encouraging beliefs and behaviors that put women in a subordinate place.

### *Motivations for Engagement in Sexual Objectification*

Surprisingly, few scholars have directly examined the motivations underlying men's engagement in the sexual objectification of women. The few existing studies point to three types of motivations. First, in line with evolutionary theorizing that women's sexual objectification by men reflects evolved mating strategies (Buss & Schmitt, 1993), findings from eye tracking research point to a sexual motivation. These studies reveal that heterosexual men sexually objectify highly attractive women targets (e.g., with lower hip-to-waist ratio; Singh, 1993) more than lowly attractive targets (Riemer et al., 2017) and that men direct more objectifying gazes at body parts that are informative for fertility, such as the waist-hip regions, than at other body parts (Hall, Hogue, & Guo, 2011).

Second, according to the terror management perspective (Greenberg, Pyszczynski, & Solomon, 1986), men's sexual attraction to women elicits existential concerns because women's reproductive bodily functions (such as menstruation, pregnancy, and lactation) increase the salience of human creatureliness and mortality. That men's tendency to sexually objectify women increases in response to mortality reminders (Morris & Goldenberg, 2015) suggests that men's sexual objectification of women, which dissociates women's bodies from their link to nature, serves as a defense mechanism against men's death anxiety—pointing to an existential motivation.

Finally, findings of research about the precarious nature of manhood (Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008) show that in response to masculinity threats (e.g., feedback according to which one possesses feminine traits), men attempt to revalidate their manhood. The finding that one way in which men respond to such threats is by sexualizing women (Dahl, Vescio, & Weaver, 2015) points to the motivation to reaffirm one's manhood.

However, no researchers to date have examined the role of the motivation for dominance in driving men's engagement in the sexual objectification of women. Our goal in the present research was to fill this gap in the literature. We relied on social dominance theory (Sidanius & Pratto, 1999) according to which individual differences in social dominance orientation (SDO; Pratto et al., 1994)—the preference for hierarchy (vs. equality) within any social system—predict the endorsement of hierarchy enhancing ideologies and practices. Individuals who are high on SDO adopt racist, nationalist, and sexist ideologies (Pratto et al., 1994) and behave in ways that reinforce the existing group-based hierarchy (e.g., discriminate against members of subordinate groups; Kteily, Sidanius, & Levin, 2011). Based on the reasoning that women's sexual objectification reinforces the existing gender hierarchy, we expected men's SDO to correlate with their tendency to sexually objectify women.

### *Dominance Motivation Can Be Disguised as Sexual Motivation*

Social psychological researchers have established the link between men's dominance motivation and sexual harassment behavior (Berdahl, 2007a), demonstrating that sexual harassment functions as a form of backlash—a negative social penalty against women who violate gender norms (Rudman, Moss-Racusin, Glick, & Phelan, 2012). For example, in both interpersonal and organizational contexts, sexual harassment was most prevalent against uppity women who showed assertiveness and independence, reflecting the harasser's desire to put these women “back in place” (Berdahl, 2007b). In addition, men's sexually harassing behaviors toward women increased under threats to the legitimacy of men's superior status (Maass, Cadinu, Guarnieri, & Grasselli, 2003). Finally, men high on the likelihood to sexually harass women exhibited more sexually harassing behavior (sending unwanted pornographic materials) toward women with egalitarian (vs. traditional) attitudes—reflecting an attempt to punish these women, who threaten men's dominance (Dall'Ara & Maass, 1999).

Broadly speaking, sexual harassment can be conceptualized as an extreme form of sexual objectification (see Szymanski, Moffitt, & Carr, 2011; but note that some researchers define sexual harassment as a spectrum of behaviors, including relatively subtle ones such as suggestive looks and gestures; Fitzgerald, Gelfand, & Drasgow, 1995). In line with this conceptualization, researchers studying harassers' motivations have focused on behaviors that reflect overt hostility and misogyny. We sought to examine

whether men's dominance motivation also influences subtler manifestations of sexual objectification. Testing subtle, mundane manifestations of sexual objectification is important because contemporary forms of prejudice and subjugation are often manifested in subtle, disguised forms that seem socially acceptable (Dovidio, Glick, & Rudman, 2005). As the sheer wish to dominate women may be deemed unacceptable in modern society, men may express this need in a disguised manner—through the sexual objectification of women, which can be enjoyable for some women (Liss, Erchull, & Ramsey, 2011).

This possibility is consistent with findings that members of dominant groups, especially individuals high on SDO, respond to threats to the existing hierarchy by attempting to defend and stabilize it. Yet these attempts often manifest in subtle, disguised forms that may appear benevolent at surface level. For example, in response to threats to the stability of existing social hierarchy, members of dominant groups—especially if high on SDO—provided more dependency-oriented than autonomy-oriented help to members of subordinate groups; that is, they tackled the difficulty for the recipients instead of providing them with tools for independent coping (Halabi, Dovidio, & Nadler, 2008). Dependency-oriented help can be conceptualized as a subtle way of dominance reassertion because it highlights the helpers' generosity and superior skills while leaving the recipients in an inferior, dependent position of indebtedness (van Leeuwen & Täuber, 2010). In the same vein, we theorized that high-SDO men would respond to situations that challenge the gender hierarchy by wishing to put women back in place, resulting in increased sexual objectifying of women.

### *Women's Sexual Objectification of Men*

We further theorized that whereas men can assert dominance by sexually objectifying women, women cannot assert dominance by sexually objectifying men. Because of the asymmetrical power relations between the genders, men's sexual objectification does not have a derogating effect, as opposed to women—whose sexual objectification activates their traditional role as sex objects (Kahalon, Shnabel, & Becker, 2018b) and reminds them of their (inferior) place in the gender hierarchy. Moreover, men's sexuality is associated with dominance and pride (e.g., Rudman, Fetterolf, & Sanchez, 2013; Zurbriggen, 2000, 2011) as opposed to women's sexuality—which is associated with submission (Kiefer, Sanchez, Kalinka, & Ybarra, 2006; Sanchez, Kiefer, & Ybarra, 2006) and considered a source of shame (e.g., V. Klein, Imhoff, Reinger, & Briken, 2018; Tolman & Tolman, 2009; Welles, 2005). Hence, men (unlike women) cannot be derogated by their sexual objectification. In line with this reasoning, men who are sexually objectified by women do not exhibit the negative responses, such as submissive behavior (Saguy et al., 2010) and impaired math performance (Gervais et al., 2011), observed among women who are sexually objectified by men.

Our theorizing is consistent with the sexual harassment literature (Berdahl, 2007a), according to which the power differential between the target and the harasser determines the extent to which the target of a given social-sexual behavior experiences it as harassing (i.e., threatening or derogating). Therefore, incidents involving similar (potentially harassing) behaviors are less likely to be experienced as derogating by men than by women. Indeed, compared to women, men reported fewer negative reactions (e.g., anxiety and loss of control; Berdahl, Magley, & Waldo, 1996; Cochran, Frazier, & Olson, 1997; Waldo, Berdahl, & Fitzgerald, 1998) and more positive reactions (e.g., fun, flattering; Berdahl et al., 1996) in response to unsolicited sexual advances. Thus, women are less likely to threaten men with sexual attention than the other way around (Berdahl, 2007a; but cf. Chan, Chow, Lam, & Cheung, 2008).

Moreover, due to the gender power asymmetry, high-SDO in women translates into substantially different behavioral patterns than high-SDO in men. High-SDO men wish to preserve and reinforce men's dominance over women and act in ways that promote this cause (e.g., oppose affirmative action for women; Fraser, Osborne, & Sibley, 2015). However, high-SDO women do not wish to reinforce women's dominance over men. Rather, they accept the existing arrangements and seek powerful men's protection and provision; securing a male protector would give them a perceived stake in the current hierarchy (Glick & Fiske, 2001).

Our theorizing does not imply that sexual objectification is one sided (i.e., that only men objectify women). Heterosexual women do sexually objectify men (Strelan & Hargreaves, 2005). We argue, however, that women's sexual objectification of men is not related to their motivation for dominance (e.g., see Waynforth, 2001, for an evolutionary account). Our theorizing also does not deny the possibility that situations in which men feel extremely objectified can carry harmful consequences for them. For example, men who tried on revealing Speedos were preoccupied with their physical appearance and consequently had higher body shame and worse math performance compared to men who tried on sweaters (Hebl, King, & Lin, 2004). However, these relatively rare situations do not have the power to challenge the existing gender arrangements: Given asymmetrical gender power relations, the male gaze toward women carries a substantially different meaning than the female gaze toward men (Calogero, Tantleff-Dunn, & Thompson, 2011). Hence, we did not expect to find a link between the motivation for dominance and sexual objectification among women.

### The Present Research

In the present research, we tested the following hypotheses:

**Hypothesis 1:** Men's dispositional motivation for dominance (i.e., SDO) would predict their tendency to sexually objectify women, whereas women's motivation for dominance would not predict their tendency to sexually objectify men.

**Hypothesis 2:** Among men high on SDO, threats to their dominance over a woman would increase the tendency to sexually objectify women. A corresponding threat to women's dominance over a man would not affect their tendency to sexually objectify men.

