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Help to Perpetuate Traditional Gender Roles: Benevolent Sexism Increases Engagement in Dependency-Oriented Cross-Gender Helping

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Based on theorizing that helping relations may serve as a subtle mechanism to reinforce intergroup inequality, the present research ($N = 1,315$) examined the relation between benevolent sexism (i.e., a chivalrous yet subtly oppressive view of women) and helping. In cross-gender interactions, the endorsement of (Studies 1, 3, and 4) or exposure to (Study 2) benevolent sexism predicted (a) men's preference to provide women with dependency-oriented help (i.e., direct assistance) rather than tools for autonomous coping, and (b) women's preference to seek dependency-oriented help rather than tools for autonomous coping. Benevolent sexism did not predict men's and women's engagement in dependency-oriented helping relations in same-gender interactions. Studies 1 and 2 examined behavioral intentions in response to a series of hypothetical scenarios; Studies 3 and 4 examined actual behavior in tests of mathematical and logical ability, and pointed to assumed partner's expectations as a potential mediator. The converging evidence supports the hypothesis that benevolent sexism encourages engagement in cross-gender helping relations that perpetuate traditional gender roles.

Keywords: benevolent sexism, dependency-oriented help, helping relations, traditional gender roles

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In her landmark book *The Velvet Glove*, sociologist Mary Jackman (1994) argues that the oppression of disadvantaged groups often does not take place by means of direct force and violence but rather through the "sweet persuasion" of paternalistic ideologies, which offer the advantaged groups' protection and affection to disadvantaged group members who comply with existing unequal social arrangements. Empirical evidence reveals that such ideologies are widely endorsed by members of both advantaged and disadvantaged groups (Jost & Hunyady, 2005), and lead them to

behave in ways that justify and reinforce the existing social hierarchy (Sidanius & Pratto, 1999). Thus, ironically, the status quo of group inequity is oftentimes the result of intergroup *cooperation* rather than conflict. Gender relations are perhaps the most straightforward example of such cooperation. Interdependence in this particular context is perhaps greater than in any other context of unequal group relations, because men and women are mutually dependent for satisfying their sexual and reproductive needs (Guttentag & Secord, 1983), and because of related socioeconomic factors that have shaped the cultural histories of human societies (Wood & Eagly, 2002). This interdependence motivates women and men to avoid open conflict and hostility (Jackman, 1994), and gives rise to a particular form of social ideology, namely, benevolent sexism (Glick & Fiske, 1996).

Benevolent sexism is defined as "a set of interrelated attitudes toward women that are sexist in terms of viewing women stereotypically and in restricted roles but that are subjectively positive in feeling tone" (Glick & Fiske, 1996, p. 491). In particular, benevolent sexism includes the beliefs that men and women have different yet complementary traits (e.g., men are agentic, whereas women are communal; Archer & Lloyd, 2002), that men are incomplete without women's love, and that men's role is to protect and support "their" women. Benevolent sexism appeals to men because it allows them to simultaneously enjoy a privileged position at the expense of women *and* maintain a positive image as

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women's protectors and providers. It also appeals to women because it guarantees that men's privilege and power will be used to their advantage (Glick & Fiske, 2001). However, despite its chivalrous tone, the endorsement of benevolent sexism has been found to be associated with a variety of attitudes that approve women's restriction. To illustrate, benevolent sexism predicted women's acceptance of ostensibly protective prohibitions imposed by a husband or romantic partner (Moya, Glick, Expósito, de Lemus, & Hart, 2007), men's and women's placement of restrictions on women's behavior during courtship (Sakalh-Uğurlu & Glick, 2003; Viki, Abrams, & Hutchison, 2003), the viewing of women as responsible for housework (Silván-Ferrero & Bustillos López, 2007), and reduced prioritizing of universalistic values such as intergroup equality and social justice (Feather, 2004). Moreover, the exposure to benevolent sexism has been found to undermine women's support for collective action (Becker & Wright, 2011), increase their self-subjugation (Calogero & Jost, 2011), and interfere with their cognitive performance (Dardenne, Dumont, & Bollier, 2007).

The goal of the present research was to identify and test a key behavioral mechanism—cross-gender helping—that serves as a means for perpetuating existing gender roles and hierarchies grounded in benevolent sexism. Drawing on theorizing regarding the role of helping in maintaining hierarchical relations between groups of unequal status (i.e., the intergroup helping as status relations model; Nadler, 2002), we examined the relations between men's and women's benevolent sexism and preferences for different types of help. Notably, benevolent sexism can be conceptualized as either a personal trait (the extent to which people endorse this ideology; Glick & Fiske, 1996) or a situational factor (witnessing a benevolent sexist act can temporarily make this ideology salient and increase participants' tendency to behave consistently with it; e.g., Shepherd et al., 2011). We expected that in both cases, benevolent sexism would be related to greater use of forms of cross-gender help that perpetuate rather than challenge the status quo of gender inequality.

Helping as a Status Maintaining Mechanism

Current theorizing on helping relations views them as a double-edged sword (Nadler, 2015): On the one hand, assistance may address the recipient's needs and signal that the helper cares about him or her, yet on the other hand it might signal the recipient's inferiority to the helper. The latter signal is likely to be particularly salient when the help provided is *dependency oriented*; that is, when the recipient remains passive while the helper tackles the difficulty for him or her (Nadler, 2002). In particular, as opposed to autonomy-oriented help—providing the recipient with tools required for independent coping (Nadler, 2002) while maintaining his or her independence, self-worth, and sense of competence (Alvarez & van Leeuwen, 2011)—dependency-oriented help does not empower its recipient. On the contrary, by addressing the recipients' immediate needs, it highlights the helpers' generosity and superior skills and knowledge, while leaving the recipients in their inferior, dependent position (Nadler, 2015; van Leeuwen & Täuber, 2010).

As such, dependency-oriented help may serve as a benevolent, seemingly prosocial means to maintain and reinforce the hierarchical relations between helpers and recipients. Specifically, in the

case of groups of unequal status, the advantaged group's care for the disadvantaged group bestows moral legitimacy on its privileged status; the disadvantaged group in turn feels grateful and reciprocates by accepting the legitimacy of its social disadvantage (Nadler, Halabi, & Harpaz-Gorodeisky, 2009). Supporting this reasoning, advantaged group members were found to provide more dependency-oriented help to members of disadvantaged groups in response to threats to their in-group's dominance, suggesting that the underlying motivation for providing such help was defending their in-group's privileged position (Nadler, Harpaz-Gorodeisky, & Ben-David, 2009). Building on this theorizing, we argue that the deceptively kind nature of dependency-oriented helping relations makes them a subtle behavioral mechanism that is ideally suited for translating the ideology of benevolent sexism into practices that maintain gender inequality.

Importantly, providing and seeking dependency-oriented help often reflects the helper's and recipient's belief that the latter lacks the competence to help him- or herself (Brickman et al., 1982). Arguably, benevolent sexism does not explicitly refer to women as incompetent. However, it involves perceiving women as high on warmth (i.e., good-natured and loveable), and such a perception is often associated with viewing women as passive and incompetent, reflecting the paternalistic "warm but incompetent" stereotype (Fiske, Cuddy, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002). Supporting this possibility, Judd, James-Hawkins, Yzerbyt, and Kashima (2005) have shown that people tend to view competence and warmth in compensatory ways: When a target outgroup is perceived as high on one dimension, it tends to be perceived as low on the other (see Kervyn, Yzerbyt, & Judd, 2010, for a review). The unfavorable perception of highly competent women leaders, who are consequently seen as masculine and less likable and warm (Eagly & Karau, 2002), illustrates this compensatory mechanism. As a consequence of this compensatory mechanism, we expected that when viewed through the lens of paternalistic stereotypes, women's warmth would make them deserving to be helped by men, yet their incompetence would make dependency-oriented help the most appropriate form.

Integrating current theorizing on helping relations and benevolent sexism, we hypothesized that benevolent sexism among men would predict a greater tendency to provide women in need with dependency-oriented help. Similarly, benevolent sexism among women was hypothesized to predict a greater tendency to seek dependency-oriented help from men. To illustrate, consider a woman who is about to drive to a distant location, but first needs to figure out how to operate her new GPS device. When she notices that her male neighbor has just purchased the same device, she asks for his help. If the neighbor is high on benevolent sexism, he may be expected to help her by entering the required address for her (i.e., dependency-oriented help) rather than explaining to her how to do it by herself or encouraging her to explore the device on her own (autonomy-oriented help). Likewise, if the woman driver is high on benevolent sexism, she is likely to ask her neighbor to enter the address for her rather than ask him to show her how to do it herself or simply explore the device on her own. Because social norms are often formed and taught inadvertently through daily interactions with those who already accept the social norms as part of "the way things are" (e.g., Deutsch & Gerard, 1955), the social implications of such daily, seemingly trivial, situations

are far-reaching. Hence, in line with the saying “the personal is political” (Hanisch, 1969), we suggest that such mundane interpersonal interactions between men and women become aggregated and have the potential to profoundly shape and reproduce traditional gender roles.

The Present Research

Four studies tested our hypotheses regarding the effect of benevolent sexism on the engagement in cross-gender dependency-oriented helping relations. Study 1 examined the correlations between participants’ endorsement of benevolent sexism and their intention to provide dependency-oriented help to a woman (for male participants) or to seek dependency-oriented help from a man (for female participants) in various situations. It also examined the link between these behavioral intentions and hostile sexism, in order to demonstrate the unique contribution of the benevolent form of sexism to men’s and women’s engagement in dependency-oriented helping relations. Study 2 extended Study 1 by experimentally manipulating the gender of the help recipient or provider, such that male participants reported their intentions to provide dependency-oriented help to either a man or a woman, whereas female participants reported their intentions to seek dependency-oriented help from either a man or a woman. In addition, Study 2 experimentally manipulated participants’ exposure to benevolent sexism, to test the hypothesis that exposing participants to benevolent sexism would increase their intentions to engage in dependency-oriented helping relations within cross-gender, but not same-gender, interactions.

Studies 3 and 4 examined participants’ actual behavior in the context of a difficult test of mathematical and logical ability. Specifically, Study 3 tested the hypothesis that endorsement of benevolent sexism would lead female participants to seek more dependency-oriented help (i.e., the answer to the question at hand, rather than an explanation of how to solve it) from a male compared with a female instructor. Study 4 tested the corresponding hypothesis that endorsement of benevolent sexism would lead male participants who serve as instructors to provide more dependency-oriented help to a female compared with a male student taking a difficult test. In addition, as explained in detail later on, Studies 3 and 4 explored the role of assumed partner’s expectations—participants’ beliefs regarding the type of help for which the instructor expects to be requested (Study 3) and the student expects to receive (Study 4)—as a potential mediator through which the interaction between benevolent sexism and partner’s gender translates into actual dependency-oriented helping behavior.

In summary, four studies examined the effects of dispositional and situational exposure to benevolent sexism on the engagement in dependency-oriented helping relations. In line with the theoretical premise that intergroup inequality is maintained through the cooperation of advantaged and disadvantaged group members (Jackman, 1994), we were interested in revealing how the *interaction* between the genders contributes to the perpetuation of traditional gender roles. We therefore examined helping behavior among both men and women, within both same- and cross-gender dyads. All four studies focused on domains in which women are stereotypically perceived to be inferior to men, such as technology, math, and mechanics

(Shinar, 1975), but ones in which women also regularly engage. We focused on these domains following our reasoning that women’s successful independent coping in traditionally masculine domains implies they are challenging traditional gender roles (whereas their independent coping with traditionally feminine domains does not carry this implication). Using various contexts, methodologies, and measures, these studies provide a robust empirical test of the hypothesis that benevolent sexism encourages men and women to engage in dependency-oriented helping relations—a subtle social mechanism that reproduces traditional gender roles.

