LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

WIRTSCHAFTS- UND ORGANISATIONSPSYCHOLOGIE
ECONOMIC AND ORGANISATIONAL PSYCHOLOGY
CHAIR: PROF. DR. FELIX BRODBECK

WOP Working Paper
No. 2013 / 3

Gender Differences in the Initiation of Negotiations: A Meta-Analysis

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A later version of this paper will be published in:
Kugler, K. G., Reif, A. M., Kaschner. T., & Brodbeck, F. C. (in press). Gender differences in the initiation of negotiation: A Meta-Analysis. *Psychological Bulletin*.

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The research was supported by the German Research Foundation (SFB 768). We thank Sarah Danboeck, Florian Gerhardinger, Lisa Hasenbein, Yvonne Hemmler, and Vladislav Tsekov for their assistance with study coding and manuscript preparation; we thank authors, who provided additional data and analyses from their studies; we thank Keri Hartman for proofreading our manuscript. We also want to express our gratitude to the editor and the reviewers for their valuable comments and suggestions.

Julia A. M. Reif and Tamara Kaschner contributed equally to the development of this manuscript. A previous version of this manuscript was presented as a poster at the conference of the "Society for Industrial and Organizational Psychology", May 16th, 2014, Honolulu, USA.

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Abstract

Gender differences in the initiation of negotiation have been suggested to reinforce unequal distributions of resources between men and women. Because previous research had yielded heterogeneous results, we conducted a meta-analysis investigating gender differences in initiating negotiation. On the basis of social role theory, we hypothesized that women are less likely to initiate negotiations than men, but also that the effect varies depending on characteristics of the immediate negotiation situation and the wider societal context. The meta-analysis comprised 55 effect sizes with $N = 17{,}504$ individuals, including both students and employees. A random-effects model confirmed that women were indeed less likely to initiate negotiations than men ($g = 0.20$). Additional moderator analyses, tested with mixed-effects models and meta-regressions, revealed that gender differences were smaller when situational ambiguity regarding the appropriateness of negotiating was low rather than high as well as when situational cues were more consistent with the female gender role than with the male gender role. Gender differences decreased by year of publication (from 1977 to 2016), but were unrelated to the degree of gender inequality in the countries in which the studies were conducted. We conclude that gender differences in the initiation of negotiation exist, but they are small and context-bound. Finally, we discuss mechanisms that alter the gender difference with a particular focus on potential starting points for practical interventions.

Keywords: meta-analysis, gender, gender differences, negotiation, initiation of negotiation

Public Significance Statement

The present meta-analysis shows that overall women are less likely to initiate negotiations than men. While certain situational characteristics attenuate the gender difference (e.g., individuals are explicitly prompted to negotiate), others reinforce the gender difference (e.g., individuals are in doubt whether negotiating is appropriate). Addressing gender differences in the initiation of negotiation might ultimately help to minimize unequal distributions of resources between men and women (e.g., gender wage gap).

Gender Differences in the Initiation of Negotiation: A Meta-Analysis

Imagine you are offered a job that you definitely want, but are offered a lower salary than expected. Would you accept the stated offer or initiate a negotiation about the salary? People differ in their likelihood of initiating negotiations (Reif & Brodbeck, 2014). But do men and women systematically differ in their likelihood of initiating negotiations? Previous meta-analyses on negotiation outcomes have repeatedly shown that under most conditions women are less effective and successful in negotiations than men (Mazei, Hueffmeier, Freund, Stuhlmacher, Bilke, & Hertel, 2015; Stuhlmacher & Walters, 1999; Walters, Stuhlmacher, & Meyer, 1998). Furthermore, phenomena such as the *gender wage gap*[1] and *glass ceiling*[2] have been attributed to women's tendency to negotiate less often and less successfully than men (e.g., Babcock, Gelfand, Small, & Stayn, 2006; Bowles & McGinn, 2008; Greig, 2008; Small, Gelfand, Babcock, & Gettmann, 2007; Tharenou, 2001). However, empirical findings regarding women's tendency to initiate negotiations are heterogeneous and inconclusive. Therefore, we conducted a meta-analysis investigating gender differences in initiating negotiation.

People often profit from taking advantage of the opportunity to negotiate (Rubin & Brown, 1975; Thompson, Wang, & Gunia, 2010). Especially in the workplace, people may improve their salaries, personal benefits, and careers, if they initiate negotiations. Recent developments such as more frequent job changes and idiosyncratic work arrangements have led to an increase in situations in which employees must decide whether to negotiate (Kulik & Olekalns, 2012; Rousseau, Ho, & Greenberg, 2006)[3]. Additionally, employees are expected to work proactively and take initiative, which indirectly spurs them to negotiate (e.g., Crant, 2000; Griffin, Neal, & Parker, 2007). Thus, if men are more likely to initiate negotiations than women, they should have an advantage.

Even though initiating negotiations is important for individuals' lives, the body of

literature addressing the topic is small (as also stated by e.g., Babcock et al., 2006; Pruitt & Kugler, 2014; Reif & Brodbeck, 2014; Small et al., 2007). Only recently has the topic received more attention from theory (cf. Reif & Brodbeck, 2014) and research (cf. Table 1). However, the available research as of now does not suggest a unanimous position on whether women are less likely to initiate negotiations than men. Some researchers have reported that women are less likely to initiate negotiations (e.g., Babcock et al., 2006; Greig, 2008), whereas others have found no effect or a reversed effect (e.g., Gerhart & Rynes, 1991; O'Shea & Bush, 2002). In addition, researchers have suggested a number of conditions that reinforce or reduce a gender difference in the initiation of negotiation (e.g., Small et al., 2007).

Therefore, we systematically analyzed the body of research about gender differences in the initiation of negotiation, research that cuts across a number of domains, such as conflict management, social psychology, organizational psychology, business studies, and consumer behavior. Our aim was to answer the question of whether women are less likely to initiate negotiations than men and to address conditions which augment or reduce the relationship between gender and initiating negotiation. By conducting a meta-analysis including moderator analyses, we provide an answer to the main research question and tested several hypotheses about factors that are likely to have accounted for the primary studies' heterogeneous results. The results have theoretical implications for our understanding of how and when men and women differ in their likelihood of initiating negotiations. They also provide practical insights for initiating negotiations – over and above what is already known about the negotiation process. Furthermore, we hope to stimulate future research on the hitherto neglected area of initiation of negotiation by highlighting research gaps of theoretical and practical relevance.