We tested these hypotheses in three studies using heterosexual participants. We focused on heterosexual persons because, although non-heterosexual men may be also motivated to reassure their dominance over women (for queer sexism, see Ward, 2000), the sexual objectification of women is not an appropriate means for them to achieve this goal (because the disguise of dominance motivation as sexual motivation is not convincing). In Study 1, we examined the correlations between men and women participants' dominance motivation and their self-reported tendency to sexually objectify women and men (respectively). To increase causal inference, in Study 2a, we used an experimental paradigm in which, after measuring their SDO, we assigned men participants to work on a dyadic task either as subordinates of a woman boss (in the threat-to-dominance condition) or jointly with a woman partner (in the control/no-threat condition). Their tendency to sexually objectify women was then assessed using both self-report and behavioral measures, to increase methodological diversity. Specifically, the measures of sexual objectification concerned both the objectification of women in general and of the participant's partner in particular. In Study 2b, we used a similar paradigm among women participants, who worked either as subordinates to a man boss or jointly with a man partner.<sup>1</sup>

Finally, to strengthen the conclusion that the engagement in women's sexual objectification is uniquely driven by a dominance threat posed by a woman, in Study 3, after measuring their SDO, we assigned men participants to work on a dyadic task as subordinates of either a woman or a man boss and then measured their sexual objectification of women. Together, these studies constitute a robust empirical test of the theorizing that men's motivation to assert dominance over women (at least partially) drives their engagement in the sexual objectification of women.

## Study 1

In Study 1, our goal was to examine the correlations between men and women participants' dominance motivation and their tendency to sexually objectify the other gender. We hypothesized that men's tendency to sexually objectify women would positively correlate with their dominance motivation, as measured by their SDO. We did not expect the corresponding correlation to occur among women.

## Method

### Participants

We recruited a convenience sample of 154 Israeli heterosexual volunteers via social media groups at a large Israeli

university and off campus to complete an online questionnaire. Using the G\*Power calculator (Faul, Erdfelder, Buchner, & Lang, 2009), we conducted an a priori power analysis (by choosing the statistical test “correlation: bivariate normal model” from the “exact” test family). We found that a sample size of 67 (for each gender) was sufficient for detecting medium effect sizes ( $\rho = .30$ ; Cohen, 1988) with a 5% significance level (one-sided) and power of 80%, and aimed to exceed the minimal sample size.

The sample included 80 women (52%;  $M_{\text{age}} = 24.06$  years,  $SD = 4.87$ , range = 18–35) and 74 men (48%;  $M_{\text{age}} = 26.22$  years,  $SD = 5.12$ , range = 18–35).<sup>2</sup> Of the full sample of women, 41 (51%) were students and the rest employed in various occupations (e.g., salesperson, lawyer); of the full sample of men, 28 (38%) were students and the rest employed in various occupations (e.g., engineer, banker). The sample was demographically diverse in terms of marital status: 76 (49%) single, 49 (32%) in a relationship, 28 (18%) married, and 1 (1%) other. The majority of participants reported Hebrew as their native language, 123 (80%); the rest reported Russian, 27 (18%), or Other, 4 (2%). None of the participants failed the instructional manipulation check (Oppenheimer, Meyvis, & Davidenko, 2009), which we used to examine whether participants read the items to which they were responding.

### Procedure and Measures

We invited participants to take part in an online survey, presented as dealing with attitudes regarding various social issues. Materials for all studies were in Hebrew. Materials translated to English and data files for all studies can be accessed through the Open Science Framework (osf.io/agx3f). Participants completed a short demographic questionnaire and the following measures:<sup>3</sup>

**Sexual objectification of other gender.** We adjusted this questionnaire to include 19 instead of 41 items (to avoid participants’ fatigue) from Curran’s (2004) measures of Men’s Objectification of Women and Women’s Objectification of Men. The 19 items that we selected captured diverse objectification-related attitudes such as the belief that the objectification of the other gender is natural and entertaining, internalized sexual objectification, commenting and flirting with attractive women/men, and crudeness toward unattractive women/men. This shortened version for men was translated and successfully used in previous research among Israeli participants (Bareket, Kahalon, Shnabel, & Glick, 2018; Bareket, Shnabel, Abeles, Gervais, & Yuval-Greenberg, 2018). The version for women was translated by the authors for the purpose of this research. In the case of discrepancies, we decided together which translation was most accurate. The measure was then back-translated into English by a bilingual researcher of social psychology. Comparisons were made between the original and back-translated versions, and where discrepancies existed, the authors

worked with the bilingual researcher to resolve them. Items were identical in both versions, except for the target of objectification, for example, “The first thing I notice about a woman/man is her/his body,” “I often imagine what women/men I meet on a daily basis would look like naked.” Participants reported their agreement with the items using a 5-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*). We averaged the items such that higher scores indicated a stronger tendency to sexually objectify the other gender,  $\alpha_{\text{women}} = .75$ ,  $\alpha_{\text{men}} = .78$ .

Previous researchers reported obtaining good internal consistencies ( $\alpha = .88$  in an Israeli student sample; Bareket, Shnabel, et al., 2018;  $\alpha = .82$  in an Israeli convenience sample; Bareket, Kahalon, et al., 2018;  $\alpha = .80$  in a U.S. MTurk sample; and  $\alpha = .78$  in a German student sample; Kahalon et al., 2019) and test-retest reliability ( $r = .88$ ; Curran, 2004) for scores on this questionnaire. The scale’s positive correlations with objectifying gazing behavior provide evidence for predictive validity (Bareket, Shnabel, et al., 2018). Positive correlations with hostile and benevolent sexism, endorsement of sexual double standards, and polarized perceptions of women’s sexuality (i.e., the madonna-whore dichotomy; Bareket, Kahalon, et al., 2018) provide evidence for convergent validity. Low correlations with sexual harassment measures provide evidence for discriminant validity (Curran, 2004).

**Social dominance orientation.** Using a 1 (*strongly disagree*) to 7 (*strongly agree*) scale, participants completed a shortened, 6-item Hebrew version of the SDO scale (Pratto et al., 1994; translated by Levin & Sidanius, 1999), for example, “It’s probably a good thing that certain groups are at the top and other groups are at the bottom”; “No one group should dominate in society” (reverse-scored). We averaged the items such that higher scores indicated stronger SDO,  $\alpha = .77$ .

Previous researchers reported obtaining good internal consistencies for scores on the SDO scale (e.g.,  $\alpha = .72$ –.84 in Israeli undergraduate students samples, using an 8-item version; Levin & Sidanius, 1999). There is extensive empirical support (Pratto et al., 1994) for both the predictive validity of scores on the SDO scale, which correlate with various attitudinal measures (e.g., sexism), and the discriminant validity of this scale from other attitudinal measures (e.g., conservatism) and standard personality variables (e.g., interpersonal dominance).

### Results and Discussion

Missing values were as follows: sexual objectification of other gender (0 participants; 0%) and social dominance orientation (12 participants, 8%). Little’s (1988) Missing Completely at Random (MCAR) test statistic indicated that missing data were randomly distributed,  $\chi^2(1) = 0.02$ ,  $p = .897$  (Graham, 2009; Schafer & Graham, 2002).

In line with Hypothesis 1, men’s tendency to sexually objectify women ( $M = 2.71$ ,  $SD = 0.46$ ) significantly

correlated with their SDO ( $M = 3.37$ ,  $SD = 1.23$ ),  $r(69) = .34$ ,  $p = .004$ , 95% CI [.11, .53]. By contrast, women's tendency to sexually objectify men ( $M = 2.52$ ,  $SD = 0.45$ ) did not significantly correlate with their SDO ( $M = 2.82$ ,  $SD = 1.19$ ),  $r(73) = .07$ ,  $p = .559$ , 95% CI [−.16, .30]. We used Fisher's  $r$ -to- $z$  transformation to test for gender differences in this correlation. As expected, the correlation between SDO and sexual objectification of other gender was significantly larger for men than it was for women,  $z = 1.66$ ,  $p = .048$ . These results are fully consistent with our theorizing.

## Study 2a

In Study 2a, we aimed to strengthen the causal inference about the link between men's dominance motivation and their sexual objectification of women by using an experimental design. We tested the prediction that men who are high on SDO would respond to threats to their dominance over women by showing increased engagement in women's sexual objectification. We led men participants to believe that they were going to work in a dyad with a woman partner via a computer-based task. After completing a measure of their SDO and a questionnaire that ostensibly assessed certain leadership traits, participants received bogus feedback that constituted the experimental manipulation: In the threat-to-dominance condition, we assigned participants to work as subordinates to their (fictitious) woman partner, allegedly based on the participant's lower scores on the leadership questionnaire relative to his partner. Thus, we manipulated the relative position of the participant compared to his partner, implying that she had better leadership skills than him. We further told participants that their woman partner would be the boss and direct the work process, whereas they would have no control over the way the work is performed, evaluated, and rewarded.

In the control/no-threat condition, we told participants that they would perform the same task as their woman partner, with whom they would work in cooperation. This design allowed to isolate the effect on men's engagement in sexual objectification that stems from a threat to their dominance relative to a woman, from the potential effect on this outcome due to merely having an interaction with a woman—which may arouse a sexually-based motivation to engage in sexual objectification (for a similar experimental design, which compared hierarchical vs. equality-based dyads, see Schaerer, du Plessis, Yap, & Thau, 2018).