Study 1

The main goal of Study 1 was to assess the association between men’s and women’s dispositional benevolent sexism and their engagement in dependency-oriented cross-gender helping relations—a behavioral mechanism that reinforces the status quo of gender inequality in a subtle manner (Nadler, Halabi, et al., 2009). An additional goal of Study 1 was to test whether, consistent with its subtle, seemingly kind and cooperative nature, the engagement in dependency-oriented helping relations would be predicted by the endorsement of an ideology in which sexism is subtle and disguised as positive (namely, benevolent sexism), rather than overtly blatant and antagonistic (i.e., hostile sexism, which reflects explicit derogation of and resentment toward women; Glick & Fiske, 2001). To achieve these goals, we first measured male and female participants’ benevolent and hostile sexism using the Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996), and then presented them with a series of scenarios that involved a woman who needed assistance in daily situations, such as fixing an electrical device or solving a math problem. Men reported the likelihood that they would provide the woman with dependency-oriented help, whereas women reported the likelihood that they would have asked for dependency-oriented help from a man, had they been in that situation.

To increase the generalizability of our conclusions, and in line with recent awareness in our field to the importance of replications (e.g., Nosek, Spies, & Motyl, 2012; Schmidt, 2009), we ran the study twice, using both an Israeli and a Hungarian sample. Despite the inevitable cultural differences between the two societies (e.g., Schwartz, 2006), we expected similar patterns to emerge in both samples based on the similar gender hierarchies in the Israeli and Hungarian societies (e.g., in both countries, women are underrepresented in politics, earn lower wages, and are subjected to more domestic and sexual violence than men; see reports by the Adva Center, 2010, the Knesset Research and Information Center, 2012 [Israeli Parliament], the European Commission on women’s equality in Hungary [European Commission, 2012], and the survey-based Special Eurobarometer gender report [European Union, 2015]).

Method

Participants. Three hundred twenty-six Israelis and 224 Hungarians were recruited in exchange for raffle participation (Israeli

sample) or payment (Hungarian sample).¹ Three participants who did not indicate their gender were excluded from the final sample, which included 196 Israeli women, $M_{\text{age}} = 27.29$ years ($SD = 8.65$, range = 14 to 64), 127 Israeli men, $M_{\text{age}} = 26.31$ years ($SD = 6.97$, range = 13 to 65), 118 Hungarian women, $M_{\text{age}} = 21.37$ years ($SD = 2.89$, range = 18 to 36), and 106 Hungarian men, $M_{\text{age}} = 21.71$ years ($SD = 2.81$, range = 18 to 33).

Procedure and measures. We presented the study as dealing with cognition and attitudes. Participants completed the following measures.

Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996). Using a 6-point scale ranging from *completely disagree* to *completely agree*, participants filled out a shortened version of the ASI (Glick & Fiske, 1996; translated into Hebrew by the first author of this article, and into Hungarian by Szabó, 2008), which included seven items measuring participants' degree of benevolent sexism, Cronbach's alpha (α) = .79 in the Israeli sample, and .74 in the Hungarian sample. These items represented the three factors comprising benevolent sexism: protective paternalism (e.g., "In a disaster, women ought to be rescued before men"); complementary gender stereotypes (e.g., "Women, compared to men, tend to have a superior moral sensibility"); and heterosexual intimacy (e.g., "Men are incomplete without women"). Seven additional items measured hostile sexism (e.g., "Many women get a kick out of teasing men by seeming sexually available and then refusing male advances"; "Feminists are making unreasonable demands of men"); Cronbach's $\alpha = .81$ in both samples. The ASI items appeared in a randomized order.

Helping intentions. Participants were exposed to nine everyday helping situations. Male participants were presented with scenarios in which a woman known to them had difficulty with a particular task. For each scenario, three courses of action were suggested: (a) not to intervene and let her handle the difficulty by herself (i.e., no help); (b) explain to her how to approach the task, and thus provide her with tools for independent coping (i.e., autonomy-oriented help); and (c) provide direct assistance by performing the task for her (i.e., dependency-oriented help). In all scenarios, participants were instructed to assume they had the requisite skills and knowledge to provide help, and had to indicate the probability (in percentage) of taking each course of action. If the three numbers did not add up to 100, participants were required to edit their response. To illustrate, in one scenario, male participants read, "Your acquaintance is having difficulty parking her car," and were asked to fill in the probability that "I will not intervene," "I will explain to her how to use the steering wheel and mirrors to get into the parking spot," and "I will offer to swap with her and park the car for her." Other scenarios referred to performing a computer function, solving a math problem, filling out complex bureaucratic documents, dealing with financial issues, and so forth (full protocols for all studies are provided as online supplemental materials). The internal consistencies for male participants' intention to provide dependency-oriented help in response to these various situations were Cronbach's $\alpha = .73$ in the Israeli sample, and .38 in the Hungarian sample.²

Female participants were presented with identical scenarios, except that they were placed in the role of the recipient of help and had to indicate the percentage probability that they would choose to (a) cope on their own (no-help), or ask a male acquaintance for (b) tools enabling independent coping (autonomy-oriented help),

or (c) direct help (dependency-oriented help). To illustrate, in one scenario, female participants read, "You need to buy a car but you are not familiar with the car market," and were asked to fill in the probability that, when interacting with their male acquaintance, "I will not ask for assistance," "I will ask him to explain me about the considerations relevant for choosing a car (safety ranking, fuel efficiency, etc.) and how they can be evaluated," and "I will ask him to tell me what car would be the best purchase for me." The internal consistencies of female participants' intention to seek dependency-oriented help in response to the various scenarios were $\alpha = .70$ in the Israeli sample, and $\alpha = .65$ in the Hungarian sample.

For each participant, we calculated a dependency-oriented score as the odds (see Grimes & Schulz, 2008) of providing or seeking dependency-oriented help as opposed to the two other options (i.e., percentage indicated by the participant for providing or seeking dependency-oriented help divided by the total percentage for providing or seeking either autonomy-oriented help or no help at all).^{3,4} To illustrate, if the participant had no preference for a particular course of action—allocating, across the 10 items, equal probabilities of one third to the dependency-oriented, one third to the autonomy-oriented, and one third to the no-help options—his or her odds score would be .50 (one third : two third); scores higher than .50 indicate that the chances of engaging in dependency-

¹ We did not have an a priori method for determining the size of the Israeli sample in Study 1, which was advertised in an online forum that is open to the general public—data collection was stopped once participants did not sign up for the study anymore. We then aimed for a Hungarian sample of about the same size as the Israeli one, but data collection ended at an earlier point because of feasibility considerations. The size of the samples used in Studies 2 and 3 was determined through a priori power analyses, conducted using the G*Power calculator (Faul, Erdfelder, Lang, & Buchner, 2007), for a significance level of $\alpha = .05$, and power of 80%, based on the effect sizes obtained in earlier pilot testing. In Study 4, which had the same design as Study 3, we aimed for a sample of about the same size (yet the actual sample was somewhat smaller because of feasibility considerations).

² Although the reliability of the help-providing measure in the sample of Hungarian men was lower than conventional standards, this is not necessarily problematic, as Schmitt's (1996) analytical approach suggests that

when a measure has other desirable properties, such as meaningful content coverage of some domain . . . low reliability may not be a major impediment to its use. There is no sacred level of acceptable or unacceptable level of alpha. In some cases, measures with (by conventional standards) low levels of alpha may still be quite useful. (pp. 351–353).

In this case, the main desirable property of our measure was the coverage of a wide range of situations in which help was provided. This property justified, in our view, the use of this scale despite the low reliability obtained in the sample of Hungarian men. Moreover, the fact that, despite the low reliability obtained for this variable, Hungarian men's help providing marginally correlated ($p = .058$) with their benevolent sexism bolsters our confidence that it successfully measured the construct it was intended to measure.

³ No participants indicated a 100% chance for choosing dependency-oriented help (which would have been computed as 100/0, an undefined number).

⁴ We lumped the "no-help" and "autonomous-help" options together because they both reflect independent coping by the woman in need, which challenges the existing status relations (as opposed to the dependency-oriented help option, which perpetuates the stereotype regarding women's dependency).

oriented help were higher than one third, whereas scores lower than .50 indicate that the chances of engaging in dependency-oriented help were lower than one third.

Results and Discussion

Table 1 presents the means and standard deviations of all measures in both samples. Table 2 presents the correlations between all measures in both samples,^{5,6} as well as the partial correlations between each type of sexism and the intention to engage in dependency-oriented help, while controlling for the other type of sexism. Consistent with our hypotheses, in both samples, higher levels of benevolent sexism among women predicted stronger intention to seek dependency-oriented help from men. Statistically, these results were highly reliable (significant) among both Israeli women, $r(196) = .239, p = .001$, and Hungarian women, $r(118) = .215, p = .019$. Correspondingly, higher levels of benevolent sexism among men predicted stronger intention to provide dependency-oriented help to women. These relations were significant among Israeli men, $r(127) = .352, p < .001$, and marginal among Hungarian men, $r(106) = .185, p = .058$, possibly because of the suboptimal reliability of the help measure in this subsample.

Although these results were consistent with our theorizing, an alternative explanation could be that benevolent sexism was simply related to women's general tendency to seek help from men, and to men's general tendency to provide help to women, regardless of help type (i.e., whether or not it was dependency oriented). To examine this possibility, for each participant we calculated a general helping score, computed as the odds of providing or seeking help (i.e., the total percentage for dependency-oriented and autonomy-oriented help) as opposed to not providing or seeking help at all.⁷ We found that higher levels of benevolent sexism among men predicted a general tendency to provide help to women in the Hungarian sample, $r(94) = .29, p = .005$, but not in the Israeli sample, $r(118) = .031, p = .739$. In addition, higher levels of benevolent sexism among women predicted a general tendency to seek help from men in the Israeli sample, $r(194) = .17, p = .016$, but not in the Hungarian sample, $r(109) = .146, p = .131$. Thus, the support for the alternative prediction, that is, regarding the association between benevolent sexism and general engagement in helping relations, was partial and inconsistent, whereas the predicted association between benevolent sexism and the specific engagement in dependency-oriented helping relations received consistent empirical support.

As for hostile sexism, as seen in Table 2, its correlation with intention to seek dependency-oriented help was nonsignificant among women in both the Israeli, $r(196) = .115, p = .108$, and Hungarian, $r(118) = .104, p = .261$, samples. The correlation between hostile sexism and intention to provide dependency-oriented help was nonsignificant among Hungarian men, $r(106) = .117, p = .234$, yet it was significant among Israeli men, $r(118) = .260, p = .003$. However, this relation likely resulted from the relation between benevolent and hostile sexism, as the partial correlation revealed that when controlling for benevolent sexism, hostile sexism no longer predicted greater intention to provide dependency-oriented help among Israeli men, $r = .101, p = .260$. These results are consistent with our theorizing that the engagement in dependency-oriented helping relations should be pre-

dicted by the endorsement of a subtle, seemingly positive, rather than a blatantly antagonistic, sexist ideology.⁸

In summary, in line with our predictions, benevolent sexism had a unique contribution to prompting dependency-oriented help, that is, the kind of help that perpetuates, rather than challenges, the status quo of gender roles.