To our knowledge, the current meta-analysis is the first comprehensive quantitative overview on the topic of gender differences in the *initiation of negotiation*. Previously published

meta-analyses focused on gender differences *during negotiations*, addressing aspects such as perceptions during negotiations (Stuhlmacher, Saunders, Fetters, & Briggs, 2008), negotiation behaviors (Walters et al., 1998), and negotiation outcomes (Mazei et al., 2015; Shan, 2014; Stuhlmacher & Walters, 1999). These meta-analyses consistently reported an overall gender difference to the disadvantage of women while also highlighting a number of moderators, such as the negotiation situation (Mazei et al., 2015; Walters et al., 1998), the negotiator (Mazei et al. 2015; Stuhlmacher et al., 2008), the negotiation task (Mazei et al., 2015), and the cultural context (Shan, 2014). Other meta-analyses of negotiation research which did not investigate gender differences focused on social motives (De Dreu, Weingart, & Kwon, 2000), information processing (Orr & Guthrie, 2006), individual differences (Sharma, Bottom, & Elfenbein, 2013), goals (Zetik & Stuhlmacher, 2002), negotiation behaviors (Druckman, 1994; Hueffmeier, Freund, Zerres, Backhaus, & Hertel, 2014; Stuhlmacher & Citera, 2005), and situational influences (Stuhlmacher, Gillespie, & Champagne, 1998). With respect to gender differences that can be broadly connected to *initiating behaviors*, several meta-analyses exist reporting that women show less assertiveness than men (e.g., Feingold, 1994; Leaper & Ayres, 2007), less aggression (e.g., Archer, 2004; Bettencourt & Miller, 1996), less risk taking and sensation seeking behaviors (e.g., Byrnes, Miller, & Schafer, 1999; Cross, Copping, & Campbell, 2011), as well as partly less proactivity (Spitzmüller, Sin, Howe, & Fatimah, 2015; Tornau & Frese, 2013). Thus, by aggregating the empirical evidence on gender differences in the focus area of initiating negotiation, the current meta-analysis also contributes to the broader research areas of gender differences, negotiation, and initiative behaviors.

We also drew on various qualitative reviews in the areas of initiating negotiation, gender differences in negotiations, negotiations in general, and gender differences in general. First, we considered the theoretical model of initiating negotiation presented by Reif and Brodbeck (2014),

which builds on a review of applicable empirical studies. Additionally, Peterson and Lucas (2001) offered a qualitative review focusing on the pre-negotiation phase. Second, qualitative reviews on gender differences during the negotiation process enriched our understanding of the phenomenon and our theoretical reasoning (Bowles, 2013; Bowles & McGinn, 2008; Kolb, 2009; Kray & Babcock, 2006; Kray & Thompson, 2005; Kulik & Olekalns, 2012; Stuhlmacher & Linnabery, 2013). Third, we considered major qualitative reviews on the general topics of negotiation (Bazerman, Curhan, Moore, & Valley, 2000; De Dreu, Beersma, Steinel, & Van Kleef, 2007; Kelleher, 2000; Lewicki, Weiss, & Lewin, 1992; Li, Tost, & Wade-Benzoni, 2007; Olekalns & Adair, 2013; Thompson, 1990; Thompson et al., 2010; Tsay & Bazerman, 2009) and gender differences (Eagly & Wood, 1999, 2013; Hyde, 2014; Stewart, & McDermott, 2004; Wood & Eagly, 2002, 2010).

Based on the meta-analyses and qualitative reviews just listed, we chose social role theory (Eagly, 1987; Eagly & Wood, 2012) to explain gender differences in the initiation of negotiation. Social role theory integrates several theoretical approaches and offers a unifying framework for predicting and studying gender differences (Eagly & Wood, 1999, 2013; Stuhlmacher & Linnabery, 2013; Wood & Eagly, 2002, 2010). Social role theory has also been shown to meaningfully predict gender differences during negotiations and in negotiation outcomes (e.g., Amanatullah & Morris, 2010; Amanatullah & Tinsley, 2013; Bowles, Babcock, & Lai, 2007; Mazei et al., 2015). Our meta-analysis contributes to the stream of theory and research exploring social roles as a source of gender differences in negotiation by testing hypotheses about the initiation of negotiation derived from social role theory and linked to the theoretical model of initiating negotiation (Reif & Brodbeck, 2014).

The Initiation of Negotiation

Before we delve into gender differences in initiating negotiation, we focus on the

initiation of negotiation in general. We provide a definition, describe the theoretical model by Reif and Brodbeck (2014), and summarize the diverse ways in which researchers have measured the initiation of negotiation.

By definition, a negotiation is initiated when individuals start negotiating intentionally and on their own terms (Reif & Brodbeck, 2014). A negotiation is a procedure for resolving differences between parties by discussion (Carnevale & Pruitt, 1992). The initiation of negotiation is described in a theoretical model that builds on the expectancy x valence approach (Vroom, 1964) and therefore highlights individuals' cognitive and motivational processes as they consider initiating a negotiation (Reif & Brodbeck, 2014). According to the model, five determinants lead to the initiation of a negotiation: (a) a perceived discrepancy between what individuals expect and what (it is offered that) they receive, linked to (b) a negative emotional reaction; (c) a desired outcome of the negotiation; (d) the expectancy of being capable of successfully negotiating; and (e) the belief that the benefits of negotiating outweigh the costs (including economic and social benefits/costs). In our meta-analysis, possible sources for gender differences in the initiation of negotiation are linked to different components of the described model[4].

Researchers have explored the initiation of negotiation in various ways, including in diverse settings and with diverse samples of participants. For example, some researchers have observed students' behaviors in a laboratory setting (e.g., Small et al., 2007), whereas others have surveyed employees about their salary negotiations (e.g., Crothers et al., 2010). We clustered the different approaches researchers have used to conceptualize and measure the initiation of negotiation into four broad categories.

First, some researchers directly observed whether individuals decided to start an actual negotiation in a given situation. For example, Small et al. (2007) invited participants to a

laboratory, asked them to complete a word game, and then offered $3 as compensation. The authors assessed whether participants accepted the $3 or started negotiating for a higher compensation. Second, other researchers used scenarios that placed participants in a situation in which they were to imagine deciding to initiate a negotiation. For example, Bowels et al. (2007) asked participants to imagine a job interview and to decide whether they would ask for a higher salary. Third, researchers have assessed the initiation of negotiation in terms of past or future behavior. Babcock et al. (2006) introduced the most widely used measure of this type. The authors asked participants when in the past they had initiated negotiations and when in the future they planned to initiate negotiations. Babcock et al. (2006) argued that participants' general likelihood of initiating negotiations was higher if they had initiated a negotiation in the recent past or intended to initiate one in the immediate future. Fourth, researchers have measured initiation of negotiation as a general behavioral tendency independent of any specific situation (e.g., Meister, 2014). For example, Meister (2014) asked participants to rate their general likelihood of negotiating when buying products and services.

Each approach to assessing the initiation of negotiation entails advantages and disadvantages. By observing whether individuals initiate a negotiation, the first approach is the only approach to assess actual behavior. However, this type of assessment is limited to very specific situations in which such observations are possible, compromising the measure's generalizability. By using scenarios, the second approach allows initiation of negotiation to be assessed in any given situation. However, this approach is also situation-specific, and additionally relies on individuals' imaginations, which might deviate from their actual behavior. By assessing memories and anticipated behavior, the third approach is independent of any specific situation. However, memory and anticipation might be subject to individual biases. By assessing dispositions, the fourth approach measures the initiation of negotiation in a generic

way. However, subjective ratings might not entirely translate into behavior.

We included all four measurement approaches in our meta-analysis, the advantages and disadvantages described above notwithstanding. In order to account for possible methodological effects as a result of the different approaches, our moderator analyses included characteristics of the sample, the studies' settings, and the measurement approach for assessing initiation of negotiation. We provide further details on these methodological moderators in the method section.