After the assignment to one of the two experimental conditions, and before measuring our outcome variable (women's sexual objectification), we measured participants' mood—to rule it out as an alternative explanation. Being subordinate to others could cause negative affect (Berdahl & Martorana, 2006), and engagement in women's sexual objectification may serve as a means for emotion regulation (because it could be enjoyable or distracting). Consistent with this possibility, Dahl and colleagues (2015) reported that the

experience of anger following a masculinity threat increased men's sexualization of women (so perhaps women's sexualization served as a means to distract from this negative emotional experience). Yet, in line with our theorizing that women's sexual objectification functions to reassert men's dominance (rather than merely regulate their mood), we expected the predicted effect on objectification of threat to high-SDO participants' dominance over women to persist even when controlling for mood.

Finally, we measured participants' sexual objectification of women. Because women's sexual objectification manifests in many ways (e.g., the endorsement of objectifying attitudes vs. the enactment of an objectifying gaze; Bareket, Shnabel, et al., 2018), we aimed to capture this multifaceted construct by using diverse measures (e.g., referring specifically to the objectification of the partner vs. to women in general; referring to attitudes toward objectification vs. actual gazing behavior). Thus, besides the explicit, self-report measure that we used in Study 1, we used three implicit behavioral measures of sexual objectification (specified in the Method section). Including such measures is important because explicit self-reports are influenced by social desirability concerns, especially when referring to socially sensitive issues (Dovidio & Fazio, 1992)—such as women's sexual objectification. Moreover, people have limited introspective awareness and often exhibit behaviors that function without their full awareness or control (Greenwald & Banaji, 1995).

We expected men in the threat-to-dominance condition to exhibit a greater tendency to sexually objectify women than men in the control condition. Yet, consistent with research on subtle ways of dominance reassertion (e.g., Halabi et al., 2008), we expected this effect to be particularly pronounced, or even to occur only among men high on SDO, who are motivated to maintain the existing gender hierarchy. This prediction is consistent with findings that backlash responses against women were exacerbated and sometimes observed only among participants high on SDO (Fowers & Fowers, 2010; Maass et al., 2003). We further expected the predicted Condition  $\times$  SDO interaction to persist when controlling for participants' mood.

## Method

### Participants

Using online ads, we recruited 117 heterosexual men undergraduates of a large Israeli university to take part in a psychological study in exchange for 20 NIS (about US\$5). While actual sample size was determined by feasibility considerations (number of participants who could be recruited over the course of one academic year), it is noteworthy that a post hoc power analysis using the G\*Power calculator (choosing “linear multiple regression: fixed model,  $R^2$  increase” from the “ $F$  tests” family) revealed that given the design of the study, its obtained sample size, and a 5% significance level

(one-sided), we had adequate statistical power (90%) to detect small-to-medium effect sizes ( $f^2 = .09$ ).

We excluded five participants from analysis: one for failing a manipulation check (he did not identify correctly his assigned role in the dyadic task) and four outliers with extreme responses (studentized residuals  $> 3$ ; see McClelland, 2002).<sup>4</sup> This left 112 participants,  $M_{\text{age}} = 26.20$ ,  $SD = 3.12$ , range = 18–35 years old. The sample was demographically diverse in terms of marital status: 60 (54%) single, 43 (38%) in a relationship, and 9 (8%) married. The majority of participants reported Hebrew as their native language, 108 (96%); the rest reported Russian, 4 (4%).

### Procedure and Materials

We invited participants to the lab to take part in a study that (ostensibly) examined decision making and work roles within organizations. Participants came to the lab in a prescheduled time. A woman research assistant (RA) told them that they were going to work in a dyad via a computer based-task with another participant who is currently in a nearby lab. The RA then led them to a private cubical where they completed the study (all the study's materials were computerized). To bolster the cover story, the RA pretended to call another lab to verify that the other participant is ready to start working on the joint task. The study took about 20 minutes to complete, and it consisted of three parts.

The first part included a shortened measure of SDO<sup>5</sup> ( $\alpha = .71$ ,  $M = 3.12$ ,  $SD = 1.08$ ) and the experimental manipulation. The manipulation was based on the hierarchical role manipulation that is used in the social power (e.g., Anderson & Berdahl, 2002; Galinsky, Gruenfeld, & Magee, 2003) and gender relations (e.g., Rudman, Moss-Racusin, Phelan, & Nauts, 2012) literatures, with two adjustments. First, the manipulation typically used in the social power literature compares between two hierarchical conditions: one in which participants have less power than their partner and one in which participants have more power than their partner. In Study 2a, however, we compared between a hierarchical condition in which participants had less power than their partner and an equality-based condition in which participants had the same power as their partner (see Inesi, Gruenfeld, & Galinsky, 2012; Kunstman, Fitzpatrick, & Smith, 2017; Schaerer et al., 2018). Second, experiments in the gender relations literature typically manipulate the partner's level of agency (high vs. low), whereas we manipulated the partner's relative position compared to the participant, without providing information about the partner's absolute level of agency (e.g., participants did not know whether their partner was assigned to be the "boss" because she was especially high on leadership or because they were especially low on it).

As part of the manipulation, participants assigned to the threat-to-dominance condition completed a questionnaire (adapted from Williams, Gruenfeld, & Guillory, 2017), in which they had to indicate whether they have ever held a

leadership position, briefly describe their leadership experience, and rate themselves across several traits (e.g., meek, dependent). The purpose of this questionnaire was to lead participants to believe that we assessed their aptitude for a leadership role and that the subsequent assignment to roles of boss and subordinate is based on this assessment. Participants in the control condition completed a questionnaire in which they had to indicate whether they had ever worked in a team, briefly describe their teamwork experience, and rate themselves across several traits (e.g., messy, perky).

Next, participants completed the second part of the study, in which we informed them that they would be randomly partnered with another participant to perform an upcoming dyadic computer-based task. In the threat-to-dominance condition, we further told participants that the task requires an assignment to hierarchical roles of boss and subordinate and that role assignment would be determined by the relative scores of the participant and his partner on the leadership questionnaire. In reality, we assigned all participants to the subordinate role, and they learned that their women partner would be their boss. Disguised among filler questions about the partner's name and age, we included a manipulation check to verify that participants correctly identified their partner's role and gender (all participants learned that their partner was a woman). Then, participants read the task's instructions (adapted from Galinsky et al., 2003; full protocols are available at [osf.io/agx3f](http://osf.io/agx3f)), which stated that the boss would direct the work process and evaluate their work and that this evaluation would determine how much bonus money they would receive at the end of the task. In the control condition, we told participants that the task required cooperative teamwork with another participant. After verifying that they correctly identified their partner's role and gender (as in the threat condition, all participants had a woman partner), participants read the task's instructions which stated that both the participant and his partner would direct the work process together and receive an equal amount of bonus money at the end of the task.

Then, participants in both conditions filled out a 5-item adapted version of the Positive and Negative Affect Schedule (PANAS; Thompson, 2007), rating the extent to which they felt various emotions (e.g., irritated) on a scale from 1 (*not at all*) to 5 (*very much*). We reversed the items that denote negative emotions and averaged all items such that higher scores indicated a more positive mood,  $\alpha = .68$ ,  $M = 3.75$ ,  $SD = 0.62$ . As a manipulation check, participants indicated the extent to which they felt strong, influential, and agentic. We averaged these 3 items such that lower scores indicated less power,  $\alpha = .82$ ,  $M = 3.54$ ,  $SD = 0.80$ .

Next, we measured participants' sexual objectification of women using four different measures. In the first measure (developed by Dahl et al., 2015), we assessed participants' tendency to sexually objectify their woman partner in the joint task, by asking them to choose an avatar to represent their woman partner, ostensibly in order to aid

communication throughout the dyadic task. The avatars of choice were all of the same women figure yet with different clothing that varied in terms of skin exposure: from 0 (*least exposure*, e.g., a sweater) through 5 (*extreme exposure*, e.g., a bikini top). Choosing an avatar with a more revealing outfit indicated a higher level of sexual objectification (we refer to this measure as Objectifying Avatar).

Afterward, while the computer supposedly synchronized the connection between them and their woman partner, we directed participants to a part of the study that was allegedly unrelated to the other parts. In this part of the study, we told participants that they were going to perform a task and to complete a questionnaire in preparation for the dyadic task (see Galinsky et al., 2003, for a similar cover story). We emphasized to participants that this part of the study would be done independently (with no relation to their partner in the dyadic task). Actually, this part included the other three measures of sexual objectification that assessed a general tendency to sexually objectify women. The first part involved a photograph-ranking task—which served as an implicit behavioral measure of sexual objectification. Adapted from Forbes and Schmader's (2010) "math motivation task," participants' task was to determine, for a series pairs of photographs, which is more beautiful. For this purpose, they first rated their preference of photography topics, from 1 (*prefer not to rank at all*) to 8 (*most want to rank*), out of a list that included landscapes, food, historical events, art pieces, animals, furniture, cars, and—most importantly for our purposes—magazine photographs of women's bodies in swimsuits. A higher preference for rating the women-in-swimsuits photography topic indicated a greater tendency to sexually objectify women (we refer to this measure as the Objectifying Task Preference).

Next, participants actually ranked the photographs. The eight photography topics appeared in a random order (unrelated to participants' preferences); for each topic, there was one pair of photographs. We sampled all photographs from Internet advertisements and standardized them for image size. The percentage of time that participants devoted to looking at and ranking the photographs of women's bodies in swimsuits out of the total amount of time they spent on the photograph-ranking task served as an additional behavioral measure of sexual objectification (we refer to this measure as Engagement in Objectification). Since the target photographs included only the bodies (but not the faces) of women in swimsuits, this measure is similar to the behavioral measure of objectification that is used in eye tracking research (e.g., Bareket, Shnabel, et al., 2018), in which researchers assess men's sexually objectifying gaze as the amount of time they devote to the visual inspection of women's bodies.