Study 2

Study 2 extended Study 1 in two ways. First, to strengthen the internal validity of our conclusions, we used an experimental

⁵ Beyond the reported measures and analyses, Studies 1 and 2 additionally examined participants' support for two types of policies intended to help women: empowering policies, which help women by increasing their economic, political, or cultural competitiveness, and nonempowering policies, which involve assistance that does not challenge the status quo of group inequality. To illustrate, affirmative action to ensure fair representation of women on boards of directors constitutes a form of empowering help, whereas legislation that guarantees national insurance for housewives constitutes a form of nonempowering help (see Jackson & Esses's, 2000, distinction between these two types of intergroup help). The results obtained for these measures were inconsistent. Specifically, in Study 1, benevolent sexism predicted greater support for nonempowering policies ($r = .162, p < .001$) but not for empowering policies ($r = -.011, p = .801$), whereas hostile sexism predicted reduced support for empowering policies ($r = -.228, p < .001$) but did not significantly correlate with support for nonempowering policies ($r = -.004, p = .929$). In Study 2, however, the results were different: Exposure to benevolent sexism did not increase participants' support for nonempowering policies, $t(570) = .01, p = .995$; $M_s = 5.26$ ($SD = .93$) and 5.27 ($SD = .95$) in the control and exposure-to-benevolent-sexism conditions, respectively. These results are available upon request.

⁶ To address the concern that the Protective Paternalism subscale in the benevolent sexism measure is conceptually too similar to engagement in dependency-oriented cross-gender helping, we additionally calculated the measure of benevolent sexism while excluding these particular items (i.e., using only items from the other two subscales comprising this measure, namely, Complementary Gender Differentiation and Heterosexual Intimacy). The results generally persisted even without the Protective Paternalism subscale. In Study 1, the correlations between benevolent sexism and dependency-oriented help persisted among Israeli men, $r(127) = .325, p = .001$, Israeli women, $r(196) = .240, p = .001$, and Hungarian women, $r(118) = .224, p = .015$, but not among Hungarian men, $r(106) = .152, p = .119$. In Study 3, the two-way interaction between participants' benevolent sexism and instructor's gender was marginal, $F(1, 212) = 3.48, p = .064$. Finally, in Study 4, the two-way interaction between participants' benevolent sexism and student's gender was significant, $F(1, 193) = 10.55, p = .001$. These findings suggest that the observed association between benevolent sexism and dependency-oriented helping in cross-gender relations was not driven solely by the Protective Paternalism subscale.

⁷ In several cases, this resulted in an undefined number as a result of the division in zero, hence the slight changes in degrees of freedom.

⁸ Although not hypothesized a priori, it is interesting that hostile sexism predicted men's reduced intention to provide women with autonomy-oriented help (calculated as the odds of providing autonomy-oriented help as opposed to either dependency-oriented or no-help), and tended to increase men's intention not to help women at all (calculated as the odds of not providing help as opposed to providing either dependency-oriented or autonomy-oriented help). In particular, when controlling for benevolent sexism, the partial correlation between hostile sexism and intention to provide autonomy-oriented help was $r(124) = -.185, p = .038$, among Israeli men, and $r(103) = -.174, p = .077$, among Hungarian men (the corresponding partial correlations among women were nonsignificant, $p_s > .606$). In addition, the partial correlations between hostile sexism and intention not to provide help to women was $r(124) = .162, p = .069$, among Israeli men, and $r(103) = .179, p = .068$, among Hungarian men (the corresponding partial correlations among women were nonsignificant, $p_s > .250$).

Table 1
Means and Standard Deviations for Measures Used in Study 1

Variables	Israeli sample			Hungarian sample		
	Male (<i>N</i> = 127)	Female (<i>N</i> = 196)	Total (<i>N</i> = 323)	Male (<i>N</i> = 106)	Female (<i>N</i> = 118)	Total (<i>N</i> = 224)
Benevolent sexism	3.38 (.99)	3.23 (1.12)	3.29 (1.07)	3.67 (.78)	3.50 (.82)	3.58 (.80)
Hostile sexism	3.18 (1.02)	2.91 (1.03)	3.01 (1.04)	3.40 (.91)	3.30 (.86)	3.35 (.88)
Odds of providing or seeking dependency-oriented help	.62 (.62)	.41 (.35)	.49 (.48)	.52 (.25)	.51 (.36)	.51 (.31)

Note. For benevolent and hostile sexism, the scale ranged from 1 to 6. For odds of engagement in dependency-oriented help, the scale theoretically ranged from zero to infinity, but in practice ranged from .01 to 4.73 in the Israeli sample, and from .00 to 2.00 in the Hungarian sample. Odds for engagement in dependency-oriented help represented intention to *provide* help to a woman among male participants, and intention to *seek* help from a man among female participants.

design to test whether exposure to the ideology of benevolent sexism increases the tendency to engage in dependency-oriented helping. Previous research has demonstrated that reading statements reflecting benevolent sexist attitudes increased female participants' justification of the gender system (see also Jost & Kay, 2005) and perceived advantages of being a woman, while decreasing their collective action intentions (Becker & Wright, 2011). Building on Becker and Wright's (2011) work, we hypothesized that exposing men and women to benevolent sexist statements would increase their engagement in dependency-oriented cross-gender helping, consistent with traditional gender roles.

Second, our assumption was that benevolent sexism should be related to people's helping preferences that pertain to cross-gender interactions, rather than helping preferences in general. In particular, benevolent sexism reflects the belief that men and women have complementary traits (and consequent roles): Men are agentic and independent, whereas women are warm and dependent (Glick & Fiske, 1999). For this reason, men who are high on benevolent sexism were expected to provide dependency-oriented help to women, whom they are supposed to paternalistically protect, but not to other men, whom they consider self-reliant. Correspondingly, women who are high on benevolent sexism were expected to behave in a dependent manner especially when interacting with men, whom they expect to take the "White Knight's" role (Rudman & Heppen, 2003) and provide them with paternalistic protection, but less so when interacting with other women, who are not expected to fulfill such a chivalrous role. To test this assumption,

we manipulated the gender of the help seeker (for male participants) or the helper (for female participants). We predicted that benevolent sexism would increase men's intentions to provide, and women's intentions to seek, dependency-oriented help only in cross-gender interactions, but not when the help seeker's or provider's gender is the same as that of the participant.

We tested our hypotheses using two corresponding studies. Study 2a tested our hypotheses among female participants who sought help, and Study 2b tested corresponding hypotheses among male participants who provided help. Both studies had a 2 (exposure to benevolent sexism: no, yes) \times 2 (type of interaction: same-gender, cross-gender) experimental design. In both studies, we expected a two-way interaction such that the exposure to benevolent sexism would have a stronger effect on engagement in dependency-oriented helping in cross-gender than in same-gender interactions.

Study 2a

Method.

Participants. Three hundred sixty-five female students were recruited from two large Israeli universities through an online invitation, in exchange for participation in a raffle. Eleven participants were excluded because they failed the instructional manipulation check (Oppenheimer, Meyvis, & Davidenko, 2009), which tested whether they had read the experimental instructions. Two additional participants were excluded because they suspected the

Table 2
Correlations Between Measures Used in Study 1

Variables	Israeli sample			Hungarian sample		
	(1)	(2)	(3)	(1)	(2)	(3)
(1) Benevolent sexism	—	.507**	.352** (.264**)	—	.267**	.185 (.161)
(2) Hostile sexism	.579**	—	.260** (.101)	.424**	—	.117 (.071)
(3) Odds of engagement in dependency-oriented help	.239** (.213**)	.115 (–.029)	—	.215* (.189*)	.104 (.015)	—

Note. Correlations among Israeli women (*n* = 196) are presented below the diagonal and correlations among Israeli men (*n* = 127) are presented above it. Similarly, correlations among Hungarian women (*n* = 118) are presented below the diagonal and correlations among Hungarian men (*n* = 106) are presented above it. Odds of engagement in dependency-oriented help represent intention to seek help from a man for female participants, and intention to provide help to a woman for male participants. Partial correlations between benevolent sexism and engagement in dependency-oriented helping while controlling for hostile sexism, and between hostile sexism and engagement in dependency-oriented helping while controlling for benevolent sexism, are presented in parentheses.

* $p < .05$. ** $p < .01$.

study's cover story (see Procedure section). The final sample thus included 352 female participants, $M_{\text{age}} = 24.24$ years ($SD = 2.54$, range = 18 to 53).

Procedure. As a cover story, adapted from Becker and Wright (2011), participants were told that they would participate in two studies. The first was ostensibly a memory test, in which they would be presented with six sentences and then asked to recognize them out of a group of 24 sentences. They were further told that because the first study explored how a disruption of several minutes affected memory, in-between its two parts they would be asked to answer a short survey regarding interpersonal relations.

In line with Becker and Wright's (2011) procedure, in both the control and the exposure-to-benevolent-sexism conditions, participants were presented with six sentences that were said to reflect prevalent beliefs in Israel. Taken from the ASI scale (Glick & Fiske, 1996) and from a more recent benevolent sexism scale designed by Schuessler (2009), the six sentences presented in the benevolent sexism condition were: "Women should be cherished and protected by men," "Women have a way of caring that men are not capable of in the same way," "Women, compared to men, tend to have a superior moral sensibility," "No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman," "Secretly, most women yearn for a man whose arms they can find protection and security in," and "Many women would like a man who conquers their heart." The six sentences presented in the control condition included, for example, "Tea is healthier than coffee" and "Biking is better for the environment than driving a car." Although Becker and Wright considered this a priming manipulation (i.e., increasing the accessibility of benevolent sexist beliefs), it might also affected participants' belief that other people endorse this ideology (because the benevolent sexist statements are said to reflect prevalent social beliefs), or even their perceptions of this ideology as legitimate. All these mechanisms, however, serve the present purpose, namely, testing the effect of exposure to or the support of benevolent sexism on helping behavior, and thus establishing the causal role of benevolent sexism in eliciting dependency-oriented help in cross-gender interactions.

After memorizing the six sentences, participants moved on to the alleged second study, in which they completed the same measure of interpersonal helping used in Study 1 with one change: Whereas in Study 1 all scenarios related to cross-gender helping, in Study 2a, participants were randomly assigned to either the same- or the cross-gender condition. Thus, our female participants indicated their help-seeking intentions in nine scenarios in which the help provider was either a woman or a man ($\alpha = .56$). As in Study 1, for each participant, we calculated the odds of seeking dependency-oriented help versus autonomy-oriented help and independent coping. To test participants' attention (see Oppenheimer et al., 2009), an additional item, which looked like the rest of the items, instructed participants what values they should enter in the response boxes. Eleven participants failed to comply with these instructions, indicating that they responded without reading the questions. These participants were excluded from the sample.

Next, as part of the cover story, participants were presented with 24 sentences and were asked to select the sentences they had seen at the beginning of the first study. They were then informed that they successfully completed the studies and were asked to share their thoughts and feelings about them. Two participants who

explicitly suspected the study's purposes (e.g., "I don't believe that it's a memory test. You examine influence on attitudes regarding gender issues.") were excluded from the sample. Participants were then thanked and debriefed.

Results and discussion. Table 3 (left half) presents the means and standard deviations of the odds of seeking dependency-oriented help in the four experimental cells. To test our hypothesis that exposure to benevolent sexism would increase the odds of seeking dependency-oriented help in cross-gender interactions, we conducted a 2 (exposure to benevolent sexism: yes, no) \times 2 (type of interaction: same-gender, cross-gender) ANOVA. Although the main effects of exposure to benevolent sexism and type of interaction were nonsignificant ($ps > .138$), the predicted two-way interaction emerged, $F(1, 348) = 5.42, p = .021, \eta_p^2 = .015$.⁹

Planned comparisons revealed that, as expected, in same-gender interactions, female participants' dependency-oriented help seeking was similar across the two experimental conditions, $t(348) = 1.30, p = .196, 95\%$ confidence interval (CI) $[-.169, .035], Ms = .36$ and $.43$ in the exposure-to-benevolent sexism and control conditions, respectively. By contrast, in cross-gender interactions, women sought for more dependency-oriented help in the exposure-to-benevolent-sexism compared with the control condition, $t(348) = 2.00, p = .047, 95\%$ CI $[-.205, -.002], Ms = .50$ and $.40$, respectively. An alternative way to interpret this interaction would be to show that in the control condition, women sought similar levels of dependency-oriented help in both same-gender and cross-gender interactions, $t(348) = .59, p = .559, 95\%$ CI $[-.134, .073]$. By contrast, in the exposure-to-benevolent-sexism condition, they sought more dependency-oriented help in cross-gender compared with same-gender interactions, $t(348) = 2.74, p = .007, 95\%$ CI $[-.240, -.039]$. These results fully support our hypotheses.