Gender Differences in the Initiation of Negotiation

We base our theoretical reasoning on gender differences in the initiation of negotiation on *social role theory* (Eagly, 1987; Eagly & Wood, 2012). Reviewing authors in the field suggested that social role theory offers a comprehensive and unifying theoretical framework for predicting and studying gender differences in various areas, including the area of negotiation (cf. Eagly & Wood, 1991, 2013; Eagly, Wood, & Diekman, 2000; Mazei et al., 2015; Stuhlmacher & Linnabery, 2013; Wood & Eagly, 2002, 2010, 2015). Below, we first describe gender differences from the perspective of social role theory in general terms. Next, we explain why social role theory offers a unifying theoretical framework for explaining gender differences by highlighting the links between social role theory and other theories on gender differences. Finally, we predict gender differences in the initiation of negotiation on the basis of social role theory and by linking social role theory to the theoretical model of initiating negotiation (Reif & Brodbeck, 2014).

Gender Differences from the Perspective of Social Role Theory

According to social role theory (Eagly, 1987; Eagly & Wood, 2012), gender differences in affect, cognition, and behavior originate in *gender role beliefs*. Gender role beliefs represent people's perceptions of men's and women's social roles in a given society. People form gender role beliefs when they observe men and women pursuing their social roles. For example, as per

the typical division of labor, women's social role is taking care of children, and men's social role is working to earn money ("typical" implies that this division of labor is overrepresented). Based on their observations, people infer gender-specific attributes and dispositions that equip men and women to perform their gender-specific behaviors (i.e., *correspondent inference*, Gawronski, 2003; Gilbert & Malone, 1995). The different attributes ascribed to men and women are apparent in shared beliefs about "the nature of men and women", also known as *gender stereotypes* (e.g., Eagly & Wood, 2012; Koenig & Eagly, 2014).

Gender role beliefs reflect what it stereotypically means to be a woman or a man. On the one hand, the *male gender role* is best described as *agentic*, a characteristic that implies being ambitious, assertive, competitive, and task-oriented. On the other hand, the *female gender role* is best described as *communal*, a characteristic that implies being supportive, caring, warm, emotional, and interpersonally oriented (Eagly & Karau, 2002; Eagly & Wood, 2012; Mazei et al., 2015; Stuhlmacher & Linnabery, 2013). The links between the male gender role and agentic characteristics and between the female gender role and communal characteristics have been repeatedly supported by research, including cross-cultural validations (Costa Jr., Terracciano, & McCrae, 2001; Ridgeway & Correll, 2004; Ridgeway & Diekema, 1992; Williams & Best, 1990; Wood & Eagly, 2002)[5].

Gender role beliefs influence individuals' behavior via several mechanisms (Eagly & Wood, 2012; Wood & Eagly, 2010). First, gender role beliefs are internalized and become part of people's identities (i.e., gender identities, Wood & Eagly, 2015). Gender identities guide behavior, as people strive to act in accordance with their identity. Second, gender roles generate expectancies about how others should behave. Conforming to gender role expectancies is socially rewarded; violating gender role expectancies is socially sanctioned. Also known as the *backlash effect*, reprisals for violations of gender roles are empirically and theoretically well

established in the literature (e.g., Amanatullah & Morris, 2010; Amanatullah & Tinsley, 2013; Rudman, 1998; Rudman & Fairchild, 2004; Rudman & Glick, 1999; Williams & Tiedens, 2016). Third, gender role beliefs activate hormonal changes, especially in testosterone and oxytocin – an aspect that we do not elaborate on in the current paper. In sum – using the terminology suggested by Cialdini and Goldstein (2004) – gender roles are thought to be both descriptive, specifying what people actually do, as well as injunctive, imposing on people what they ought to do.

Links between Social Role Theory and other Theories on Gender Differences

The social role perspective on gender differences offers a unifying and comprehensive theoretical framework, as it can be linked to other major theoretical approaches explaining gender differences (for reviews see Bowles, 2013; Eagly & Wood, 1999, 2013; Hyde, 2014; Wood & Eagly, 2002, 2010). We describe basic links to other theories on gender differences below.

Social role theory proposes that gender role beliefs emerge when people observe gender-specific behavior and infer underlying gender-specific dispositions. Thereby, social role theory is linked to *evolutionary theories*, which explain how gender-specific behaviors evolved. Evolutionary theories (e.g., Buss, 1995; Buss & Schmitt, 1993, 2011, Mealey, 2000) highlight that different physical attributes and behaviors were adaptive for men and women during evolution and therefore prevailed.

Furthermore, social role theory suggests that social rewards and punishments provoke and maintain gender-typical behavior. These two mechanisms are also central elements of *social constructionist theories* (e.g., Bohan, 1993; Gergen, 2001) and *learning theories* (e.g., Bussey & Bandura, 1999; Martin, Ruble, & Szkrybalo, 2002). Social constructionist and learning theories highlight that boys/men and girls/women learn how to behave appropriately not only by imitating role models, but also by being rewarded for socially accepted behaviors and punished for socially unaccepted behaviors.

According to social role theory, the male gender role is linked to high status and power in society more than the female gender role. Exercising high power is associated with agentic behaviors; therefore, exercising high power is consistent with the male gender role and inconsistent with the female gender role (cf. Carrier, Louvet, Chauvin & Rohmer, 2014; Conway & Vartanian, 2000). Experiencing backlash when acting in opposition to their gender role, women avoid showing explicitly agentic behavior (e.g., Williams & Tiedens, 2016). These dynamics, which reinforce a power imbalance between men and women, are taken up and explored in more detail by *status approaches* to gender (e.g., Berger, Rosenholtz, & Zelditch, 1980; Carli & Eagly, 1999; Ridgeway, 2011; Ridgeway & Diekema, 1992; Stewart, & McDermott, 2004).

Lastly, social role theory suggests that men and women internalize gender roles, which then become gender identities. On the basis of these gender identities, individuals define themselves by sex-typical vocations, activities, and interests. Thereby, social role theory links to e*xpectancy x valence models* on gender differences (e.g., Atkinson, 1983; Eccles, 1994; Vroom, 1964; Wigfield & Eccles, 1992). Expectancy x valence models suggest that gender differences in behavior originate from underlying gender differences in expectancies about being successful in a certain task (e.g., negotiation) and the importance ascribed to the task. In other words, expectancy x valence models also assume gender differences in vocations, activities, and interests.

In sum, social role theory connects to other major theories explaining gender differences from various perspectives. Given its unifying and comprehensive nature, social role theory has been frequently used to predict gender differences in various behavioral domains, including negotiation behavior (e.g., Amanatullah & Morris, 2010; Amanatullah & Tinsley, 2013; Bowles et al., 2007; Mazei et al., 2015). Therefore, we draw upon social role theory in conceptualizing

gender differences in the initiation of negotiation.