Finally, participants completed the Men's Sexual Objectification of Women measure (see Study 1; Curran, 2004), using a 7-point scale,  $\alpha = .85$  (we refer to this measure as Explicit Objectification). Upon completion of this measure, we told participants that the dyadic task (supposedly the third

part of the study) was canceled due to synchronization problems and that both of them (the participant and his woman partner) would get the payment for the experiment as planned, as well as half of the bonus amount, for an additional 5 NIS (about US\$1). Participants then completed a short demographic questionnaire. Finally, they responded to an open-ended question, included to probe for suspicion, in which we encouraged them to write their comments about the experiment. None of the participants expressed strong suspicions about the study's purpose or about whether their partner existed. Upon completion, we thanked and debriefed the participants.

## Results

### Manipulation Checks

All participants, except one who was excluded from analysis (see Participants section), correctly identified the role to which we assigned them, as well as their partner's gender. An independent samples *t*-test revealed that, as intended, participants tended to feel weaker in the threat-to-dominance condition ( $M = 3.40$ ,  $SD = .088$ ) than in the control condition ( $M = 3.66$ ,  $SD = 0.71$ ),  $t(110) = 1.72$ ,  $p = .088$ ,  $d = .32$ .

### Sexual Objectification of Women

The descriptive statistics for the four sexual objectification outcome variables were as follows: objectifying avatar ( $M = 2.08$ ,  $SD = 1.56$ ), objectifying task preference ( $M = 4.82$ ,  $SD = 2.27$ ), engagement in objectification ( $M = .14$ ,  $SD = .05$ ), and explicit objectification ( $M = 3.37$ ,  $SD = 0.87$ ). The three behavioral measures of sexual objectification positively correlated with the explicit, self-reported measure (whose construct validity was established in previous research, e.g., Bareket, Kahalon, et al., 2018; Bareket, Shnabel, et al., 2018),  $r_s = .21-.42$ ,  $p_s < .03$ . This indicates that these behavioral measures (two of them developed for the purpose of this study and used here for the first time) tapped into the construct they were supposed to measure.

To test Hypothesis 2, we conducted four hierarchical multiple regression analyses, one for each outcome variable. The predictors were SDO (standardized), condition (dummy coded), and their two-way interaction. We included SDO and condition as predictors in the first block and added the interaction in the second block. These regression models are presented in Table 1, and the two-way interactions, which we interpreted using Preacher, Curran, and Bauer's (2006) online calculator, are illustrated in Figure 1. To enhance the interpretability of the figure, we standardized all outcome variables before analyses.

*Objectifying avatar.* One participant had a missing value for this measure due to a technical problem (the avatars' pictures



**Table 1.** Regression Analyses Results on Sexual Objectification of Women Outcome Variables (Study 2a).

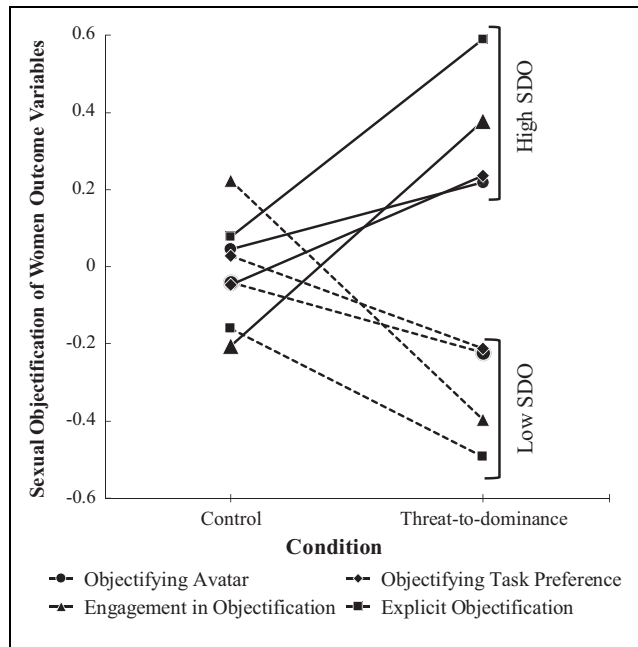
Predictors	B	SE	$\beta$	t	p	LLCI	ULCI
<b>Objectifying avatar</b>							
Constant	0.002	0.13		0.02	.986	-0.26	0.26
Condition	-0.01	0.19	-.002	-0.02	.981	-0.38	0.37
SDO	0.04	0.12	.04	0.36	.717	-0.19	0.28
Condition $\times$ SDO	0.18	0.20	.11	0.90	.373	-0.22	0.57
<b>Objectifying task preference</b>							
Constant	-0.01	0.13		-0.07	.942	-0.27	0.25
Condition	0.02	0.19	.01	0.11	.914	-0.36	0.40
SDO	-0.04	0.12	-.04	-0.31	.755	-0.27	0.20
Condition $\times$ SDO	0.26	0.20	.16	1.31	.192	-0.13	0.66
<b>Engagement in objectification</b>							
Constant	0.01	0.13		0.07	.944	-0.24	0.26
Condition	-0.02	0.18	-.01	-0.10	.923	-0.38	0.35
SDO	-0.22	0.12	-.22	-1.87	.065	-0.44	0.01
Condition $\times$ SDO	0.60	0.19	.36	3.13	.002	0.22	0.98
<b>Explicit objectification</b>							
Constant	-0.04	0.12		-0.34	.735	-0.29	0.20
Condition	0.09	0.18	.05	0.50	.617	-0.27	0.45
SDO	0.12	0.11	.12	1.05	.295	-0.11	0.34
Condition $\times$ SDO	0.42	0.19	.25	2.24	.027	0.05	0.80

Note.  $N = 112$  men participants. Due to space saving considerations, for the four hierarchical multiple regression analyses, only the effects of block 2 are reported.  $R^2$  change values were as follows: for objectifying avatar,  $\Delta R^2_{\text{first block}} = .01$ ,  $\Delta R^2_{\text{second block}} = .01$ ; for objectifying task preference,  $\Delta R^2_{\text{first block}} = .003$ ,  $\Delta R^2_{\text{second block}} = .02$ ; for engagement in objectification,  $\Delta R^2_{\text{first block}} = .0001$ ,  $\Delta R^2_{\text{second block}} = .08$ ; for explicit objectification,  $\Delta R^2_{\text{first block}} = .08$ ,  $\Delta R^2_{\text{second block}} = .04$ . Condition was dummy-coded (control = 0 and threat-to-dominance = 1). SDO (social dominance orientation) and sexual objectification outcomes scores were standardized. SE = standard error; CI = confidence interval; LL = lower level of CI; UL = upper level of CI.

failed to load). Unexpectedly, and as seen in Table 1, the predicted Condition  $\times$  SDO interaction was not significant.

**Objectifying task preference.** Unexpectedly, and as seen in Table 1, the predicted Condition  $\times$  SDO interaction was not significant.

**Engagement in objectification.** As seen in Table 1, the predicted Condition  $\times$  SDO interaction was significant.<sup>6</sup> As expected, participants relatively high on SDO (+1SD above the mean) spent a significantly higher percentage of their time looking at and ranking the photographs of women's bodies in swimsuits (relative to looking at and ranking the other types of photographs) in the threat-to-dominance compared to the control condition, *simple slope* = 0.58 (0.28),  $t = 2.19$ ,  $p = .031$ . Unexpectedly, participants relatively low on SDO (-1SD below the mean) spent a significantly lower percentage of their time on looking at and ranking the photographs of women's bodies in swimsuits in the threat-to-



**Figure 1.** The effects of condition on four sexual objectification of women outcome variables among participants high on SDO (social dominance orientation; +1SD) versus low on SDO (-1SD).  $N = 112$  men participants.

dominance compared to the control condition, *simple slope* = -0.62 (0.27),  $t = -2.33$ ,  $p = .022$ .

**Explicit objectification.** As seen in Table 1, the predicted Condition  $\times$  SDO interaction was significant. As expected, participants relatively high on SDO endorsed more objectifying attitudes toward women in the threat-to-dominance compared to the control condition, *simple slope* = 0.51 (0.26),  $t = 1.96$ ,  $p = .053$  (the effect becomes significant for participants whose  $Z_{\text{SDO}} > 1.04$ ). By contrast, participants relatively low on SDO showed similar endorsement of explicitly objectifying attitudes in the threat-to-dominance and control conditions, *simple slope* = -0.33 (0.26),  $t = -1.27$ ,  $p = .207$ .

### Additional Analyses

Conducting the four regression analyses while controlling for participants' mood (using mood as a covariate) did not change our statistical conclusions. Specifically, a hierarchical regression model in which we entered mood (standardized), SDO (standardized), and condition (dummy coded) as predictors in the first block, and the Condition  $\times$  SDO interaction in the second block, yielded a significant interaction effect for engagement in objectification,  $\beta = .38$ ,  $t(107) = 3.23$ ,  $p = .002$ , and explicit objectification,  $\beta = .27$ ,  $t(107) = 2.39$ ,  $p = .019$ , but not for objectifying avatar or objectifying task preference,  $ps > .259$ . In all four regression models, the effect of mood was non-significant ( $ps > .268$ ).