Finally, to rule out the possibility that the exposure to benevolent sexism simply increased women's general tendency to seek help from men (regardless of the type of this help), we calculated a general help-seeking score for each participant (see Study 1). Inconsistent with this alternative explanation to our findings, the two-way interaction between exposure to benevolent sexism and type of interaction (i.e., cross vs. same gender) failed to reach significance, $F(1, 336) = .46, p = .50$.

Study 2b

Method.

Participants. Male participants were recruited from two large Israeli universities through an online invitation, in exchange for raffle participation. Of the 232 students who were recruited, 10 participants who failed the instructional manipulation check and two participants who expressed strong suspicion in our cover story were excluded from analysis. The final sample included 220 male participants, $M_{\text{age}} = 25.30$ years ($SD = 2.83$, range = 18 to 39).

⁹ This interaction remained significant when the participants who expressed strong suspicion were included in analysis, $F(1, 350) = 4.89, p = .028, \eta_p^2 = .014$, but became marginal when we additionally included the participants who failed the instructional manipulation check, $F(1, 361) = 3.22, p = .074$. Nevertheless, excluding these participants was highly justified given our a priori decision to drop from analysis participants who failed to read the items to which they were responding.

Table 3
Means and Standard Deviations of Engagement in Dependency-Oriented Helping Relations in Same-Gender and Cross-Gender Interactions (Study 2)

Variables	Female participants: Dependency-oriented help seeking			Male participants: Dependency-oriented help providing		
	Control condition	Exposure to benevolent sexism condition	Total	Control condition	Exposure to benevolent sexism condition	Total
Same-gender interaction	.43 (.27) (<i>n</i> = 85)	.36 (.18) (<i>n</i> = 90)	.39 (.23) (<i>N</i> = 175)	.44 (.27) (<i>n</i> = 54)	.44 (.23) (<i>n</i> = 57)	.44 (.25) (<i>N</i> = 111)
Cross-gender interaction	.40 (.28) (<i>n</i> = 86)	.50 (.53) (<i>n</i> = 91)	.45 (.43) (<i>N</i> = 177)	.48 (.27) (<i>n</i> = 56)	.64 (.42) (<i>n</i> = 53)	.56 (.36) (<i>N</i> = 109)
Total	.41 (.28) (<i>n</i> = 171)	.43 (.40) (<i>n</i> = 181)	.42 (.35) (<i>N</i> = 352)	.46 (.27) (<i>n</i> = 110)	.53 (.35) (<i>n</i> = 110)	.50 (.31)

Note. (*N* = 220). Standard deviations appear in parentheses. The scale for odds of seeking dependency-oriented help theoretically ranged from zero to infinity, but in practice ranged from .00 to 4.00 in Study 2a, and from .02 to 2.46 in Study 2b.

Procedure. The procedure was identical to that used in Study 2a, except that the measure of behavioral intentions referred to providing (rather than seeking) help ($\alpha = .55$).

Results and discussion. Means and standard deviations are presented in Table 3 (right half). We tested our hypotheses using a 2 (exposure to benevolent sexism: yes, no) \times 2 (type of interaction: same-gender, cross-gender) ANOVA. The main effect of type of interaction was significant, $F(1, 216) = 8.63, p = .004$, such that male participants reported greater intentions to provide dependency-oriented help in cross-gender (i.e., when the recipient was a woman) compared with same-gender interactions. The main effect of condition was marginal, $F(1, 216) = 3.54, p = .06$, such that participants tended to report greater intention to provide dependency-oriented help in the exposure-to-benevolent-sexism compared with the control condition. Most importantly, the predicted two-way interaction emerged, $F(1, 216) = 4.02, p = .046, \eta_p^2 = .018$.¹⁰

Planned comparisons revealed that, as expected, in same-gender interactions, male participants provided similar levels of dependency-oriented help across the two experimental conditions, $t(216) = .87, p = .930, 95\% \text{ CI} [-.119, .109], M = .44$, in both conditions. By contrast, in cross-gender interactions, men provided more dependency-oriented help in the exposure-to-benevolent-sexism compared with the control condition, $t(216) = 2.74, p = .007, 95\% \text{ CI} [-.275, -.045], M_s = .64$ and $.48$, respectively. An alternative way to interpret this interaction would be to show that in the control condition, men provided similar levels of dependency-oriented help in both same-gender and cross-gender interactions, $t(216) = .66, p = .510, 95\% \text{ CI} [-.076, .153]$. By contrast, in the exposure-to-benevolent-sexism condition, men provided more dependency-oriented help in cross-gender compared with same-gender interactions, $t(216) = 3.49, p = .001, 95\% \text{ CI} [.082, .315]$. These results fully supported our hypotheses.

Finally, to rule out the possibility that the exposure to benevolent sexism simply increased men's general tendency to provide help to women (regardless of the type of this help), we calculated a general help providing score for each participant (see Study 1). Inconsistent with this alternative explanation to our findings, the two-way interaction between exposure to benevolent sexism and type of interaction (i.e., cross vs. same gender) failed to reach significance, $F(1, 198) = .43, p = .837$.

Study 3

The goal of Study 3 was to extend the generalizability and ecological validity (Schmuckler, 2001) of the findings of Study 2a by examining female participants' actual behavior in a setting that simulates a real-life helping interaction. Using an adaptation of Nadler and Chernyak-Hai's (2014) procedure, female participants took a difficult test measuring mathematical, logical, and technical ability (often referred to as a "psychotechnical" or "logics" test in Hebrew and Hungarian—our participants' native tongues), and were given the opportunity to ask an instructor for help that was either dependency oriented (i.e., final answers) or autonomy oriented (i.e., explaining how to solve the questions). Depending on the experimental condition, the instructor was either a man or a woman. We expected women high, but not low, on benevolent sexism to seek more dependency-oriented help from a male than from a female instructor.

An additional goal of Study 3 was to explore the psychological mechanism driving the effect of the interaction between female participants' benevolent sexism and instructor's gender on their help-seeking behavior. For this purpose, we measured several psychological constructs that, based on previous research on helping relations between groups of unequal status (Nadler, 2015; Nadler & Chernyak-Hai, 2014), could serve as potential mediators that lead benevolent sexist women to seek dependency-oriented help from men. These constructs included participants' sense of competence and motivation to succeed, endorsement of the stereotype regarding women's inferior psychotechnical ability, impression management concerns (e.g., wish to prove independent coping), belief that autonomy-oriented help would be effective (e.g., belief that the hints for solution provided by the instructor would be conveyed in a clear manner), and assumed instructor's expectations (i.e., whether the instructor expects to be asked for the final answers rather than for explanations of how to solve the questions).

For each of these variables, we tested for a conditional indirect effect (i.e., moderated mediation; Preacher, Rucker, & Hayes,

¹⁰ This interaction remained significant when the participants who expressed strong suspicion were included in analysis, $F(1, 218) = 4.29, p = .040, \eta_p^2 = .019$, but not when we additionally included the participants who failed the instructional manipulation check, $F(1, 228) = 2.49, p = .116$. Nevertheless, excluding these participants was highly justified given their failure in the instructional manipulation check.

2007; see Figure 1 for the tested model), yet only *assumed expectations* significantly mediated the obtained interaction between instructor's gender and student's benevolent sexism. For the sake of brevity and conceptual clarity, we report and discuss the obtained results solely for this variable (the full protocol, reliabilities, and moderated mediation results pertaining to all the other variables are available in the online supplemental materials).

Method

Participants. Two hundred seventeen female students in a large Hungarian university, $M_{\text{age}} = 22.30$ years ($SD = 3.58$, range = 18 to 51), were recruited through online invitations to participate in a psychological study in exchange for payment. Most participants (66%) were undergraduate students majoring in various disciplines such as education and psychology; the rest had a different educational status (e.g., master's students).

Procedure. Participants were invited to the computer lab in groups of about 10 to 20 in each session. All instructions and materials were computerized. As a cover story, participants were told that the study examines interpersonal interactions on the Internet, and consists of three parts related to Internet dating, online customer services, and patterns of social interactions in online problem solving.

After filling out a demographic information form including their final high school math grade (an available proxy of the psychotechnical ability evaluated by the test), participants were directed to the experiment's first part, which included a shortened version of the ASI (see Study 1; $\alpha_{\text{bs}} = .75$, $M_{\text{bs}} = 3.42$, $SD_{\text{bs}} = .80$; $\alpha_{\text{hs}} = .69$, $M_{\text{hs}} = 3.22$, $SD_{\text{hs}} = .86$). To disguise the study's real purpose, the ASI was followed by four filler questions about online dating (e.g., "Online dating is ineffective because both men and women provide false information about themselves"). To further bolster our cover story's credibility, participants were then directed to the second part of the study, which consisted of filler questions about the effectiveness of online customer services (e.g., "Online customer service is more effective than face-to-face meetings with customer service representatives").

The third part of the study ostensibly examined Internet teamwork and was conducted in collaboration with a bogus online partner (see Nadler & Chernyak-Hai, 2014). Constituting the experimental manipulation, the partner's name was either typically masculine (Péter) or feminine (Adrienn). Participants further learned that this part of the study consisted of a psychotechnical test measuring mathematical, logical, and technical ability of the kind often used for workplace selection. To stress the practical

importance of knowing how to solve such tests, participants were told that

psychotechnical tests are a common tool used in the process of employees selection, and therefore it is likely that in the future, when you apply to different jobs within your career track, you will be required to solve similar questions to the ones you are about to solve now.

Participants also learned that one team member (either them or their partner) would be randomly assigned the role of "student," who had to solve the test, whereas the other member would be assigned the role of "instructor" and receive the information needed to solve the questions (i.e., explanations and final answers) in order to help the "student" as required. All participants were then informed that they had been randomly assigned to be "students." As a manipulation check, participants were asked to identify their assigned role as well as their partner's role and gender.

Next, participants answered seven difficult questions. To verify that they indeed solved these questions, participants could not continue without answering all of them. Upon completion, they were informed that they got three answers wrong. Adapting the procedure developed by Nadler and Halabi (2006), for each of these three questions the participant could ask the instructor for either a hint on how to solve the question on her own ("I want to receive a hint from [Adrienn/Péter] to help me solve the question on my own"), or the final answer ("I want to receive the final answer to the question from [Adrienn/Péter]"), indicating autonomy-oriented versus dependency-oriented help seeking, respectively. Participants' dependency-oriented help score ranged from 0 (no final answers requested) to 3 (final answers requested for all three questions).