Gender Differences in the Initiation of Negotiation from the Perspective of Social Role Theory

The essence of our reasoning why men and women differ in their likelihood of initiating negotiations is the relative (in)consistency between the female gender role, the male gender role, and the negotiator role: The social role of an effective negotiator is consistent with the male gender role, whereas it is inconsistent with the female gender role. Both the negotiator role and the male gender role are portrayed as assertive, strong, dominant, and rational – in other words, agentic (Kray & Thompson, 2005; Kulik & Olekalns, 2012). Thus, men who initiate negotiations comply with the male gender role, whereas women who initiate negotiations violate the female gender role. When women violate their gender role, they oppose their own gender identity and may experience backlash (e.g., Bowles et al., 2007; Rudman, 1998; Rudman & Fairchild, 2004; Rudman & Glick, 1999).

The implications of the relative (in)consistency between the male, female, and negotiator roles can be linked to the theoretical model of initiating negotiation presented by Reif and Brodbeck (2014). First, women are more likely than men to question their negotiation effectiveness because they are more likely to experience a *misfit* between their perception of themselves and the characteristics of an effective negotiator. In addition, women who conform to the female gender role when negotiating are more likely to *fail* than men, because agentic (i.e., male) behaviors in negotiations have been shown to be more effective than communal (i.e., female) behaviors (e.g., Hueffmeier et al., 2014; Kray & Thompson, 2005; Kray, Thompson, & Galinsky, 2001). Experiencing misfits and failures more often than men, women should also question their capability to negotiate successfully more often than men. Questioning one's own negotiation effectiveness should reduce one's likelihood of initiating negotiations (according to

the model by Reif & Brodbeck, 2014). Second, women are more likely to fear backlash when considering a negotiation, and women are more likely to experience backlash when starting a negotiation (e.g., Bowles et al., 2007; Rudman, 1998; Rudman & Fairchild, 2004). Because backlash constitutes a social cost, women are more likely to expect higher social costs when negotiating than men. When the costs of negotiating outweigh the benefits, people refrain from negotiating (according to the model by Reif & Brodbeck, 2014). Accordingly, women should refrain from initiating negotiations more often than men.

The mechanisms discussed above suggest the following hypothesis:

Hypothesis 1: Women are less likely to initiate negotiations than men.

Moderator Variables

The social roles perspective implies at least two classes of moderators: first, the *degree of situational ambiguity* regarding the appropriateness to negotiate; and second, the *degree of (in)consistency* between gender roles and the negotiator role. Below, we address both classes of moderators.

Degree of Situational Ambiguity

One source for variation in the gender difference is the degree to which a situation explicitly prompts a negotiation or is ambiguous about whether negotiating is expected and accepted (e.g., Bowles, 2013; Bowles et al., 2007; Bowles, Babcock, & McGinn, 2005; Bowles & McGinn, 2008; Mazei et al., 2015; Mischel, 1977; Wood & Eagly, 2010). Our reasoning regarding situational ambiguity is influenced by Mischel's (1977) idea of situational strength. Whereas strong situations provide clear scripts of desirable behaviors, weak situations are ambiguous with regard to desirable behaviors. Instead, weak situations evoke general and fallback behaviors, such as gender-typical behaviors (Bowles et al., 2005; Eagly & Karau, 2002).

In strong negotiation situations (i.e., low situational ambiguity), negotiating is the script

for desirable behavior – regardless of gender. Accordingly, in strong negotiation situations, women can take on the negotiator role without having to fear backlash (Bowles & McGinn, 2008; Bowles et al., 2005, 2007). As a result, men and women should initiate negotiations to the same extent (according to the model by Reif & Brodbeck, 2014). In weak negotiation situations (i.e., high situational ambiguity), it remains unclear whether negotiating is a desirable and accepted behavior, and gender roles provide a fallback script for behavior. Given that negotiating is more consistent with the male gender role than the female gender role, a gender difference in the initiation of negotiation should exist in weak negotiation situations.

Sources of situational ambiguity regarding the appropriateness of negotiating can be manifold. We focus on those that were addressed in the primary studies of our meta-analysis.

First, *the negotiation topic* can influence the degree of situational ambiguity (Olekalns & Kulik, 2011). For example, most organizations expect that (potential) employees negotiate salaries and benefits, an expectation that reduces the situational ambiguity. On the contrary, less commonly negotiated topics involve a high degree of situational ambiguity, because it remains unclear whether such topics should actually be negotiated. Reif, Kunz, Kugler, and Brodbeck (2016) empirically investigated how commonly different topics are negotiated. Whereas participants frequently mentioned negotiations related to their jobs or to purchases, they infrequently mentioned other categories like negotiations with public administration. We propose that commonly negotiated topics reduce situational ambiguity and not commonly negotiated topics increase situational ambiguity regarding the appropriateness of negotiating.

Second, situations may be directly *announced as an opportunity to negotiate*, meaning that situational ambiguity is low. For example, prices or salaries can be labeled as “a basis for negotiation” or “negotiable”. Eriksson and Sandberg (2012) invited participants into the laboratory to complete a word game (i.e., Boogle). The researchers then stated: “You have now

finished the word puzzle and will be paid between 30 and 100 SEK [Swedish Kronor]. Wait here while your word puzzle is being scored. When the word puzzle has been scored, you will be paid. The exact payment is negotiable." (p. 412). The researchers then offered 30 SEK and observed whether participants initiated a negotiation. They found no gender difference in this situation of low ambiguity (i.e., the situation was directly announced as negotiation).

In sum, we conclude that man and women initiate negotiations to the same extent when situational ambiguity regarding the appropriateness of negotiating is low, because they both can draw on the negotiator role without having to fear backlash. By contrast, men initiate negotiations more than women when situational ambiguity is high, because they draw on their gender roles, with women having to fear backlash if they nevertheless initiate negotiations.

> *Hypothesis 2:* Situational ambiguity regarding the appropriateness of negotiating moderates the gender difference in the initiation of negotiation: The lower the situational ambiguity, the smaller the gender difference in the initiation of negotiations.

Degree of (In)Consistency Between Roles

Another source of variation in the gender difference is the degree of (in)consistency between the female, male, and negotiator roles. The degree of (in)consistency can be influenced by both the *broader societal context (e.g., time and culture)* and the *immediate negotiation situation*. We first address time and culture as sources of variability in the gender difference in initiating negotiation before turning our focus to the immediate negotiation situation.

Since the middle of the last century, women have increasingly entered domains formerly dominated by men. These domains include the workforce in general as well as managerial positions and (higher) education (Gipson, Pfaff, Mendelsohn, Catenacci, & Burke, 2017; Tomaskovic-Devey et al., 2006; Wood & Eagly, 2010). As women strengthen their agency by increasingly occupying new roles, the expression of agency is becoming part of the female

gender role (Donnelly & Twenge, 2016; Twenge, 1997, 2001; Wood & Eagly, 2010). Because agency is central to the male gender role, the degree of inconsistency between female and male gender roles should decline over *time*[6].

Just as gender roles vary over time, they also vary *across cultures*. Cultures differ greatly regarding their degree of *gender inequality*. Gender inequality is a cultural dimension that describes the degree to which similarity between men and women is put into practice. Indices assessing gender inequality shed light on the position of women in a specific society as well as gender gaps in major areas of human development (House, Hanges, Javidan, Dorfman, & Gupta, 2004; Human Development Report, 2015; World Economic Forum, 2015). For example, the United Nations measured gender inequality by assessing women's participation in politics and the labor force as well as women's reproductive health (Human Development Report, 2015). Because gender roles mirror the positions that men and women occupy in a given society, a culture's level of gender inequality should reflect the level of inconsistency between female and male gender roles (Eagly & Karau, 2002; Wood & Eagly, 2010).