## Discussion

The results of Study 2a partially supported Hypothesis 2. Specifically, under a threat to their dominance over women, namely, when we assigned them to be subordinated to a woman boss (vs. work with a woman teammate), men who were high on SDO endorsed more explicitly objectifying attitudes (e.g., the belief that commenting on women's bodies is natural) and spent more time engaging in an objectifying task of looking at and ranking photographs of sexually objectified women targets (women's bodies in swimsuits). Inconsistent with our predictions, however, the threat to men's dominance over women did not have a significant effect on high-SDO participants' choice of a sexually objectifying avatar (i.e., a figure with more revealing clothes) and preference to engage in an objectifying task (i.e., preference to rank photographs of women's bodies in swimsuits as compared to other photography topics).

In hindsight, we suspect that these unexpected results stemmed from limitations of these two particular measures. The Objectifying Avatar measure, in which we presented participants with avatars wearing clothing with varying degrees of coverage, was developed in the United States (by Dahl et al., 2015). Yet the same clothes convey different signals in different cultures (Argyle, 2013). Hence, Dahl and colleagues' (2015) measure might have been unsuited to measure objectification among Israeli participants, whose culture has a substantially different dress code than American participants (e.g., due to the warm climate or a general preference for informal clothing; Almog, 2015).

As for the Objectifying Task Preference measure, which we developed and used in Study 2a for the first time: We suspect that participants' preferences might have been influenced by other factors (e.g., being hungry might have affected the preference for ranking photographs of food) that obscured the effect of the experimental manipulation. Due to these retrospective insights, in the next studies (Studies 2b and 3), we refrained from further using these measures. Notably, as seen in Figure 1, even though it reached significance in only two of them, the general pattern of results was consistent across all four measures.

As for Engagement in Objectification, although the results for this measure were in line with predictions, a limitation of this measure is that it included only a single pair of photographs (to avoid respondents' fatigue). Current recommendations, however, are to include multiple stimuli (Judd, Westfall, & Kenny, 2012). Nevertheless, we used it as is in the subsequent studies for the sake of consistency. That the Engagement in Objectification measure was moderately correlated with the Explicit Objectification measure strengthened our confidence in its construct validity.

Besides the predicted increase in engagement in objectification among high-SDO participants in the threat-to-dominance condition, there was an unexpected trend in the opposite direction among low-SDO participants, who showed

lower levels of objectification in the threat versus control condition. Specifically, participants low on SDO spent significantly less time on looking at and ranking the photographs of women's bodies in swimsuits (compared to the time spent on the other photographs) when subordinated to a woman boss (vs. working with a woman teammate). A similar trend, albeit not significant, can be observed for the other measures of objectification. This trend is consistent with previous findings that individuals who are low on SDO sometimes actively reject culturally available ideologies and practices whose function is to reinforce the existing hierarchy (rather than simply adopt these hierarchy-enhancing ideologies and practices to a lesser extent than high-SDO individuals). For example, low-SDO individuals sometimes engage in collective action in solidarity with subordinate group members to promote group-based equality (Saeri, Iyer, & Louis, 2015). Possibly, because individuals with lower SDO are motivated to promote equality (Levin, Sidanius, Rabinowitz, & Federico, 1998), they perceived the situation of being subordinated to a woman boss in a positive light, namely as implying a warranted change in the existing social hierarchy rather than as a threat. Their response may have reflected their increased efforts to further advance this change by reducing their engagement in sexually objectifying women. This explanation is conceptually consistent with findings that men who were low on sexism provided less dependency-oriented help to women than to men—thus exhibiting an opposite behavioral pattern, rather than the same pattern yet weaker—than men who were high on sexism (Shnabel, Bar-Anan, Kende, Bareket, & Lazar, 2016). Apparently, men who support gender equality actively reject the dominant behaviors prescribed by patriarchal ideology and are motivated to behave in ways that defy patriarchal arrangements.

Overall, Study 2a provides preliminary evidence that a threat to men's dominance over women may increase the tendency to sexually objectify women among men who support social hierarchy. As such, it complements Study 1, which focused on the link between men's dispositional dominance motivation and tendency to sexually objectify women, by examining the effect on objectification of situationally induced dominance motivation. Besides its contribution to internal validity (by strengthening causal inference), the manipulation that we used in Study 2a extends the generalizability of our conclusions by examining actual behavior in a realistic setting that simulates a real-life interaction. Moreover, the effect of a threat to men's dominance over women on objectification among high-SDO men persisted even when controlling for mood, allowing to rule out mood regulation as an alternative explanation. This finding supports our theorizing that (some) men may attempt to reassert their dominance through sexually objectifying women.

The main findings of Study 2a are consistent with backlash theory (for a review, see Rudman, Moss-Racusin, Glick, & Phelan, 2012), as they demonstrate that the sexual objectification of women functions as a backlash response to

situations that challenge the gender hierarchy. Admittedly, our operationalization was slightly different than the operationalization typically used in backlash research. Backlash researchers (e.g., Rudman, Moss-Racusin, Phelan, & Nauts, 2012) conceptualize backlash as the negative reactions (i.e., social and economic penalties) directed toward women who behave counter-stereotypically (e.g., women who exhibit high agency and thus violate proscriptive norms about how women should not act). In the present research, we conceptualized backlash as the negative reactions to a change in the traditional power relations between men and women (see Faludi, 1992). Despite this slight difference in approaches, backlash researchers (Rudman, Moss-Racusin, Glick, & Phelan, 2012) do identify the preservation of social hierarchies as a primary motive for backlash—in line with the conceptualization and operationalization we used in the present study. The fact that the threat-to-dominance-over-women effect on sexual objectification occurred only among men high on SDO is also consistent with backlash theory, which predicts greater backlash among people who more strongly endorse the gender status quo (Rudman, Moss-Racusin, Phelan, & Nauts, 2012).

### Study 2b

In Study 2b, we tested whether high-SDO women would respond to being subordinated to a man boss by sexually objectifying men. Based on Study 1's finding that women's SDO was not associated with their tendency to sexually objectify men, we did not expect to find the effect obtained on Study 2a. We reasoned that a direct test of this null hypothesis would be valuable—because if an effect corresponding to that found in Study 2a would have been found, it would undermine our theoretical account. Using a similar procedure to that used in Study 2a, the participants of Study 2b were women, whom we led to believe that they were going to work in a dyad with a man partner. After completing a measure of their SDO and a bogus personality questionnaire that ostensibly assesses leadership traits, we assigned them to work either as subordinates to or as teammates with their man partner. Then, we measured their sexual objectification of men using the Engagement in Objectification measure. As explained above, we refrained from using the problematic Objectifying Avatar and Objectifying Task Preference measures again. We also refrained from using the Explicit Objectification measure because we were concerned that its blatant nature would impair the reliability of our cover story—which was especially important because the study was conducted online rather than in the lab (see below).

## Method

### Participants

Using online ads, we recruited 129 heterosexual women undergraduates of a large Israeli university to take part in a psychological study in exchange for 20 NIS (about US\$5).

We aimed for a sample of about the same size as in Study 2a. Two outliers with extreme responses (studentized residuals > 3) were excluded (McClelland, 2002).<sup>7</sup> This left 127 participants,  $M_{\text{age}} = 23.85$ ,  $SD = 2.96$ , range = 19–36 years old. The sample was demographically diverse in terms of marital status: 67 (53%) single, 42 (33%) in a relationship, and 18 (14%) married. The majority of participants reported Hebrew as their native language, 119 (94%); the rest reported Arabic, 5 (4%); Russian, 2 (1%); or Other, 1 (1%).

### Procedure and Measures

The procedure was identical to that of Study 2a, except for the following changes: (a) To minimize social desirability effect, participants conducted the experiment from their home (without a face-to-face interaction with an experimenter) in a pre-scheduled time. A couple of minutes prior to the time in which the experiment was scheduled to begin, the experimenter called the participant to verify that she and the other (fictitious) participant were online and ready to begin (the real purpose of this call was to increase the reliability of the cover story, according to which they should work with a partner); (b) the partner's gender in the dyadic task was a man; and (c) the dependent variable was (only) engagement in objectification—namely the percentage of time that the participant devoted to looking at and ranking photographs of men's bodies in swimsuits, out of the total amount of time they spent on the photograph-ranking task. Upon completion, we encouraged participants to write their comments about the experiment in an open-ended question (none of the participants expressed strong suspicions) and then thanked and debriefed them.

## Results

### Manipulation Checks

All participants correctly identified the role to which we assigned them, as well as their partner's gender. As for the manipulation check ( $\alpha = .84$ ), an independent samples *t*-test revealed that, as intended, participants felt weaker in the threat ( $M = 2.96$ ,  $SD = 0.94$ ) compared to the control condition ( $M = 3.41$ ,  $SD = 0.84$ ),  $t(125) = 2.87$ ,  $p = .005$ ,  $d = .51$ .

### Engagement in Objectification

We conducted a hierarchical multiple regression analysis with Engagement in Objectification ( $M = .14$ ,  $SD = 0.05$ ) as the outcome variable (standardized). The predictors were SDO (standardized;  $\alpha = .70$ ,  $M = 3.01$ ,  $SD = 0.97$ ), condition (dummy coded), and their two-way interaction. We entered SDO and condition in the first block and added the two-way interaction in the second block. The effects of condition and SDO were non-significant,  $\beta_s < .04$ ,  $p_s > .752$ . Most importantly, the Condition  $\times$  SDO two-way interaction was non-significant,  $\beta = -.06$ ,  $t(123) = -0.52$ ,  $p = .602$ .