After participants were informed that the test was completed, they were asked to answer several "feedback questions about the teamwork during the test." These questions measured the following potential mediators, using 7-point scales (1 = *strongly disagree* to 7 = *strongly agree*): sense of competence and motivation to succeed (e.g., "It was very important to me to succeed in answering the psychotechnical questions"), belief that autonomy-oriented help provided by the instructor would be effective (e.g., "I believed that the instructor would provide me clear hints that would allow me solve the questions"), endorsement of the stereotype regarding women's inferior psychotechnical ability (e.g., "I believe that women are generally less good in solving psychotechnical questions compared to men"), impression management concerns (e.g., "It was important for me to prove to my instructor that I have the ability to cope independently"), and assumed expectations of the instructor, which was measured using one item (i.e., "I believe the instructor expected me to ask primarily for the final answers"). Note that although we hypothesized that these constructs may serve as mediators, we measured them only *after* we examined participants' help-seeking behavior, because exposure to these measures might have revealed the study's real purpose. Upon completion, participants were thanked and debriefed.

Results

Manipulation check. All participants correctly identified the role to which they had been assigned ("student") as well as their partner's gender.

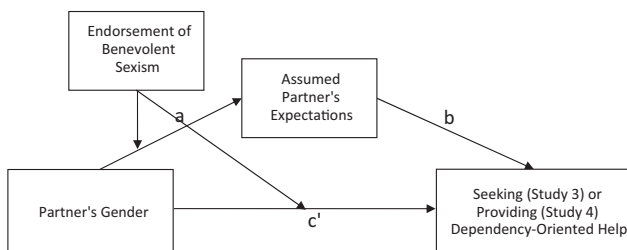


Figure 1. The tested model of a conditional indirect effect.

Dependency-oriented help seeking. Overall, 43% of the participants did not seek dependency-oriented help at all, 32% sought dependency-oriented help one time, 18% sought help two times, and 7% sought help in all three times.¹¹ The means for dependency-oriented help seeking were .85 ($SD = .90$) and .93 ($SD = .97$) in the female and male instructor conditions, respectively. To test our main hypothesis, based on Aiken and West's (1991) guidelines, we conducted a regression analysis with dependency-oriented help seeking as the dependent variable. The predictors were benevolent sexism (standardized), instructor's gender (coded such that female instructor = -1 , and male instructor = $+1$), and their interaction. Given the fact that beyond the variables of interest, participants' tendency to seek dependency-oriented help could be affected by poor psychotechnical ability, we computed the average of the standardized scores of participants' final high school math grade and actual test performance (i.e., number of correct answers), which were significantly correlated, $r = .18$, $p = .009$, and used this variable as an available proxy of this ability—controlling for the variance associated with it (i.e., using it as a covariate). The regression model obtained, presented in Table 4, was significant, $F(4, 212) = 3.31$, $p = .012$, $\Delta R^2 = .059$.

As shown in Table 4, the predicted Instructor's Gender \times Benevolent Sexism interaction was significant ($p = .050$; note that when psychotechnical ability was not used as a covariate, the interaction effect was slightly weaker and only marginally significant, $\beta = .116$, $p = .089$, yet controlling for this variable was justified both conceptually and empirically, because of its significant effect on help-seeking behavior, $\beta = -.162$, $p = .018$). To interpret this interaction, we used Preacher, Curran, and Bauer's (2006) online computational tool for probing two-way interaction effects in multiple linear regression models. The interaction is illustrated in Figure 2, which presents the slopes obtained for either a male or a female instructor. As expected, benevolent sexism significantly predicted women's help-seeking behavior when interacting with a man, $\beta = .221$, $p = .010$, but not when interacting with a woman, $\beta = -.027$, $p = .010$.

Conditional indirect effect. Out of the several variables that we explored, we found results compatible with mediated moderation for one variable—*assumed expectations*—which reflected the extent to which participants assumed that the instructor expected them to ask for dependency-oriented help. The causal chain illustrated in Figure 1 was tested using Hayes's (2013) PROCESS macro (Model 8), which tests for moderated mediation using regression models followed by bootstrapping techniques. The results are presented in Table 5. As seen in the upper part of the table, in the first regression model, the predictors were instructor's gender, benevolent sexism, and their two-way interaction, psychotechnical ability was controlled for, and assumed instructor's expectations was the outcome variable. This model revealed that the Instructor's Gender \times Benevolent Sexism interaction had a significant effect on assumed instructor's expectations. Whereas benevolent sexism was not associated with assumed expectations when the instructor was a woman, $r = .015$, $p = .875$, it was associated with a stronger tendency to assume that the instructor expects the student to request dependency-oriented help when the instructor was a man, $r = .266$, $p = .005$. In the second regression model, the predictors were assumed instructor's expectations, instructor's gender, benevolent sexism, and the Instructor's Gen-

der \times Benevolent Sexism interaction, psychotechnical ability was controlled for, and dependency-oriented help seeking was the outcome variable. This model revealed that assumed instructor's expectations had a significant effect on dependency-oriented help seeking. As seen at the lower part of Table 5, bootstrapping analysis revealed that the indirect effect of Instructor's Gender \times Benevolent Sexism on dependency-oriented help seeking through assumed instructor's expectations was significant (i.e., zero was not included in the 95% CI). Specifically, the indirect effect of instructor's gender on dependency-oriented help seeking through assumed expectations was significant for participants who were high on benevolent sexism ($z_{bs} = +1$), but not for participants with average ($z_{bs} = 0$) or low ($z_{bs} = -1$) levels of benevolent sexism. As seen in the middle part of the table, the direct effect of instructor's gender on dependency-oriented help seeking (i.e., the effect *not* mediated through assumed expectations) failed to reach significance for participants with high, average, and low levels of benevolent sexism. These results suggest that, to the extent that that they were guided by a male rather than a female instructor, women high on benevolent sexism assumed that their instructor expected them to seek dependency-oriented help; this assumption, in turn, predicted the actual seeking of dependency-oriented help.

Discussion

The results of Study 3 supported our main hypothesis that the endorsement of benevolent sexism predicted women's tendency to seek more dependency-oriented help in cross-gender, compared with same-gender, interactions. Whereas Studies 1 and 2 focused on participants' behavioral intentions, Study 3 extended the generalizability of our conclusions by examining participants' *actual help-seeking behavior*. In addition, the exploratory analysis of Study 3 identified assumed expectations of the help provider as a potential mediator of the interactive effect of benevolent sexism and helper's gender on women's help-seeking behavior. Specifically, our results are compatible with the possibility that when interacting with a male instructor, higher levels of benevolent sexism predicted female participants' tendency to assume that he

¹¹ The dependent variable in Studies 3 and 4 (i.e., the number of times dependency-oriented help was sought or provided, respectively) is a count variable, namely, a variable that takes discrete values reflecting the number of occurrences of an event, which can only take on positive integer values or zero. The conditional distributions of count variables tend to be positively skewed and kurtotic, with many low-count observations and no observations below zero. The use of a standard ordinary least squares (OLS) regression in such cases "represents the standard, nonoptimal practice in much of current literature in psychology" (Coxe, West, & Aiken, 2009, p. 125). Instead of using OLS, Coxe and colleagues (2009) recommend using a standard Poisson regression, which increases statistical power while maintaining the proper Type 1 error rate. Indeed, when using a Poisson regression, the key two-way interaction in Study 3 (i.e., Instructor's Gender \times Benevolent Sexism), which is only marginal when using an OLS regression, becomes significant, $b = .290$, $SE = .144$, Wald chi square = 4.04, $p = .045$, 95% CI [.007, .572]. In Study 4, the key two-way interaction (i.e., Student's Gender \times Benevolent Sexism) is also significant, $b = .256$, $SE = .089$, Wald chi square = 8.28, $p = .004$, 95% CI [.081, .430]. Using Poisson regression, however, has "the disadvantage that the predicted scores are not in the same metric as the observed dependent variable scores; rather, the predicted scores are in a less familiar transformed metric" (Coxe et al., 2009, p. 124). We therefore chose to report the OLS results, as the regression coefficients obtained when using this analysis are simple and easy to interpret.

Table 4
 Study 3: Results of Regression Analysis on Dependency-Oriented Help Seeking

Predictors	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	β	95% CI	
						LL	UL
Constant	.849	.088	9.653	.001		.689	1.026
Psychotechnical ability	-.197	.083	-2.391	.018	-.162	-.376	-.029
Instructor's gender	.072	.125	.575	.566	.038	-.174	.295
Benevolent sexism	-.027	.093	-.289	.773	-.029	-.207	.168
Instructor's Gender \times Benevolent Sexism	.248	.126	1.969	.050	.195	.004	.485

Note. $N = 217$ female participants (109 and 108 in the female and male instructor condition, respectively). Instructor's gender was coded such that it had the values -1 and $+1$ in the female vs. male instructor conditions, respectively. Participants' score on dependency-oriented help seeking ranged from 0 (no dependency-oriented help was sought) to 3 (dependency-oriented help sought in all the cases in which the student needed help). Participants' score on psychotechnical ability ranged between -2.18 and 1.84 . CIs were calculated using bootstrapping (1,000 resamples). *SE* = standard error; CI = confidence interval; LL = lower level of CI; UL = upper level of CI.

expected them to seek dependency-oriented help, and this assumption, in turn, predicted greater tendency to ask for final answers (dependency-oriented help) instead of explanations on how to solve the questions on their own (autonomy-oriented help). This finding is consistent with previous findings that benevolent sexism shapes women's perceptions, judgments, and expectations in various domains and situations (see Glick & Fiske, 2011), including cross-gender helping (Becker, Glick, Ilic, & Bohner, 2011).

In particular, benevolent sexism might have shaped female participants' *metastereotypes* (see Vorauer, Main, & O'Connell, 1998) within the helping interaction: Women high on benevolent sexism were more likely to believe that the man with whom they were interacting expected them to behave in accordance with the dependency-stereotype (i.e., seek dependency-oriented help). Because people generally wish to get along with others, and therefore often align their behavior and views with those of their interaction partners (e.g., Chartrand & Bargh, 1999; Chen, Shechter, & Chai-

ken, 1996), assumed instructor's expectations strongly predicted women's actual behavior (i.e., women aligned their behavior with their partner's assumed expectations).

The results of Study 3 may seem, at first glance, inconsistent with Wakefield, Hopkins, and Greenwood's (2012) findings that when female participants were made aware of the dependency stereotype, they became *less* willing to seek help from either a man or a woman, suggesting that women's awareness of metastereotypes regarding their gender "can motivate behavior *discrepant* with the stereotype" (p. 424). However, female participants in Wakefield et al.'s experimental condition were directly exposed to the dependency stereotype, in a context in which it was explicitly *condemned* by another woman (who received unsolicited help from a man). By contrast, in Study 3, we neither directly exposed our participants to the dependency stereotype nor presented it in a negative light. If anything, because our participants knew that their interaction partner was provided with the correct answers for the explicit purpose of helping them (as part of his or her role as their instructor), our procedure likely induced them with the feeling that seeking help is normative and encouraged. Future research may further explore the conditions under which women show stereotype-consistent versus inconsistent behavior. It is possible that stereotype-inconsistent behavior would occur when this stereotype is explicitly condemned, and especially among women who are low on benevolent sexism (and are possibly motivated to refute the dependency-stereotype). By contrast, stereotype-consistent behavior would occur when the dependency stereotype is not explicitly condemned, and especially among women who strongly endorse this stereotype themselves (i.e., those high on benevolent sexism)—as found in the present study.

A limitation of Study 3 is that its key effect (i.e., the interaction between participants' benevolent sexism and the instructor's gender) was relatively small. This finding might reflect the fact that help-seeking behavior is a highly complex phenomenon, which is determined by multiple factors beyond the ones that are the focus of the present study (i.e., benevolent sexism and gender of interaction partner). Quite logically, for example, participants' psychotechnical ability affected their behavior as well, such that higher ability predicted less dependency-oriented help seeking among our female participants. We further discuss this issue in the General Discussion.