In sum, in times and cultures in which the male and female gender roles converge, both gender roles become similarly consistent with the negotiator role (and vice versa). When both gender roles are similarly consistent with the negotiator role, women and men should have similar perceptions about being effective negotiators and similar expectations about backlash when negotiating. When they have similar perceptions and expectations, women and men should consider initiating negotiations to a similar extent (according to the model by Reif & Brodbeck, 2014).

> *Hypothesis 3:* The time in which studies were conducted moderates the gender difference in the initiation of negotiation: The more recently a study was conducted, the smaller the gender difference in the initiation of negotiations.

Hypothesis 4: The cultural background in which studies were conducted moderates the gender difference in the initiation of negotiation: The lower the gender inequality in a given culture, the smaller the gender difference in the initiation of negotiations.

Another source for variability in the degree of (in)consistency between the female, male, and negotiator roles is the *immediate negotiation situation*. For example, some negotiations take place in a cooperative social environment, which calls for cooperative negotiation strategies; other negotiations take place in a competitive social environment, which calls for competitive negotiation strategies. In the first setting, women do not violate their female gender role by negotiating cooperatively; however, in the second setting, women violate their female gender role in order to negotiate competitively. Consequently, researchers have suggested that actively offering cues within the immediate negotiation situation that are in line with the female gender role helps women to perceive less inconsistency between the female and the negotiator roles and to initiate more negotiations (Babcock, 2016; Bear & Heller, 2015; Reif & Neser, 2013).

Reif und Neser (2013) investigated the influence of cooperative versus competitive situational cues in a negotiation situation. Participants were either asked to imagine a salary negotiation in which a win-win outcome through open communication was highlighted (i.e., cooperative cues in line with the female gender role), or participants were asked to imagine a salary negotiation in which a win-lose outcome through assertive claims was highlighted (i.e., competitive cues in line with the male gender role). Babcock (2016) contrasted situations with a feminine negotiation topic (i.e., dinner decoration) and a masculine negotiation topic (i.e., dinner payment plan). In both studies, women's likelihood of initiating negotiations was higher in situations with cues in line with the female gender role than in situations with cues in line with the male gender role, a result that the authors traced back to the assumption that female cues decrease the inconsistency between the female and negotiator roles.

In brief, in negotiation situations where the inconsistency between the female and negotiator roles is low, women should feel more confident in their ability to successfully negotiate and less fearful of experiencing backlash when negotiating. Thus, women's likelihood of initiating negotiations should increase (according to the model by Reif & Brodbeck, 2014).

Hypothesis 5: Cues in the immediate negotiation situation moderate the gender difference in the initiation of negotiation: The more situational cues are in line with the female gender role, the smaller the gender difference in the initiation of negotiations.

Method

Identification of Studies

Search strategies. To identify the body of empirical studies investigating gender differences in the initiation of negotiation, we employed several search strategies until May 2016.

First, we conducted an electronic search in the following databases: ABI/Inform Complete, Academic Search Complete, British Index of Theses, Business Source Premier, Business Source Complete, DissOnline, Educational Resources Information Centre (ERIC), Emerald Insight, Google Scholar, PAIS International, ProQuest Dissertations & Theses A&I, PsycINFO (via EBSCO), PsycARTICLES, PSYNDEX, Science Direct, Social Science Research Network, Sociological Abstracts, Web of Science, Wiley Interscience, and Worldwide Political Science Abstracts. To identify studies exploring the initiation of negotiation, we searched all databases, determining whether a document included at least one of the following terms in the full text (if full text search was not available, we searched the keywords): *propensity to initiate negotiat** or *initiation of negotiat** or *start* to negotiate* or *begin* to negotiate* or *initiation of bargain** or *initiation of conflict resolution* or *initiation of mediation** or *avoidance of negotiat** or *avoidance of bargain** or *avoidance of conflict resolution* or *avoidance of mediat** or *choosing to negotiate* or *choosing to bargain* or *choosing to mediate* or *likelihood to negotiate* or

negotiation likelihood or *women are more likely to negotiate* or *men are more likely to negotiate* or *women are less likely to negotiate* or *men are less likely to negotiate*. In addition, we conducted another search in all databases listed above to identify papers that focused on either gender and negotiation or gender and initiation by using the following combinations of keywords: *gender* or *sex* in combination with (i.e., and) any one of the terms *negotiat** or *bargain** or *conflict* or *initiat** or *avoid** (cf. Mazei et al., 2015; Stuhlmacher & Walters, 1999; Walters et al., 1998).

Second, the conference programs of the Society for Industrial and Organizational Psychology (for the years 2003-2015), the International Association for Conflict Management (for the years 2002-2015), the European Association for Work and Organizational Psychology (for the years 2007, 2009, 2011, 2013, 2015), and the European Academy of Management (for the years 2010-2013, 2015, 2016) were screened.

Third, we conducted a forward search through Web of Science of the following three articles crucial to the literature on the initiation of negotiations: Gerhart and Rynes (1991), Babcock et al. (2006), and Small et al. (2007). We intended to find the papers that cited these three articles.

Fourth, we conducted a backward search identifying all papers cited in the following articles: Alserhan (2009), Bowles et al. (2007), Carlson, Huppertz, and Neidermeyer (2008), Crosby (2015), Crothers et al. (2010), Douglas and Miller (2015), Gerhart and Rynes (1991), Greig (2008), Harris and Mowen (2001), Kaman and Hartel (1994), Leibbrandt and List (2015), Magee, Galinsky, and Gruenfeld (2007), McGraw, Davis, Scott, and Tetlock (2016), O'Shea and Bush (2002), Schneider, Rodgers, and Bristow (1999), Small et al. (2007), as well as Volkema, Kapoutsis, and Nikolopoulos (2013).

Fifth, to find unpublished studies, we sent requests via the following mailing lists:

CMDNET (newsgroup of the Conflict Management Division of the Academy of Management), OB Listserv (mailing list of the Academy of Management), the mailing list of the Social Psychology Network, and the mailing list of the International Association for Conflict Management.

Sixth, we directly emailed authors of published papers and other researchers in the field of negotiation and asked for working papers and unpublished results.

These search strategies yielded a total of 201,482 records of potential relevance for our meta-analysis. The records were successively narrowed down as described below.

Inclusion criteria. To be included in the meta-analysis, a study had to meet the following criteria:

1. The study explored the initiation of negotiations among individuals rather than groups, organizations, or nations.
2. The study reported original data that allowed the effect size for the gender difference in the initiation of negotiation (Hedges' g) and its direction to be calculated.
3. The study's effect size was independent.
4. The study focused on the initiation of negotiation rather than other aspects of negotiation (e.g., the negotiation strategy or negotiation outcomes) or preceding factors (e.g., feelings of entitlement, recognition of opportunities, apprehensiveness about a potential negotiation, or conflict avoidance).
5. The study's participants were adults or adolescents (adolescents, in addition to adults, were also included in meta-analyses on negotiation outcomes, e.g., Mazei et al., 2015; Stuhlmacher & Walters, 1999).