In line with recommendations to quantify the evidence in favor of the null hypothesis using Bayesian hypothesis testing (Kruschke, 2015; Wagenmakers et al., 2018), we performed Bayesian linear regression using the JASP statistical software. Bayesian analyses provide a Bayes factor (BF) that denotes the weight of evidence provided by the data for competing hypotheses. As such, BFs can indicate how strongly the data support either the null hypothesis ( $BF_{01}$ ; representing the absence of a significant effect) or the alternative hypothesis ( $BF_{10}$ ; representing the presence of a significant effect). BF scores can be computed for both the null and the alternative hypothesis.  $BF_{01}$  scores smaller than 1, between 1 and 3, and higher than 3 designate no evidence, anecdotal evidence, and substantial evidence in favor of the null hypothesis (H. Jeffreys, 1961; see also Wagenmakers et al., 2018). In the Bayesian linear regression, we compared the null model, which included the two main effects of condition and SDO, to a model with the two main effects (condition, SDO) and the Condition  $\times$  SDO two-way interaction. The Bayes factor  $BF_{01}$  was 2.58 (i.e.,  $BF_{10} = 1/2.58 = 0.39$ ), providing anecdotal evidence that the data were more than 2.58 times more likely to have been observed under the null hypothesis than under the hypothesis that the threat did increase high-SDO women's tendency to sexually objectify men.

### Additional Analysis

We conducted a multiple regression analysis in which we entered SDO, condition, and participants' mood ( $\alpha = .73$ ,  $M = 3.52$ ,  $SD = 0.67$ ) in the first block and the Condition  $\times$  SDO interaction in the second block; the interaction remained non-significant,  $\beta = -.07$ ,  $t(122) = -0.55$ ,  $p = .586$ . The effect of mood on engagement in objectification was non-significant,  $p = .250$ .

## Discussion

In Study 2b, we did not find evidence that women participants, regardless of their SDO level, sexually objectify men when subordinated to a man boss. This finding is consistent with our theorizing that dominance motivations in women would not translate into sexually objectifying men because this is not an effective means for women to gain power. We acknowledge, however, that an alternative explanation for the lack of effect among women is that women—even if high in SDO—are unlikely to experience working as subordinates to a man boss as threatening, as it is perceived to reflect “the natural” social order (Newport & Wilke, 2013). Therefore, they do not experience a need “to do something about it,” whereas men—especially if high in SDO—may experience working as subordinates to a woman boss as threatening and consequently feel a need to “do something” to restore the natural order of things. Thus, even though women in the experimental condition felt weaker than women in the control condition (as indicated by the manipulation check), perhaps

this weakness was experienced as natural rather than threatening. Either way, the two possibilities are the result of the gender hierarchy and are consistent with our general claim regarding the asymmetrical role of women's and men's sexual objectification in maintaining this hierarchy.

## Study 3

The goal of Study 3 was to bolster the conclusion derived from Study 2a, according to which high-SDO men's heightened engagement in women's sexual objectification is driven by a threat to their dominance over women. An alternative explanation would be that men who are high on SDO are threatened simply by being subordinated to a boss, regardless of his or her gender, because it means that they are currently at the bottom of a given social hierarchy. In addition, although working in equality-based teams has been used in the literature as a control condition to test the effects of being subordinated to a boss, we acknowledge that these conditions may differ in additional dimensions besides the one of interest. First, participants completed a questionnaire about leadership in the experimental condition and about teamwork in the control condition—which possibly activated different parts of their self-concept. Moreover, participants assigned to work under a boss (vs. as teammates) possibly experienced lower levels of control, competence, or self-esteem. To conceptually replicate the effect observed in Study 2a while ruling out these alternative explanations, we used a two-cell experimental design in which, after completing a measure of their SDO and a bogus leadership assessment questionnaire, men participants were randomly assigned to work as subordinates to either a woman or a man boss. We assessed the dependent variable, women's sexual objectification, as the relative amount of time participants spent on looking at and ranking photographs of women's bodies in swimsuits (relative to other photography topics). We expected that high (but not low) SDO men would exhibit a heightened tendency to sexually objectify women when subordinate to a woman, as compared to a man boss.

## Method

### Participants

Using online ads, we recruited 138 heterosexual men undergraduates of a large Israeli university to take part in a psychological study in exchange for 20 NIS (about US\$5). We conducted an a priori power analysis using the G\*Power calculator (using the statistical test of “linear multiple regression: fixed model,  $R^2$  increase” from the “ $F$  tests” family) which revealed that a sample size of 90 was sufficient for detecting small-to-medium effect sizes (based on the effect size obtained in Study 2a;  $f^2 = .09$ ) with a 5% significance level (one-sided) and power of 80%. We aimed to exceed the minimal sample size. After the exclusion of three outliers (studentized residuals  $> 3$ ),<sup>8</sup> the sample included 135

**Table 2.** Regression Analysis Results on Engagement in Objectification (Study 3).

Predictors	B	SE	$\beta$	t	p	LLCI	ULCI
Constant	-0.07	0.12		-0.62	.538	-0.31	0.16
Boss' gender	0.11	0.17	.06	0.66	.511	-0.23	0.45
SDO	-0.19	0.12	-.19	-1.52	.130	-0.43	0.06
Boss' gender $\times$ SDO	0.39	0.17	.28	2.27	.025	0.05	0.73

Note.  $N = 135$  men participants. The effects of block 2 of a hierarchical multiple regression analysis is reported,  $\Delta R^2_{\text{first block}} = .003$ ,  $\Delta R^2_{\text{second block}} = .04$ . Boss' gender was dummy-coded (man = 0 and woman = 1). SDO (social dominance orientation) and engagement in objectification scores were standardized. SE = standard error; CI = confidence interval; LL = lower level of CI; UL = upper level of CI.

participants,  $M_{\text{age}} = 26.04$ ,  $SD = 3.50$ , range = 18–37 years old. The sample was demographically diverse in terms of marital status: 68 (50%) single, 48 (36%) in a relationship, 18 (13%) married, and 1 (1%) divorced. The majority of participants reported Hebrew as their native language, 131 (97%); the rest reported Russian or Other, 4 (3%).

### Procedure

The study was similar to Study 2b, with two modifications: (a) All participants were assigned to the subordinate role in the dyadic task and (b) we manipulated the partner's gender (the boss in the dyadic task) to be either a man or a woman. Similar to Studies 2a and 2b, none of the participants expressed strong suspicion about the study's purpose or whether their partner existed.

### Results

#### Manipulation Check

All participants correctly identified the role to which they had been assigned as well as their boss' gender. As intended, an independent samples  $t$ -test revealed that participants' sense of power ( $\alpha = .76$ ) was similar across the two experimental conditions,  $t(133) = 0.03$ ,  $p = .978$  ( $M = 3.04$ ,  $SD = 0.87$ , and  $M = 3.04$ ,  $SD = 0.96$ , in the woman and man boss conditions).

#### Engagement in Objectification

We conducted a hierarchical multiple regression analysis with engagement in objectification ( $M = .16$ ,  $SD = 0.06$ ) as the outcome variable. The predictors were SDO (standardized;  $\alpha = .70$ ,  $M = 3.52$ ,  $SD = 1.01$ ), boss' gender (dummy coded), and their interaction. We entered SDO and boss' gender in the first block and their two-way interaction in the second block. The regression model is presented in Table 2, and the two-way interaction is illustrated in Figure 2. The predicted Boss' Gender  $\times$  SDO interaction was significant. As expected, participants who were relatively high on SDO



**Figure 2.** The effects of boss' gender on engagement in objectification among participants high on social dominance orientation (SDO; +1SD) versus low on SDO (-1SD).  $N = 135$  men participants.

(+1SD) spent a significantly higher percentage of their time looking at and ranking the photographs of women's bodies in swimsuits in the woman boss, compared to the man boss condition, *simple slope* = 0.50 (0.24),  $t = 2.07$ ,  $p = .040$ . By contrast, participants who were relatively low on SDO (-1SD) spent similar percentage of their time looking at and ranking the photographs of women's bodies in swimsuits in both conditions, *simple slope* = -0.28 (0.24),  $t = -1.15$ ,  $p = .254$ .

#### Additional Analysis

When conducting a multiple regression analysis in which we entered SDO, boss' gender, and participants' mood ( $\alpha = .71$ ,  $M = 3.38$ ,  $SD = 0.70$ ) in the first block and the Boss' Gender  $\times$  SDO interaction in the second block, the interaction remained significant,  $\beta = .26$ ,  $t(130) = 2.12$ ,  $p = .036$ . The effect of mood on engagement in objectification was non-significant,  $p = .118$ .

### Discussion

Further supporting Hypothesis 2, in Study 3 we found that, even though there was no difference in participants' sense of power in the two experimental conditions, high-SDO men engaged more in sexually objectifying women when subordinated to a woman as compared to a man boss. This finding strengthens our conclusion that the effect of dominance threat on men's sexual objectification of women occurs only when the source of this threat are women (who thus pose a threat to the gender hierarchy). Put differently, sexually objectifying women does not reflect a general strategy to cope with situations in which one is put in a subordinate role.