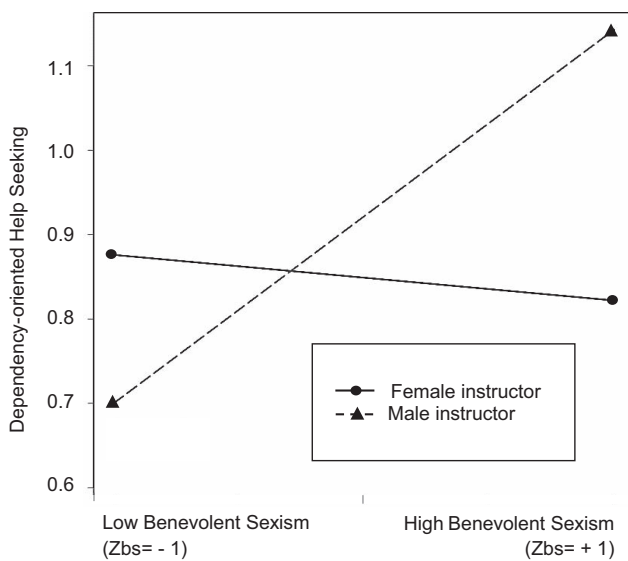


Figure 2. The effect of benevolent sexism on dependency-oriented help seeking (i.e., number of requests for final answers) among female participants interacting with either a male or a female instructor. $N = 217$ female participants.

Table 5

Assumed Instructor's Expectations as a Conditional Mediator of the Interactive Effect of Instructor's Gender and Student's Benevolent Sexism on Female Participants' Dependency-Oriented Help Seeking (Study 3)

Regression results for a conditional indirect effect (moderated mediation)				
Predictor	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Outcome: Assumed instructor's expectations				
Constant	2.188	.411	5.324	.001
Psychotechnical ability	-.136	.122	-1.120	.264
Instructor's gender	-.668	.409	-1.634	.104
Benevolent sexism	.226	.117	1.928	.055
Instructor's Gender × Benevolent Sexism	.233	.116	-1.997	.047
Outcome: Dependency-oriented help seeking				
Constant	.125	.289	.432	.666
Psychotechnical ability	-.176	.081	-2.179	.030
Assumed instructor's expectations	.157	.045	3.463	.001
Instructor's gender	-.391	.272	-1.440	.151
Benevolent sexism	.086	.078	1.104	.271
Instructor's Gender × Benevolent Sexism	.119	.078	-1.530	.127
Conditional direct effects of instructor's gender on dependency-oriented help seeking				
BS level (<i>z</i> score)	Effect	<i>SE</i>	<i>t</i>	<i>p</i>
Low (-1)	-.079	.086	-.919	.359
Average (0)	.016	.061	.257	.798
High (+1)	.110	.088	1.258	.210
Conditional indirect effects of instructor's gender on dependency-oriented help seeking through assumed instructor's expectations				
BS level (<i>z</i> score)	Effect	Boot <i>SE</i>	Boot LLCI	Boot ULCI
Low (-1)	-.009	.023	-.062	.031
Average (0)	.020	.016	-.002	.064
High (+1)	.049	.025	.014	.123
Indirect effect of Instructor's Gender × BS interaction				
Mediator	Effect	Boot <i>SE</i>	Boot LLCI	Boot ULCI
Assumed expectations	.037	.023	.004	.095

Note. $N = 217$ female participants. Unstandardized regression coefficients are reported. Bootstrap sample size = 5,000. Instructor's gender was coded such that +1 represented a male instructor and -1 represented a female instructor. The regression model with assumed instructor's expectations as dependent variable, reported in the upper part of the table, is significant at $p = .019$; in terms of descriptive statistics for assumed instructor's expectations, $M_s = 3.10$ ($SD = 1.45$) and 2.83 ($SD = 1.29$) in the male and female instructor conditions, respectively. The regression model with dependency-oriented help seeking as dependent variable, reported in the middle part of the table, is significant at $p < .001$; descriptive statistics for dependency-oriented help seeking are reported in the Results section of Study 3. Level of confidence = 95%. *SE* = standard error; LLCI = lower level of confidence interval; ULCI = upper level of confidence interval.

Study 4

Corresponding to Study 3, Study 4 was designed to extend the generalizability and ecological validity of the findings of Study 2b by examining the influence of men's endorsement of benevolent sexism on their actual behavior in same- versus cross-gender helping interactions. The procedure generally matched that of Study 3, except that participants were assigned to be the *instructors* of either male or female (depending on the experimental condition) "students" who took a difficult test of mathematical, technical, and logical ability. When students requested help, participants could provide help that was either dependency oriented (i.e., final answers) or autonomy oriented (i.e., hints for solutions). As "a mirror image" of Study 3's results, we expected male participants who were high, rather than low, on benevolent sexism to provide more dependency-oriented help to a female than to a male student.

As in Study 3, we additionally explored the psychological mechanism that may drive this interactive effect between male participants' benevolent sexism and the help recipient's gender on their help providing behavior. For this purpose, we measured several psychological constructs that could serve as potential mediators (see Nadler & Chernyak-Hai, 2014). These included perceived competence and motivation of the student; perceived effectiveness of autonomy-oriented help (i.e., the belief that the student would benefit from this type of help); positive attributions for help requests, such as attributing requests to situational factors like the questions' difficulty (as opposed to dispositional factors, such as the student's low ability); endorsement of the stereotype regarding women's inferior psychotechnical ability; and assumed student's expectations (i.e., whether the student expects to be provided with the final answers rather than with explanations of how to solve the questions). Interestingly, consistent with Study 3, when testing for

a conditional indirect effect (Preacher et al., 2007), only assumed expectations significantly mediated the obtained interaction between student's gender and instructor's benevolent sexism. We therefore report and discuss the obtained results solely for this variable (full protocol, reliabilities, and moderated mediation results pertaining all other variables are available as part of the online supplemental materials).

Method

Participants. One hundred ninety-eight male students of a large Israeli university, $M_{\text{age}} = 24.51$ years ($SD = 2.84$, range = 18 to 40), were recruited through ads placed on campus to take part in a psychological study in exchange for a payment. Most participants (85.9%) were undergraduate students, and the rest had different educational statuses (e.g., master's students). More than half (63.6%) majored in engineering and exact sciences, and the rest in other disciplines (e.g., social sciences).

Procedure. The study was the "mirror image" of Study 3, with the following modifications. Participants conducted the experiment from their home, in a prescheduled 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 he was online and ready to begin. Corresponding to Study 3, after the measure of their benevolent sexism ($\alpha = .85$, $M = 3.43$, $SD = .93$) and the completion of the filler task, and prior to the psychotechnical test, all participants were informed that they had been randomly assigned to be "instructors." A manipulation check verified that they correctly identified their assigned role as well as their partner's gender and role. Participants also reported their self-perceived psychotechnical ability (as explained in Study 3, this is a common term in Hebrew) using a three-item 7-point scale (e.g., "To what extent do you perceive yourself as having high psychotechnical ability?"; Cronbach's $\alpha = .96$).

Next, as instructors, the participants read 12 difficult questions, and received their final answers as well as a detailed explanation on how to solve them. To illustrate, for the question "What is the next term in the arithmetic series: 7, 13, 5, 17, -1, ? (a) 27, (b) -27, (c) 25, (d) 5," participants were provided both with a clue for solution—

You need to write down the differences between the terms in the series. These differences constitute a secondary series with a certain rule, such that in each step the difference between the terms is larger by two. Now you have to calculate the next term in the secondary series and add the resulting number to the last term in the main series

—and with the final solution, "(c) 25." While their "student" was supposedly working on the test, participants were notified that the student had asked for their help in solving four questions. For each question, the participant could provide the student either with the final answer, indicating dependency-oriented help, or with an explanation on how to solve it, indicating autonomy-oriented help ("The participant asked for help in this question. Would you like to provide him/her with a clue or with the final solution?"). Thus, participants' dependency-oriented help-providing score ranged from 0 (no final answers provided) to 4 (final answers provided in response to all help requests).

Similar to Study 3, we used ostensible "feedback questions" to explore possible mediators of the predicted moderation effect. The

following constructs were measured, using 7-point scales: perceived competence and motivation of the student (e.g., "To what extent, in your opinion, does the participant that you instructed have high academic skills?"); perceived effectiveness of autonomy-oriented help (e.g., "I believed that when I provided hints instead of final solutions, the information was not conveyed efficiently," reverse-scored); positive attributions for help requests (e.g., "To what extent did you attribute the other participant's help requests to the high difficulty of the questions?"); endorsement of the stereotype regarding women's inferior psychotechnical ability (e.g., "It is possible that men have better psychotechnical ability than women"); and, finally, three items measured assumed student's expectations with regards to the type of help the student prefers to receive (i.e., "I believe that the other participant expected me to provide him/her with mainly the final solutions"; "I believe that when the other participant encountered an especially difficult question s/he preferred me to solve the question instead of him/her"; and "I felt that the participant that I instructed preferred to deal with the test on his/her own without me telling him/her the final solutions"; reverse-scored; $\alpha = .65$). Upon completion, participants were thanked and debriefed.

Results

Manipulation check. All participants correctly identified the role to which they were assigned as well as their partner's gender.

Dependency-oriented help providing. Overall, 12% of the participants did not provide dependency-oriented help at all, 27% provided dependency-oriented help one time, 33% provided help two times, 18% provided help three times, and 10% provided help all four times. The means for dependency-oriented help providing were 1.82 ($SD = 1.12$) and 1.89 ($SD = 1.17$) in the male and female student conditions, respectively. To test our main hypothesis, we conducted a regression analysis with dependency-oriented help providing as the dependent variable. The predictors were benevolent sexism (standardized), student's gender ($-1 =$ male student, $+1 =$ female student), and their interaction. Consistent with Study 3, we also controlled for participants' psychotechnical ability, which was assumed to affect their judgment pertaining to the task's difficulty and the effectiveness of autonomy-oriented help. The obtained regression model, presented in Table 6, was significant, $F(4, 193) = 2.65$, $p = .035$, $\Delta R^2 = .052$. As shown in the table, the predicted Student's Gender \times Instructor's Benevolent Sexism interaction was significant (note that this interaction remained significant even when the instructor's self-perceived ability was not controlled for, $p = .006$).

We interpreted this interaction using Preacher et al.'s (2006) tool. The interaction is illustrated in Figure 3, which presents the slopes obtained for a female versus a male student. As expected, men's benevolent sexism predicted heightened dependency-oriented help providing when interacting with a woman, $\beta = .268$, $p = .038$. Unexpectedly, yet in line with our theoretical rationale, the opposite effect was observed in same-gender interactions, such that men's benevolent sexism predicted providing *less* dependency-oriented help when the help recipient was a man, $\beta = .242$, $p = .042$.