After identifying 201,482 records that were potentially relevant for our meta-analysis, we successively winnowed the studies to find those that met the criteria. Figure 1 describes the steps

and details of the successive process.

First, one of the authors performed an automated search with Microsoft Excel to identify duplicates and records referring to irrelevant topics (Figure 1 lists the irrelevant topics). Second, six individuals (two of the authors and four research assistants) screened the titles of the remaining 66,853 records, excluding 66,308 titles. The research assistants were familiar with the topic and empirical research methods and also participated in a two-hour training facilitated by one of the authors. Third, the same six individuals read the abstracts of the remaining 545 records, excluding another 392 records. Fourth, one of the authors screened the full-text of the 153 remaining records and excluded 97 records, a decision that was double checked by another author. Another nine records had to be excluded because information necessary for the meta-analysis was missing and could not be tracked down. Ultimately, 47 full texts met all criteria and were included in the meta-analysis.

Throughout the entire process, we contacted the authors of the respective studies whenever documents, information, or specific results were unavailable to us. For student theses, we contacted both the students and their supervisors. Although we received many additional documents and results, we also had to exclude several records because their authors did not respond or could not provide the missing information (for details see Figure 1).

In several studies included in our meta-analysis, researchers used more than one type of question to assess the initiation of negotiation within the same study. In such cases, our preference was to include the combined effect sizes in our meta-analysis. Reif et al. (2016) provided the combined effect size. McGraw et al. (2016) reported the information necessary for us to combine the effect sizes using the procedure for complex data structures suggested by Borenstein, Hedges, Higgins, and Rothstein (2011). When the effect sizes could not be combined, we included only one effect size per study in our meta-analysis. For each study, we

chose the effect size that (a) was closest to real behavior, (b) was preferably about something tangible, (c) assessed recent behavior, or (d) was included in the questionnaire first. (a) For the study by Greig (2008), we included whether participants made a request during the study, instead of their most recent initiated negotiation. (b) For the studies by Crothers et al. (2010), Holliday et al. (2014), Kapoutsis, Volkema, and Nikolopoulos (2014b), McLaughlin and Hesli (2013), Traavik (2008), Valentich and Gripton (1977), and Volkema (2016), we included the results for negotiations about salary, instead of negotiations about other topics like promotion, salary increase, travel funds, or research space. (c) For the studies by Babcock et al. (2006), De Riemer, Quarles, and Temple (1982), Guthrie, Magyar, Eggert, and Kain (2009), and Reif, Kugler, Enders, and Brodbeck (2012, Study 3), we included the results for the most recent negotiation instead of negotiations further in the past. (d) For the studies by Carlson et al. (2008) and Petrescu (2016), we included the first question assessing the initiation of negotiation rather than questions asked later in the questionnaire; given that their questions were very similar, we presumed that the first question was least influenced by preceding questions.

The 47 full texts included in the meta-analysis comprised $k = 55$ studies reporting an effect size for the gender difference in the initiation of negotiations. The $k = 55$ effect sizes were based on $N = 17{,}504$ participants, of which 51% were male and 49% were female (Valentich and Gripton, 1977, did not report the gender distribution). The studies' sample sizes ranged from Min = 25 to Max = 2220; the average number of participants per effect size was $N = 318$.

For two moderator analyses (i.e., degree of (in)consistency between roles and degree of situational ambiguity), we considered conditions within studies separately. In some studies, the researchers included different experimental conditions (i.e., between-subjects designs) in which they deliberately manipulated one of our moderator variables. When performing the moderator analyses for these variables, the effect sizes for the conditions (instead of the effect sizes for the

entire study) were used. Table 1 shows which studies contained which conditions relevant to our meta-analysis (see columns "Manipulation of situational ambiguity" and "Manipulation of (in)consistency between roles"); all information regarding the conditions are marked in italics.

Coding Procedures

Once the study set was complete, all studies were coded independently by two coders: one author of the meta-analysis and one experienced research assistant, who was given three hours of additional training by one of the authors. To test our moderator hypotheses, the following aspects were coded: the degree of situational ambiguity (cf. Hypothesis 2), the year the study was conducted (cf. Hypothesis 3), the cultural background of the study (cf. Hypothesis 4), and the degree of (in)consistency between roles (cf. Hypothesis 5). To test whether characteristics of the studies' methodological approaches influenced the gender difference (i.e., methodological moderators), the following aspects were coded: measurement of initiating negotiation, study characteristics, and sample characteristics.

Degree of situational ambiguity. Situations vary in the extent to which they explicitly prompt a negotiation or are ambiguous about whether negotiation is expected and accepted. The study set of our meta-analysis allowed for the consideration of two factors that influence the degree of situational ambiguity: (a) deliberate prompts to negotiate versus deliberate ambiguity, and (b) the negotiation topic.

In several studies of the mea-analysis, researchers deliberately created *experimental conditions that varied in situational ambiguity* regarding the appropriateness of negotiation (i.e., experimental manipulation of situational ambiguity). The corresponding studies or conditions within studies were coded with respect to whether they induced high or low situational ambiguity. Beninger (2009), Eriksson and Sandberg (2012), Exley, Niederle, and Vesterlund (2016), Jung, Young, and Bauman (2010), and Tellhed and Björklund (2011) explicitly prompted

participants to negotiate (i.e., low situational ambiguity). Leibbrandt and List (2015) and Small et al. (2007) each included two conditions in their study: one condition with an explicit prompt to negotiate (i.e., low situational ambiguity) and one condition that deliberately made no reference to a negotiation (i.e., high situational ambiguity). Reif and Mehner (2013) as well as Reif et al. (2012, Study 1) each included three conditions in their study: participants were offered more than expected (positive discrepancy), as much as expected (no discrepancy), and less than expected (negative discrepancy). Following the rationale of Reif and Brodbeck (2014), experiencing a negative discrepancy activates the behavioral script for "negotiating" and thus reduces situational ambiguity (and vice versa). Whereas a positive discrepancy and no discrepancy were considered to induce high situational ambiguity, a negative discrepancy was seen as inducing low situational ambiguity.

Second, we coded the *negotiation topic* based on the assumption that commonly negotiated topics reduce situational ambiguity and not commonly negotiated topics raise situational ambiguity. Negotiating one's salary and career opportunities is expected in most workplaces (e.g., Kolb, 2013; Reif et al., 2016; Rousseau et al., 2006). Similarly, theory (e.g., Kolb, 2013) and research (e.g., Reif et al., 2016) suggests that budgets, prices, and purchases are commonly negotiated. Consequently, the topics *salary, career,* and *purchases* were considered to induce low situational ambiguity in our meta-analysis. Two other negotiation topics were investigated in the studies comprising the current meta-analysis: compensation for study participation and university grades. Negotiating one's compensation for study participation is uncommon in research to date; other forms of compensation like fixed payments, lotteries, or payments dependent on the experimental task are more common (e.g., Bankert & Amdur, 2006). We also could not find evidence that university grades are commonly negotiated. Moreover, Reif et al., (2012) reported that 42% of the students participating in their study had never negotiated a

university grade. Thus, *compensation for study participation* and *university grades* were considered to induce high situational ambiguity.