Study 3 extended Study 2a—in which we examined reactions to women who either or not threatened men's dominance (similar to studies that demonstrated backlash against dominant women, e.g., Dall'Ara & Maass, 1999)—by comparing reactions to dominance threats posed by both women and men. Our results are consistent with findings that women (but not men) leaders give rise to defensive responses—because they threaten what is perceived to be the natural social order, in which women are in a subordinate position (Hoover, Hack, Garcia, Goodfriend, & Habashi, 2018; Netchaeva, Kouchaki, & Sheppard, 2015; Rudman, Moss-Racusin, Phelan, & Nauts, 2012; see also Newport & Wilke, 2013, for the finding that the majority of people in a U.S. sample reported preferring to work under a man over a woman boss).

As illustrated in Figure 2, compared to low-SDO men, men high on SDO seemed to engage less in sexually objectifying women when subordinated to a man boss. Possibly, high-SDO men are especially sensitive to hierarchy-related cues, and hence—besides their increased efforts to restore their perceived natural hierarchy in response to situations that disrupt it (such as when having a woman boss)—they show heightened compliance with the existing hierarchy (by showing more submissive behavior) when it is in place. This possibility is consistent with Kasumovic and Kuznekoff (2015) findings that, within men-dominated video gaming environments, lower-skilled men players showed hostile and aggressive behavior toward women teammates who outperformed them but behaved submissively toward men teammates who outperformed them (for male submissive behavior in the presence of more dominant males among non-human primates, see de Waal, 2007).

### Additional Analysis: Aggregating Studies 2a and 3

To provide a more high-powered test of Hypothesis 2 (see Lakens & Etz, 2017; Schimmack, 2012) and gain more precise estimates of the effect on objectification of threat to men's dominance over women, we conducted an additional analysis in which we combined Studies 2a and 3 into a single study with a three-cell design. In one condition (comprised of the experimental, threat-to-dominance-over-women conditions in Studies 2a and 3), we assigned men participants to work under a woman boss; in a second condition (comprised of the control condition in Study 2a), we assigned men participants to work jointly with a woman partner; and in a third condition (comprised of the control condition in Study 3), we assigned men participants to work under a man boss.

We conducted a hierarchical multiple regression analysis ( $N = 247$ ) with engagement in objectification ( $M = .15$ ,  $SD = 0.06$ ) as the outcome variable. The predictors in the first block were SDO (standardized;  $M = 3.34$ ,  $SD = 1.06$ ) and the experimental condition (dummy coded into two contrasts, such that the threat-to-dominance-over-women was the reference category). We entered the contrasts' two-way

interactions with SDO in the second block. The results of this analysis were consistent with the results of Studies 2a and 3. The effects of the two contrasts were non-significant,  $\beta_s < |.19|$ ,  $p_s > .231$ . The effect of SDO was significant,  $\beta = .29$ ,  $t(241) = 3.14$ ,  $p = .002$ , such that higher SDO predicted higher sexual objectification. Both two-way interactions were significant,  $\Delta R^2 = .06$ . Consistent with the results of Study 2a, the Threat-to-Dominance-Over-Women versus Teammate-With-Women  $\times$  SDO interaction was significant,  $\beta = |.26|$ ,  $t(241) = |3.18|$ ,  $p = .002$ , such that high-SDO participants spent a significantly higher percentage of their time looking at and ranking the photographs of women's bodies in the woman-boss compared to the woman-teammate condition, *simple slope* =  $|0.66|$  (0.23),  $t = |2.92|$ ,  $p = .004$ . Low-SDO participants showed similar levels of sexual objectification in both conditions, *simple slope* =  $|0.28|$  (0.21),  $t = |1.36|$ ,  $p = .174$ . Consistent with the results of Study 3, the Threat-to-Dominance-Over-Women versus Threat-to-Dominance-Over-Men  $\times$  SDO interaction was significant,  $\beta = |.25|$ ,  $t(241) = |3.24|$ ,  $p = .001$ , such that high-SDO participants spent a significantly higher percentage of their time looking at and ranking the photographs of women's bodies in the woman-boss compared to man-boss condition, *simple slope* =  $|0.46|$  (0.21),  $t = |2.22|$ ,  $p = .028$ . Low-SDO participants showed significantly less objectification in the woman-boss compared to the man-boss condition, *simple slope* =  $|0.56|$  (0.23),  $t = |2.49|$ ,  $p = .013$ . The results of this analysis should be interpreted cautiously because data for Study 2a and Study 3 were collected in different times (see Campbell, 1957, for history threat to internal validity); nevertheless, they provide further support for our theorizing.

### General Discussion

In the present research, consisting of three studies, we demonstrated that heterosexual men's engagement in the sexual objectification of women is to some extent driven by their need for dominance. Providing support for Hypothesis 1, in Study 1, we found that men's, but not women's, social dominance orientation (SDO) correlated with their self-reported tendency to sexually objectify the other gender. In Study 2a, we found partial support for Hypothesis 2, such that a threat to men's dominance over women, posed by assigning participants to work as subordinate to a woman boss (vs. working as teammate with a woman partner), increased high-SDO men's tendency to sexually objectify women, as assessed using both self-reported and one behavioral measure (but admittedly, not by two additional behavioral measures). By contrast, in Study 2b, we found that women did not sexually objectify men when subordinated to a man boss, regardless of their SDO level. Further establishing the causal role of threat to men's dominance, in Study 3, we found that high-SDO men's higher tendency to sexually objectify women occurred when subordinated to a woman boss, but not when

subordinated to a man boss. In both Studies 2a and 3, we ruled out mood as an alternative explanation.

Theoretically, our research contributes to the growing integration between seminal feminist theorizing on the one hand and current social psychological ideas and quantitative empirical research on the other hand. According to feminist theorizing, because men are the dominant group in patriarchal societies, women are objectified and men are their objectifiers (MacKinnon, 1987). Consistent with this argument, social psychological researchers have demonstrated that when people are put in a dominant position, they engage more in the objectification of social targets, namely view other people as a means to end (Gruenfeld, Inesi, Magee, & Galinsky, 2008). Moreover, in line with feminist argument that women's sexual objectification not only reflects but also reinforces the gender hierarchy (Dworkin, 1985), social psychological researchers have shown that when sexually objectified, women passively accept the existing gender arrangements—as “objects don't object” (Calogero, 2013, p. 312). Finally, feminist theorizing argues that men's engagement in women's sexual objectification serves as a subtle means to put them in place and hence increases in response to threats to men's dominance (Wolf, 1991). We provided direct empirical support for this claim in the present research.

In the present research, we also extended previous findings on backlash and sexual harassment against dominant women (e.g., Infanger, Rudman, & Sczesny, 2014; McLaughlin, Uggen, & Blackstone, 2012; for a meta-analysis, see Williams & Tiedens, 2016). Previous researchers have demonstrated that women's sexual harassment reflects a hostile reaction to “deviant” women, which is driven by dominance motivations (e.g., Maass et al., 2003). The sexually harassing behaviors examined by these researchers can be conceptualized as extreme forms of sexual objectification (see Szymanski et al., 2011). Our findings extend this previous research by showing that even very subtle and mundane forms of sexual objectification (e.g., looking at pictures of women's bodies in swimsuits), which are not overtly hostile or oppressive and do not constitute sexual harassment by any means, are (partially) stemming from men's motivation to maintain patriarchy.

Indeed, women's sexual objectification provides men with a socially acceptable means to reassert dominance. The subtle nature of this behavior is exacerbated by the fact that some men sincerely think that they are complimenting women by sexually objectifying them (Quinn, 2002), and some women enjoy sexually objectifying behaviors directed toward them by men (Kahalon, Shnabel, & Becker, 2018a; Liss et al., 2011). Nevertheless, there is ample evidence for negative consequences, such as impaired math performance (Gervais et al., 2011) and “narrowed presence” (Saguy et al., 2010, p. 179), for women who are objectified by men (for a review, see Kahalon et al., 2018b). While in the present research, we focused on the motivations underlying men's engagement in sexually objectifying behaviors toward women, but not on women's reactions to such behaviors, raising awareness to the

existence, underlying motivations and consequences of subtle objectifying behaviors is important. Ultimately, such awareness could increase peoples' engagement in collective action to promote gender equality (see Becker & Swim, 2011, 2012).

### *Limitations and Future Directions*

A limitation of the present research is that our conclusions rest on statistically reliable yet weak relations between the variables in question. Although they were remarkably consistent with our theorizing, as well as across studies, the obtained effects were relatively small. We attribute this to the fact that women's sexual objectification is a multifaceted phenomenon, which reflects diverse rather than a single motivation. For example, besides the motivation for dominance, it stems from sexual drives, as evident by findings from eye tracking studies that women targets judged as highly attractive are sexually objectified more than targets judged as less attractive (Riemer et al., 2017). That women's sexual objectification can be potentially driven by several motivations makes it a good concealment for (potentially socially unacceptable) dominance motivation—yet it also makes it more challenging to isolate the effect of this particular motivation.

In addition, despite our attempt to use implicit measures of sexual objectification, participants' responses might have still been affected by social desirability concerns (for socially desirable responding of men perpetrators of sexual coercion, see Freeman, Schumacher, & Coffey, 2015; Visschers, Jaspert, & Vervaeke, 2017). Thus, the frequency of sexually objectifying behaviors in reality might be higher than observed in controlled studies, in which participants employ impression management strategies (Paulhus & Reid, 1991)—which might lead to an underestimation of the effect sizes. Given these limitations and intervening factors, that consistent patterns did emerge across various measures and contexts is noteworthy.