Conditional indirect effect. To test the causal chain presented in Figure 1, we again used Hayes's (2013) PROCESS macro (Model 8). Consistent with Study 3, only one analysis—

Table 6
 Study 4: Results of Regression Analysis on Dependency-Oriented Help Providing

Predictors	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	β	95% CI	
						LL	UL
Constant	2.665	.537	4.97	.001	—	1.696	3.791
Instructor's self-perceived ability	-.148	.095	-1.56	.120	-.111	-.348	.032
Student's gender	.052	.081	.64	.524	.045	-.121	.202
Benevolent sexism	.012	.081	.15	.879	.011	-.141	.171
Student's Gender \times Benevolent Sexism	.237	.081	2.93	.004	.207	.059	.416

Note. $N = 198$ male participants (99 in each experimental condition). Student's gender was coded such that it had the values -1 and $+1$ in the male vs. female student conditions, respectively. Participants' score on dependency-oriented help providing ranged from 0 (no dependency-oriented help was provided) to 4 (dependency-oriented help provided in all the cases in which the student asked for help). Participants' score on self-perceived ability ranged from 2.67 to 7.00. CIs were calculated using bootstrapping (1,000 resamples). *SE* = standard error; *CI* = confidence interval; *LL* = lower level of *CI*; *UL* = upper level of *CI*.

with assumed student's expectations as the potential mediator—found statistical support for moderated mediation. The results are presented in Table 7. First, as shown in the table, we found that the Student's Gender \times Instructor's Benevolent Sexism interaction had a significant effect on assumed student's expectations, such that benevolent sexism was positively associated with participants' assumption that their student expects to receive dependency-oriented help when the student was a woman, $r = .220$, $p = .029$, but was negatively associated with this assumption when the student was a man, $r = -.175$, $p = .083$. Second, assumed student's expectations to receive dependency-oriented help had a significant effect on instructors' dependency-oriented help providing (higher expectations predicted providing more dependency-oriented help, namely, participants provided their student with the type of help that they assumed the student to expect). Third, the

indirect effect of Student's Gender \times Instructor's Benevolent Sexism on dependency-oriented help seeking through assumed student's expectations was significant (i.e., zero was not included in the 95% CI). Specifically, the indirect effect was significant among participants whose benevolent sexism was high ($z_{bs} = +1$), but not average ($z_{bs} = 0$); in addition, a significant indirect effect in the opposite direction was obtained among participants with low benevolent sexism ($z_{bs} = -1$). Fourth, by contrast, the direct effect of student's gender on dependency-oriented help providing (i.e., the effect *not* mediated through assumed student's expectations) failed to reach significance for participants with high, average, and low levels of benevolent sexism. These results suggest that when instructing a female rather than a male student, men high on benevolent sexism assumed that their student expected them to provide her with dependency-oriented help; this assumption, in turn, predicted actual providing of dependency-oriented help. Interestingly, men who were low on benevolent sexism assumed that their female students *did not* expect them to provide the final solutions to the questions at hand, and these assumed expectations, in turn, predicted their tendency to provide *less* dependency-oriented help to female compared with male students.

Discussion

By examining men's actual behavior in a setting that simulates real-life helping interactions, Study 4 strengthened our conclusions that benevolent sexism encourages men to provide the type of help that reinforces traditional gender roles. Supporting our main hypothesis, endorsing benevolent sexism predicted male participants' tendency to provide more dependency-oriented help (i.e., final answers, as opposed to hints for solution) in cross-gender, compared with same-gender, interactions. Additionally, men low on benevolent sexism provided less dependency-oriented help to a female compared with a male student. Possibly, these participants intentionally rejected the chivalrous behavior prescribed by this sexist ideology, consistent with Wakefield et al.'s (2012) logic that, under certain circumstances, being aware of the prescriptions regarding traditional gender roles may motivate behavior that defies these prescribed norms.

Interestingly, consistent with Study 3, our results were compatible with the possibility that assumed partner's expectations mediated the interaction between instructor's benevolent sexism and student's gender, such that when interacting with a female student,

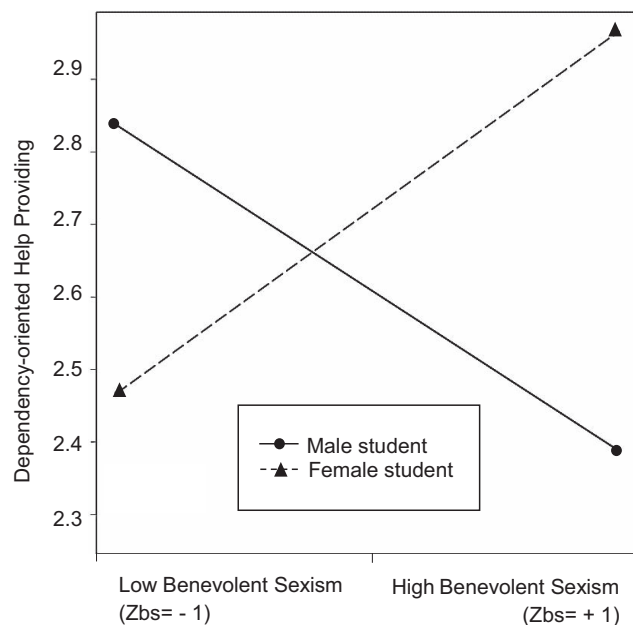


Figure 3. The effect of benevolent sexism on dependency-oriented help providing (i.e., number of final answers provided) among male participants interacting with either a male or a female student. $N = 891$ male participants.

Table 7

Assumed Student's Expectations as a Conditional Mediator of the Interactive Effect of Student's Gender and Instructor's Benevolent Sexism on Dependency-Oriented Help Providing Among Male Participants (Study 4)

Regression results for conditional indirect effect (moderated mediation)				
Predictor	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Outcome: Assumed student's expectations				
Constant	2.952	.656	4.500	.000
Instructor's self-perceived ability	-.005	.105	-.045	.965
Student's gender	-.933	.343	-2.721	.007
Benevolent sexism	.053	.097	.543	.588
Student's Gender × Benevolent Sexism	.273	.097	2.821	.005
Outcome: Dependency-oriented help providing				
Constant	.995	.494	2.015	.045
Instructor's self-perceived ability	-.145	.075	-1.934	.055
Assumed student's expectations	.550	.052	10.681	.000
Student's gender	-.310	.250	-1.239	.217
Benevolent sexism	-.016	.069	-.226	.822
Student's Gender × Benevolent Sexism	.105	.071	1.489	.138
Conditional direct effects of student's gender on dependency-oriented help providing				
Benevolent sexism level (z score)	Effect	<i>SE</i>	<i>t</i>	<i>p</i>
Low (-1)	-.047	.091	-.513	.609
Average (0)	.051	.064	.789	.431
High (+1)	.148	.092	1.613	.109
Conditional indirect effects of student's gender on dependency-oriented help providing through assumed student's expectations				
Benevolent sexism level (z score)	Effect	Boot <i>SE</i>	Boot LLCI	Boot ULCI
Low (-1)	-.138	.070	-.278	-.006
Average (0)	.001	.047	-.009	.089
High (+1)	.140	.072	.005	.278
Indirect effect of Student's Gender × Benevolent Sexism interaction				
Mediator	Effect	Boot <i>SE</i>	Boot LLCI	Boot ULCI
Assumed expectations	.150	.057	.032	.259

Note. $N = 198$ male participants. Unstandardized regression coefficients are reported. Bootstrap sample size = 5,000. Student's gender was coded such that the value +1 represented a female student and the value -1 represented a male student. The regression model with assumed student's expectations as dependent variable, reported in the upper part of the table, is marginally significant, $p = .093$; in terms of descriptive statistics for assumed student's expectations, $M_s = 3.12$ ($SD = 1.21$) and 3.13 ($SD = 1.31$) in the male and female student conditions, respectively. The regression model with dependency-oriented help providing as dependent variable, reported in the middle part of the table, is significant at $p < .001$; descriptive statistics for dependency-oriented help providing are reported in the Results section of Study 4. Level of confidence = 95%. *SE* = standard error; LLCI = lower level of confidence interval; ULCI = upper level of confidence interval.

higher levels of benevolent sexism predicted a higher tendency among male participants to assume that she expected them to provide her with dependency-oriented help. This, in turn, predicted behavior in accordance with these presumed expectations (i.e., providing final answers instead of explanations on how to solve the questions). Put differently, benevolent sexism may have shaped men's metastereotypes (Vorauer et al., 1998), such that men who strongly endorsed this ideology tended to believe that women expected them to serve as their "male protectors." Thus, although the decision of men higher on benevolent sexism to provide women with dependency-oriented help practically served the purpose of reasserting their superior status compared with their passive help recipients (see Nadler, Harpaz-Gorodeisky, et al., 2009), their subjective experience was that they acted to meet recipients' needs and expectations. Although the mediation tests

conducted in Study 4 were exploratory, it is noteworthy that a similar mediator was found in the exploratory tests in Study 3. This provides further support to the possibility that assumed partner's expectations indeed serve as the mechanism through which benevolent sexist attitudes translate into actual engagement in dependency-oriented cross-gender helping.

General Discussion

Four studies, conducted in Israel and Hungary, supported the hypothesis that benevolent sexism promotes engagement in dependency-oriented cross-gender helping relations, an ostensibly chivalrous mechanism through which men and women cooperatively reinforce traditional gender roles. Study 1 found that higher levels of benevolent sexism predicted women's preference to ask

for dependency-oriented help from men, rather than use strategies that would ultimately promote their independent coping. Correspondingly, among men, benevolent sexism predicted stronger intentions to provide dependency-oriented help to women. Study 1 also found that the endorsement of overtly hostile sexism did not predict men's and women's engagement in dependency-oriented helping relations, suggesting that there is a "match" between the subtle, seemingly kind nature of the sexist ideology and the type of behavior that it promotes. Study 2 found evidence for a causal link between benevolent sexism and engagement in dependency-oriented helping relations, demonstrating that exposing male and female participants to benevolent sexist statements increased their engagement in dependency-oriented helping relations in cross-gender, but not in same-gender, interactions.

In line with the recommendation to directly observe behavior when possible in social psychological research (Baumeister, Vohs, & Funder, 2007), Studies 3 and 4 extended these findings to women's and men's actual behavior within a setting that simulates real-life situations in which help may be sought or provided. Study 3 found that female participants high on benevolent sexism sought more dependency-oriented help from a male compared with a female instructor when taking a difficult psychotechnical test. Moreover, our results supported the possibility that this effect was mediated by the belief that the instructor expected them to request dependency-oriented rather than autonomy-oriented help. Correspondingly, Study 4 found that when serving as instructors, male participants who were high on benevolent sexism provided more dependency-oriented help to a female compared with a male student taking a difficult test. This effect was mediated by the belief that the female student expected them to provide dependency-oriented help. The consistency across the two studies is noteworthy in light of the fact that they were carried out in different countries (i.e., Hungary and Israel) and included measures of various potential mediators.

Theoretically, the present research offers a novel integration of the study of helping relations, on the one hand, and gender roles, on the other. Previous research on gender and helping has focused primarily on comparing women's and men's help-seeking behavior in response to various difficulties (e.g., Galdas, Cheater, & Marshall, 2005; Veroff, 1981), as well as on the reasons and consequences of the observed gender differences (e.g., Addis & Mahalik, 2003; Nadler, 2015; Rosner, 1990). The present study extends this work by looking not only at whether or not women seek help to cope with various difficulties but also at the *type* of help they seek, and how it relates to their gender role ideology (i.e., their endorsement of benevolent sexism) and situational cues (i.e., recent exposure to benevolent sexism and the gender of the help provider). Moreover, our study also examined an additional, complementary aspect of this phenomenon, namely, the type of help that men choose to offer women, compared with men, and the way it is shaped by their endorsement of or recent exposure to benevolent sexism.

The present studies also extend previous work on the adverse consequences of benevolent sexism. Converging empirical evidence (e.g., Barreto & Ellemers, 2005; Swim, Mallett, Russo-Devosa, & Stangor, 2005) reveals that both men and women often fail to recognize benevolent sexism as a form of prejudice. Moreover, women have been found to underestimate the coexistence of hostile and benevolent sexism in men, considering it unlikely that profiles of a hostile and a benevolent sexist describe the same

person (Kilianski & Rudman, 1998), and even rate a target male as more likable when presented as a benevolent sexist (compared with a nonsexist or a hostile sexist; Bohner, Ahlborn, & Steiner, 2010). In fact, however, benevolent sexism has various negative consequences for women. These include interfering with women's cognitive performance (Dardenne et al., 2007); increasing their self-objectification, self-surveillance, and body shame (Calogero & Jost, 2011; Shepherd et al., 2011); increasing men's tolerance for offensive sexist jokes (Greenwood & Isbell, 2002); and, of direct relevance to the present study, reducing men's assignment of challenging experiences to female targets in workplace contexts (King et al., 2012). Our findings extend this research by suggesting that benevolent sexism also shapes the nature of helping relations between men and women in a way that perpetuates rather than challenges traditional roles. Whereas previous research has focused on the effect of benevolent sexism on *either* men's biased behavior toward women (e.g., Greenwood & Isbell, 2002) *or* women's self-debilitating behavior (e.g., Becker & Wright, 2011), the present work examines how benevolent sexism affects the *interaction* between genders in a way that reinforces the traditional gender roles.