The two factors influencing the degree of situational ambiguity were not independent of one another. Negotiations were always about a topic, even in studies that deliberately varied situational ambiguity. Therefore, we combined the two factors in the following way: First, we considered whether situational ambiguity was deliberately manipulated. Only for all remaining studies did we consider the negotiation topic. We assumed that an experimental manipulation is dominant over the negotiation topic.

Degree of (in)consistency between roles. Negotiation situations vary in the degree of (in)consistency between the negotiator role and gender roles. The study set of our meta-analysis allowed for the consideration of three factors that influenced the degree of (in)consistency between roles: time, culture, and situational cues.

We approximated the *time* in which the study was conducted by the *year of publication*. Even though the studies were most likely conducted some time before their year of publication, there should not be systematic differences in this deviation.

We assessed the *cultural background* of each study by the *country* in which study participants were recruited (this information was either included in the publication or provided by the studies' authors upon request). Subsequently, we determined each country's level of gender inequality using the G*ender Inequality Index* published by the United Nations (Human Development Report, 2015). The Gender Inequality Index assesses gender inequality in three domains of human development: reproductive health (i.e., maternal mortality ratio and adolescent birth rates), empowerment (i.e., proportion of parliamentary seats occupied by females and proportion of adult females and males with at least some secondary education), and economic status (i.e., female and male labor market participation rates). The Gender Inequality Index

ranges from 0 = 0% equality to 1 = 100% equality (for details, see Human Development Report, 2015). Because gender inequality varies both over time and across countries (cf. Hypothesis 3 and Hypothesis 4), each country's Gender Inequality Index score from about the year of publication was used (± 3 years; the deviation was necessary as the index was not available for all years).

We additionally considered a sub-facet of the Gender Inequality Index: the *Labor Force Participation Ratio* (retrieved from the World Bank, 2016). The Labor Force Participation Ratio specifies the percentage of women versus men in the labor force and would be 100% under full equality. We were interested in this sub-facet because it mirrors gender inequality in the workplace, a domain where initiating negotiations is especially important (see introduction). Again, we incorporated the index score from about the year in which the study was published (± 3 years; because the index is only available from 1990 onwards, we could not assign an index score to the two oldest studies: De Riemer, Quarles, & Temple, 1982 and Valentich & Gripton, 1977).[7]

The *immediate negotiation situation* can comprise *cues that align with the female gender role*, thereby decreasing the inconsistency between the female and negotiator roles (i.e., low inconsistency); or *cues that align with the male gender role*, thereby increasing the inconsistency between the female and negotiator roles (i.e., high inconsistency). Cues aligned with the female gender role can be related to "communal" characteristics (i.e., friendly, cooperative, concerned about others, emotionally expressive) or to stereotypically female tasks and behaviors like caring for children and the family (Stuhlmacher & Linnabery, 2013); cues aligned with the male gender role can be related to "agentic" characteristics (i.e., assertive, competitive, masterful, dominant, rationale) or to stereotypically male tasks and behaviors like earning money or dealing with financial issues (Stuhlmacher & Linnabery, 2013).

Our meta-analysis included three studies contrasting a condition in which cues were aligned with the female gender role with a condition where cues were aligned with the male gender role. Reif and Neser (2013) framed the negotiation situation as either cooperative (i.e., communal characteristic) or competitive (i.e., agentic characteristic). Babcock (2016) conducted an experiment in which participants imagined negotiating either about dinner decoration (i.e., female topic) or about dinner payment plans (i.e., male topic). Bear and Heller (2015) instructed participants either that skilled negotiators typically use a collaborative approach (i.e., communal characteristic) or a competitive approach (i.e., agentic characteristic). These studies' conditions were coded and compared for the meta-analysis.

Methodological moderators. Methodological moderators refer to artifacts of the sample and study design that may explain heterogeneity across studies (Lipsey & Wilson, 2001). Researchers have mentioned several methodological influences on gender differences. Eagly and Johnson (1990) suggested that gender stereotyped behavior is more prevalent in simulated or laboratory settings than in "real world" settings. In the real world, individuals occupy different roles (e.g., the role of a manager, a friend, etc.) that influence perceptions and behaviors above and beyond gender roles; in simulated and laboratory settings, individuals' visible characteristics like gender are most obvious. Walters et al. (1998) pointed out that student participants adhere to gender roles more than employees as they lack experience occupying other roles, such as that of a manager (Walters et al., 1998). Walters et al. (1998) as well as Stuhlmacher and Walters (1999) argue that interactions between parties that cannot develop further (e.g., scenarios or questionnaire studies) increase the likelihood of gender-typical behaviors surfacing.

Despite the potential for influences as a result of the studies' methodological approaches, we expect the gender difference to be robust and independent of these influences. Other meta-analyses in the area of negotiation also report robust gender differences regardless of the primary

studies' methodological approaches (e.g., Stuhlmacher & Walters, 1999; Walters et al., 1998). Nevertheless, we coded the following methodological aspects of the studies and investigated their influence on the gender difference.

First, we identified four broad approaches that were used to *measure the initiation of negotiation*. (a) We coded *actual behavior* when researchers put participants in a situation that was potentially negotiable and then observed whether each participant decided to initiate an actual negotiation. (b) We coded *imagined scenario* when researchers asked participants to imagine a situation that was potentially negotiable and then assessed whether they envisioned initiating a negotiation. (c) We coded *retro-/prospective* when researchers asked participants about negotiations they had initiated in the past or planned to initiate in the future. (d) We coded *disposition* when researchers assessed participants' general tendency to initiate negotiations. More details and examples for each type of measurement were provided in the section "initiation of negotiation".

To code the *characteristics of the sample*, we distinguished between student samples (i.e., *students*) and samples comprising individuals who were part of the workforce (i.e., *employees*). Samples that were mixed or not specified were not considered in the moderator analysis.

Additionally, we coded the *study design* by differentiating between studies conducted in the laboratory (i.e., *lab*) and studies conducted in the field, which were mainly questionnaires answered by participants online (i.e., *field*).

Interrater agreement. All studies were coded twice: once by an author of the meta-analysis and once by an experienced research assistant, who completed an additional three-hour training session led by one of the authors. Their average overall interrater reliability was $\kappa = .90$. More specifically, the interrater reliability was $\kappa = .84$ for country, $\kappa = 1.00$ for the year of publication, $\kappa = 1.00$ for experimental conditions in the case of situational ambiguity or

experimental manipulation of (in)consistency between roles, $\kappa = .84$ for negotiation topic, $\kappa = .92$ for measurement of the initiation of negotiation, $\kappa = .88$ for sample characteristics, and $\kappa = .75$ for study design. All discrepancies were resolved by discussion. Table 1 displays the final codes for all studies.

Statistical Methods

The meta-analysis was conducted using the computer program Comprehensive Meta-Analysis (2011), which follows the method suggested by Borenstein et al. (2011). We computed the effect size Hedges' g for all effects ($k = 55$) using: descriptive statistics ($k = 44$), t statistics ($k = 5$) or correlations ($k = 6$). Hedges' g constitutes an effect size for the difference in means and is unbiased with respect to the number of participants in each study. The mean gender difference in the initiation of negotiation across multiple studies was computed using a random-effects model that took into account both the subject-level and study-level sampling error. We report *Z*-values, standard errors, and confidence intervals (CI) for the effects.