Another limitation is that, although the threat-to-dominance manipulation that we used in the present research simulated a real-life setting (Rudman, Moss-Racusin, Phelan, & Nauts, 2012), the situation was still somewhat artificial (e.g., because participants knew that they take part in a study). Future research may benefit from examining our hypotheses in real-life settings using field studies. For example, it may be interesting to examine whether in environments that support patriarchy, such as the military (Enloe, 1983), high-SDO men would respond to threats to men's dominance (e.g., having women commanders; Sasson-Levy, 2003), by greater engagement in women's sexual objectification (e.g., hanging sexually objectifying posters in their barracks) or even harassment (e.g., sharing explicit photos of women soldiers without their consent and advocating sexual comments toward the women in the photographs; Lucero, 2018).

Also, whereas the manipulation that we used in the present research tested an organizational context, future research may benefit from examining women's sexual objectification

within romantic relationships—which is associated with reduced relationship quality (Strelan & Pagoudis, 2018). Previously, researchers found that, in heterosexual couples, the experience of threat to one's relationship dominance led to more aggressive responses toward one's partner among men, but not among women (Overall, Hammond, McNulty, & Finkel, 2016). It may be interesting to test whether dominance threats additionally lead men, especially if high on SDO, to sexually objectify their romantic partner (e.g., put her down by commenting on her body; Puhl & Brownell, 2006).

Another remaining question, which can be tested in future research, is whether men actually feel more dominant after sexually objectifying women. In other words, while in the present research we demonstrated that men sexually objectify women in an attempt to (re)gain dominance, we still do not know whether this strategy is actually effective. Previous findings that exposure to images of sexually objectified women increases beliefs that support men's dominance (e.g., that women should be used as a reward for accumulating social status; Wright & Tokunaga, 2013) suggest that the answer may be positive.

Finally, in the present research, we demonstrated the lack of association between heterosexual women's SDO and their tendency to sexually objectify men. An intriguing direction for future research would be to test whether women's motivation for dominance is associated with the objectification of other women. Indeed, some women habitually objectify other women (Lindner, Tantleff-Dunn, & Jentsch, 2012; Strelan & Hargreaves, 2005). Researchers suggested that this behavior stems either from evolutionary pressures (e.g., as it can guide the decision of whether to engage in competition over a potential mate; Sugiyama, 2005) or from sociocultural factors that emphasize women's role as "the fairer sex" (Fredrickson & Roberts, 1997) and thus encourage appearance-based social comparisons (Lindner et al., 2012; Tiggemann & McGill, 2004; Tylka & Sabik, 2010). A third, additional motivation could be reinforcing the existing gender hierarchy. This possibility is consistent with theorizing that gender inequality is maintained through cooperation between men and women (Jackman, 1994), who actively enforce the existing arrangements (e.g., by endorsing sexist ideologies; Glick & Fiske, 2001). An additional question that may be interesting to test in future research is whether women can actually gain dominance through sexually objectifying themselves, as women's sexuality may be viewed as a source of social influence (Watkins, Smith, & Aquino, 2013), and there is evidence for a backlash response against self-sexualizing women (because they are perceived as too dominant; Infanger et al., 2014).

### *Practice Implications*

Our findings could be of potential use for policy makers to develop useful interventions to reduce sexism. Specifically, they suggest that beyond explicit attitudes and behaviors, policy makers should also target subtler manifestations of

sexism such as the sexual objectification of women—for example, by teaching about the negative implications for women of receiving objectifying gazes (Saguy et al., 2010) and comments, even if complimentary, about their bodies (Kahalon et al., 2018a). These interventions can be informed by existing strategies to reduce other forms of sexism, which aim to increase sensitivity for sexism in everyday lives (Becker & Swim, 2011), educate about the harm and prevalence of sexist beliefs (Becker & Swim, 2012), and raise awareness to the existence of more elusive and unconscious sexist behaviors (Shields, Zawadzki, & Johnson, 2011; see also Navarro-Pérez, Carbonell, & Oliver, 2019).

In line with the common saying that "knowledge is power," gaining insights about the motivations underlying their sexual objectification by men may empower women. Researchers found that knowledge about gender issues (e.g., learning about how gender stereotypes contribute to bias against women; Shields et al., 2011; Zawadzki, Shields, Danube, & Swim, 2014) is associated with women's greater feelings of self-efficacy (Zawadzki, Danube, & Shields, 2012), willingness to engage in actions to reduce gender bias (Moss-Racusin et al., 2016), and incorporation of policies and practices to reduce gender bias in their own institutions (Shields, McCormick, Diccio, & Zawadzki, 2018).

The practical implications of the present research are not confined to women. They are also relevant for men because subjugating others comes with a cost. Men's sexual objectification of women predicts their experience of heightened anxiety and hostility (Johnson, McCreary, & Mills, 2007), dissatisfaction with their bodies (Lavine, Sweeney, & Wagner, 1999), mental health-related outcomes (Wong, Ho, Wang, & Miller, 2017), and reduced satisfaction within their romantic relationships (Bareket, Kahalon, et al., 2018; Zurbruggen, Ramsey, & Jaworski, 2011). Hence, educating the public about the antecedents of women's sexual objectification and highlighting the negative consequences for both men and women can benefit society as a whole.

### *Conclusions*

The sexual objectification of women is a multifaceted phenomenon, influenced by various factors. While acknowledging the central role of adaptive forces (Buss & Schmitt, 1993) in shaping objectifying behavior toward women, sexual drives clearly are not the whole story. In line with the feminist observation that "to live in a culture in which women are routinely naked where men aren't is to learn inequality in little ways all day long" (Wolf, 1991, p. 139), in the present research, we demonstrated that the sexual objectification of women is also driven by the motivation for men's dominance.

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## Notes

1. In both Study 1 and Study 2, we analyzed each sample (women and men) separately because the measures of dependent variables were different for women and men. For example, in Study 2, men participants rated photographs of women's bodies in swimsuits, whereas women participants rated photographs of men's bodies in swimsuits. Combining these samples would make it difficult to interpret the results. For example, a main effect such that men showed higher levels of objectification than women could be attributed to the particular stimuli used (which were different for men and women participants) rather than to a real gender difference in objectification.
2. We computed partial correlations controlling for age. The expected association between men's tendency to sexually objectify women and their SDO persisted, partial  $r = .37, p = .002$ , whereas the corresponding association among women remained non-significant, partial  $r = .08, p = .529$ .
3. For exploratory purposes, participants also completed the Schwartz Value Survey (Schwartz, 1992), which measures the relative prioritization of 10 basic values including the relative importance ascribed to the attainment of dominance over people and resources (power values in Schwartz's, 1992, terminology). We also measured participants' need for power and influence using the nPower and nInfluence scales (Bennett, 1988), which are related yet conceptually distinct constructs: nPower correlates positively with anti-social orientations (e.g., egoism, arrogance) and negatively with pro-social orientations (e.g., empathy), whereas nInfluence negatively correlates (or does not correlate at all) with anti-social orientations and positively with pro-social orientations. We presented the measures in this study to participants in a randomized order. Men's tendency to sexually objectify women significantly correlated with their prioritization of power values ( $r = .44, p > .001$ ) and need for power ( $r = .30, p = .011$ ), but not with their need for influence ( $r = .17, p = .155$ ). Women's tendency to sexually objectify men did not significantly correlate with any of these measures ( $r < |.10|, p > .459$ ).
4. When all 117 participants were included in the analysis, the Condition  $\times$  SDO interaction on engagement in objectification became marginally significant,  $\beta = .20, t(113) = 1.75, p = .083$ , and the interaction on explicit objectification became non-significant,  $\beta = .15, t(113) = 1.34, p = .185$ . However, excluding these participants was justified given the need to avoid disproportionate influence of single observations on our analysis (McClelland, 2002).
5. In Studies 2a, 2b, and 3, we used a newer version of the SDO scale (SDO7; Ho et al., 2015) than the one we used in Study 1 (see full protocols in [osf.io/agx3f](https://osf.io/agx3f)). The SDO7 is a new version of the SDO scale that conceptualizes the construct as having two sub-dimensions: SDO-Dominance (SDO-D), the preference for group-based dominance hierarchies in which dominant groups actively oppress subordinate groups, and SDO-Egalitarianism

(SDO-E), the preference for group-based inequality that is supported by subtle hierarchy-enhancing ideologies and social policies.

6. We calculated engagement in objectification as the percentage of time participants devoted to the swimsuits-task out of the total time they devoted to the photograph-ranking task, rather than simply looking at the overall time participants spent on the swimsuit-task, because the latter is influenced by participants' general speed of performance—which was irrelevant for our purposes. Notably, the two-way Condition  $\times$  SDO interactions reported in Studies 2a and 3 remained significant ( $ps < .022$ ) when examining the overall time (instead of the percentage of time) participants spent on the swimsuit-task.
7. When all 129 participants were included in the analysis, the Condition  $\times$  SDO interaction on engagement in objectification remained non-significant,  $\beta = -.11, t(125) = -0.89, p = .375$ .
8. When all 138 participants were included in the analysis, the Condition  $\times$  SDO interaction on engagement in objectification became non-significant,  $\beta = .16, t(134) = 1.27, p = .206$ .

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