From a broader theoretical perspective, according to social dominance theory (Sidanius & Pratto, 1999); "legitimizing myths," that is, stereotypes and ideologies that "provide moral and intellectual justification for the social practices that distribute social value within the social system" (p. 45), impact the existing group-based social hierarchy by influencing the behavior of members of both "dominant" and "subordinate" groups. Specifically, legitimizing myths give rise to dominant group members' manifestation of in-group favoritism as well as to subordinate group members' self-debilitating behavior (such as passively accepting the status quo). The present research has applied this logic to the context of gender relations and demonstrated how benevolent sexism operates as a legitimizing myth.

One limitation of the present research is that our conclusions rest mostly on statically reliable but weak relations between the variables in question. Put differently, although they were highly consistent with our theorizing, the obtained effects were relatively small (using Cohen's, 1988, general rules of thumb for evaluating effect sizes). We attribute this limitation to the fact that there are numerous factors—within the recipient, the provider, and the situation—that affect the seeking or providing of help. To illustrate just a few examples, helping behavior has been shown to depend on the provider's self-perceived competence (Latané & Darley, 1970) and mood (e.g., Isen, 1999), and the recipient's personality (e.g., his or her field dependence-independence; Wapner & Demick, 1991) and impression management concerns (e.g., Ashford & Northcraft, 1992). In addition, giving and seeking help may vary across different situations (e.g., depending on the perceived norms within a given context; Lee, 1997). Thus, for example, one may provide or seek help when solving difficult math problems but not when dealing with financial issues. Given all these intervening factors, the fact that consistent patterns *did* emerge across the various measures and diverse settings is noteworthy.

An additional limitation of the present research is that participants were provided with distinct, clear-cut options of autonomy-versus dependency-oriented helping behavior, yet helping behavior might have a more ambiguous nature in reality. For example, even when a woman seeks for autonomy-oriented help, she can

adopt either a passive or an active approach (e.g., when consulting an advisor with regard to the statistical analysis required for her seminar paper, a female student can either avoid asking for further clarification when the advisor offers a strategy that does not convince her, or openly express her doubts and stir up a discussion). Correspondingly, even when seeking dependency-oriented help, a women can adopt either an active or a passive approach (e.g., when her acquaintance enters the address into the GPS for her, she can either watch him and try to understand how he operates the device, or engage in other activities until he is done). For this reason, examining naturally occurring helping behavior, that is, exploring the processes observed in the present research outside of the lab, would require going beyond the simple dichotomy of autonomy- versus dependency-oriented help and observing additional variables. For example, one may have to measure the amount of time that passes before a father who tries to teach his little daughter or son how to perform a difficult task would give up on teaching and simply perform the task on his own.

In addition, the present research focused on one specific dimension that differentiates between autonomy-oriented and dependency-oriented help, namely, the help-recipient's level of (in)dependence. However, another critical difference between the two types of help is that, in most cases, dependency-oriented help is likely to yield a faster solution to the problem at hand. Therefore, the engagement in each type of help is likely to be influenced by time-related considerations. In particular, the association between benevolent sexism and engagement in cross-gender dependency-oriented helping is likely to disappear under the circumstances of time pressure, in which seeking or providing dependency-oriented help constitutes the most effective strategy.

Another limitation of the present research is that it measured, rather than directly manipulated, the proposed mediating variable (i.e., partner's expectations). Such a design does not allow for ruling out the reverse order of causality, namely, that participants first engaged in dependency-oriented helping, and then rationalized their behavior by arguing that their partner expected them to seek or provide this kind of help. At the conceptual level, we believe this reverse model to be less consistent with our findings, because such rationalization would be expected to influence other variables beyond partner's expectations. For example, women who sought dependency-oriented help could rationalize their behavior by reporting reduced motivation to succeed in the test, and men who provided dependency-oriented help could rationalize it by claiming that they believed autonomy-oriented help would be less effective—yet we did not find evidence for these processes. Nevertheless, we acknowledge that to allow stronger inference about the role of assumed partner's expectations in the causal chain (Spencer, Zanna, & Fong, 2005; Stone-Romero & Rosopa, 2008), future research should empirically demonstrate that when a male help-provider explicitly conveys that he expects to be requested for autonomy-oriented help, women who are high on benevolent sexism will no longer show heightened dependency-oriented help-seeking behavior. Similarly, when a woman in need explicitly conveys that she expects to be provided with autonomy-oriented help, men who are high on benevolent sexism will no longer show heightened dependency-oriented help-providing behavior.

The possibility that conveying explicit expectations to engage in autonomy-oriented helping relations can break the vicious benevolent-sexism/women's-dependency cycle is consistent with

recent findings (Nadler & Chernyak-Hai, 2014) that advantaged group members attributed help requests by a disadvantaged group member to his low competence and motivation, and hence chose to provide him with dependency-oriented help. However, when the disadvantaged group member explicitly requested to receive autonomy-oriented help, advantaged group members viewed him as especially competent and motivated, suggesting that “the link between social inferiority and chronic dependency is more tenuous and malleable than is suggested [by previous findings]” (Nadler & Chernyak-Hai, 2014, p. 70). Notably, in the case of women who seek help, a message that explicitly refutes the assumptions driven by the benevolent sexist ideology may be particularly important. Previous research has shown that women who refused patronizing, dependency-oriented help were judged as cold and unlikable (Becker et al., 2011). This research exemplifies the social costs women face when confronting men's sexist behavior (see Good, Moss-Racusin, & Sanchez, 2012), and which, along with the social pressures to be cooperative and polite (Swim & Hyers, 1999), often cause them to avoid confrontation. A direct message from the helper, conveying that he expects to be requested to provide autonomy-oriented help, can reassure women that asserting autonomy would not entail adverse social costs.

Our research points to a number of additional potentially fruitful future research directions. First, in all our studies, the association between benevolent sexism and helping behavior was examined in the context of low-commitment relationships (i.e., between acquaintances in Studies 1 and 2, and between fellow participants in Studies 3 and 4). However, it may be interesting to examine whether this association is moderated by the relationship's level of closeness and commitment, which is known to influence prosocial behavior (e.g., Rusbult & Van Lange, 2003). For example, it is possible that in contexts of close, communal relationships, in which people wish to do what is in the best interest of their partners (Mills & Clark, 1982), men would be reluctant to provide dependency-oriented helping to women (e.g., their spouses or daughters). Alternatively, because traditional gender roles are often maintained even in close relationships (e.g., Ickes, 1993), the association between benevolent sexism and engagement in dependency-oriented cross-gender helping may generalize to such contexts as well.

Second, it may be intriguing to examine men's help-seeking behavior or women's help-providing behavior. In the present research, we focused on help providing among men and help seeking among women because our goal was to examine whether and how helping relations may subtly reinforce the traditional roles of women as dependent and men as their “rescuers.” It may be intriguing to additionally explore the corresponding hypotheses that either preexisting endorsement of, or situational exposure to, sexist attitudes toward men (i.e., perceptions of men as “bad but bold,” as measured by the Ambivalence Toward Men Inventory; Glick et al., 2004) would predict men's lower level of seeking dependency-oriented help in cross-gender compared with same-gender helping interactions (i.e., when interacting with a woman rather than a man), and women's lower level of providing dependency-oriented help when interacting with a man compared with a woman. Such behavioral patterns may further reinforce traditional gender roles, in this case, the role of men as independent and self-reliant.

Third, the present research has treated benevolent sexism as an antecedent rather than a consequence of engagement in dependency-oriented helping relations. However, consistent with self-perception theory (Bem, 1972) that people develop their attitudes based on their behavior, it is possible that the engagement in dependency-oriented helping relations may increase men's and women's endorsement of benevolent sexism. This possibility is consistent with our theorizing that dependency-oriented helping relations both *reflect* and *reinforce* the existing gender roles (see also Sidanius & Pratto, 1999). Thus, an intriguing direction for future research would be to examine the reverse causal direction by experimentally leading male and female participants to engage in dependency-oriented helping relations, and then measuring their endorsement of benevolent sexism.

Future research may also examine the potential influence of the domain in which help is sought or offered. In the present study, we chose to focus on domains in which women are stigmatized as inferior, such as psychotechnical ability (Abbate, 2012), based on our reasoning that in order to challenge the conventional gender roles, women must be able to independently cope with traditionally masculine tasks. We hypothesize that the patterns observed in the present study would not be replicated when traditionally feminine domains are examined. To illustrate, we believe that benevolent sexist women would not seek more dependency-oriented help from a man compared with a woman if they encounter a difficulty changing a diaper or cooking a meal; similarly, benevolent sexist men would not offer more dependency-oriented help to a woman compared with a man in these situations. This hypothesis is generally consistent with earlier findings that people tend to avoid helping behaviors that are incongruent with their perceived gender roles (Nadler, Maler, & Friedman, 1984; Wallston, 1976), yet this awaits direct empirical testing.

Finally, the present research focused on benevolent sexism, which shares two features with the engagement in dependency-oriented cross-group helping relations: first, its oppressiveness is subtle (rather than overt and explicit), and second, it is disguised as reflecting cooperative, kind intentions. Indeed, as a consequence of modern societies' formal endorsement of egalitarianism (Moscovici & Pérez, 2009), attempts to preserve group inequality are often manifested in such implicit and seemingly benign forms; for example, sometimes the real purpose of intergroup apologies is closing the lid on the past (Imhoff, Wohl, & Erb, 2013) and reinforcing the existing social arrangement (Shnabel, Halabi, & SimanTov-Nachlieli, 2015). Nevertheless, future research may aim to disentangle the two components—subtlety and positive tone. In particular, it may be intriguing to explore whether forms of sexism that are subtle, yet not especially positive, in tone, such as the denial of the existence of discrimination against women (which is measured by the Modern Sexism Scale [Swim, Aikin, Hall, & Hunter, 1995], as well as by the Neosexism scale [Tougas, Brown, Beaton, & Joly, 1995]), also predict men's and women's engagement in cross-gender dependency-oriented helping.

Conclusion

Most Western societies regard gender inequality as illegitimate. Nevertheless, progress toward equality is frustratingly slow, to a large extent because subtle and unconscious behavioral mecha-

nisms operate to maintain the status quo (e.g., Moss-Racusin, Dovidio, Brescoll, Graham, & Handelsman, 2012). Our findings that benevolent sexist men believed that women wished to receive dependency-oriented help illustrates such a mechanism, because in light of this belief, providing women with the type of help that maintain their lower, dependent status (i.e., dependency-oriented help) seems like a cooperative, rather than an oppressive, behavior. One of the challenges of the contemporary study of sexism is to expose such subtle mechanisms (Swim & Hyers, 2009), which are harder to pinpoint and identify compared with blatant manifestations of sexism (Barreto & Ellemers, 2005; Swim et al., 2005). Demonstrating how cross-gender helping relations can subtly perpetuate the existing gender roles is of primary theoretical and practical importance as it may increase men's, and even more so, women's, awareness of the adverse consequences of such help. Such awareness may contribute to the removal of one of many barriers to gender equality.

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