Furthermore, we addressed the heterogeneity between studies. The *Q*-statistic, which is the sum of the squared deviations, indicates whether the studies' dispersion is due to random sampling error (non-significant *Q*-value) or to real differences (significant *Q*-values). The *Q*-test can be interpreted analogously to the *F*-test in an ANOVA. The I^2 quantifies the amount of dispersion that is probably due to true differences and the τ^2 quantifies the variance of the true effect.

Moderator analyses with categorical moderators were performed with mixed-effects models analogous to the ANOVA. Significant categorical moderators are indicated by significant heterogeneity between groups (significant $Q_{between}$). When moderators were continuous, meta-regressions were performed with the SPSS macro provided by Wilson (2010) instead of the Comprehensive Meta-Analysis (2011) program. Significant continuous moderators are indicated

by significant relationships between the moderator and the gender effect.

Results

First, we report the overall gender difference in the initiation of negotiation and the degree of heterogeneity within the primary studies. Second, we address publication bias. Third, we present the moderator analyses in the order of our hypotheses, followed by methodological moderators. Fourth, we offer an additional analysis of gender differences in initiating negotiations about salaries and careers. We conducted this additional analysis because negotiations about salaries and careers are repeatedly discussed in the literature (e.g., as sources of phenomena such as the gender wage gap and the glass ceiling, see introduction) and are especially important for individuals' professional and personal lives.

Overall Effect and Heterogeneity

Supporting *Hypothesis 1*, we found that overall, women were less likely to initiate negotiations than men (see Table 2, overall effect). The effect size of Hedges' $g = .20$ indicated a small (according to Cohen, 1992) but significant effect with a 95% CI of [0.13, 0.27]. The effect size corresponded to an odds ratio of $OR = 1.44$, implying that men are roughly one and a half times more likely to initiate negotiations than women.

The primary studies' effect sizes exhibited substantial heterogeneity. Table 1 lists the effect sizes of all primary studies included in the analyses. They ranged from $g = -0.95$ to $g = 1.32$. Of the 55 effect sizes, 47 (85%) were positive (i.e., women are less likely to initiate negotiations then men), while eight (15%) were negative (i.e., men are less likely to initiate negotiations than women). Of the 47 positive effect sizes, 16 (34%) were significant, and of the eight negative effect sizes one (2%) was significant. The heterogeneity across studies was significant ($Q(54) = 200.37$, $p < .001$) and predominantly due to systematic variations (the I^2 statistic suggested that 73% of the variance was due to systematic heterogeneity, Higgins &

Thompson, 2002). Moreover, the 90% prediction interval, which specifies the dispersion of true effect sizes (cf. Borenstein et al., 2011), ranged from -0.14 to 0.54. Thus, conducting moderator analyses to explain the studies' systematic heterogeneity seemed appropriate.

Publication Bias

The funnel plot analysis (see Figure 2) revealed that our meta-analysis showed some degree of publication bias. Of all effect sizes, 75% were within the 95% CI, and the funnel plot was somewhat asymmetric, with more effect sizes on the upper right side of the plot. In the best case (i.e., no publication bias), 95% of effect sizes are located within the 95% CI and the graph is symmetric around the average effect size. However, the asymmetry was not significant when analyzed using Egger's test of the intercept (intercept = 0.21, SE = 0.50, 95% CI [-0.79, 1.21], $t(53) = 0.42$, 2-tailed $p = .676$; Egger, Smith, Schneider, & Minder, 1997). Furthermore, Duval and Tweedie's (2000a, 2000b) trim and fill test yielded no missing effect sizes on either side of the mean in the funnel plot. Therefore, according to Duval and Tweedie (2000a, 2000b), the overall effect size does not need to be adjusted due to publication bias.

Moderator Analyses

Situational ambiguity. *Hypothesis 2* specified that situational ambiguity regarding the appropriateness of negotiating moderates the gender difference in the initiation of negotiation: the difference should be larger when situational ambiguity is high and smaller when situational ambiguity is low. First, we considered all studies in which the authors deliberately manipulated the degree of situational ambiguity (see Table 1, manipulation of ambiguity). Whereas some authors deliberately put all participants in a context with a high or low degree of situational ambiguity, others compared high versus low situational ambiguity by including various conditions within one study. For the latter studies, we included the conditions' effect sizes in the present moderator analysis instead of the studies' overall effect sizes (Table 1 shows conditions

within studies in italics). Second, we considered all studies where ambiguity was not deliberately manipulated. We coded the negotiation topics of those studies according to the following criteria: salary, career, and purchase were coded "low ambiguity", compensation for study participation and grades were coded "high ambiguity".

The moderator analysis (including deliberate experimental manipulations and negotiation topics) was significant and in support of Hypothesis 2 (see Table 2, situational ambiguity). The gender difference was larger in situations with high situational ambiguity (see Table 2, high ambiguity) than in situations with low situational ambiguity (see Table 2, low ambiguity).

Degree of (in)consistency between roles. Based on the idea that female and male gender roles have become more aligned over time, *Hypothesis 3* suggested that more recent studies should show smaller gender differences. The studies' years of publication served as a proxy for the time in which each study was conducted (Min = 1977, Max = 2016, see Table 1). A meta-regression using an unrestricted maximum likelihood model showed that the gender difference did indeed significantly decline over time ($k = 55$, $\beta = -.29$, $B = -.01$, $Q(1) = 5.11$, $p = .024$, $R^2 = .09$).

Hypothesis 4 predicted that the gender difference between men and women would be smaller in countries with low levels of gender inequality and larger in countries with high levels of gender inequality. For the analysis, we determined the countries in which the primary studies' participants were recruited. Participants originated from 13 different countries; however, the variance was limited, as 78% of effect sizes were based on samples drawn in Germany or the US (Table 1 lists the countries). Next, we assessed each country's level of gender inequality using the Gender Inequality Index (Human Development Report, 2015) and the Labor Force Participation Ratio (World Bank, 2016). Because gender inequality also varies over time (see Hypothesis 3), we used the indices that roughly matched the time in which each study was

conducted. Taking these indices into account, we conducted a meta-regression using an unrestricted maximum likelihood model. Disproving our Hypothesis 4, we found that the gender difference in the initiation of negotiation was not influenced by a country's level of gender inequality (result for the Gender Inequality Index: $k = 55$, $\beta = -.03$, $B = -.20$, $p = .823$, $Q(1) = 0.05$, $R^2 < .01$; result for the Labor Force Participation Ratio: $k = 53$, $\beta = .11$, $B = .00$, $p = .408$, $Q(1) = 0.69$, $R^2 = .01$).

According to *Hypothesis 5*, situational cues moderate the gender difference in initiating negotiation: the more situational cues are in line with the female gender role, the smaller the gender difference. The analysis was conducted on the basis of three primary studies in which situational cues were experimentally manipulated. Each of the three studies had two experimental conditions: one condition involving cues aligned with the female gender role (i.e., low inconsistency, see Table 1) and another condition involving cues aligned with the male gender role (i.e., high inconsistency, see Table 1). The current moderator analysis was based on the effect sizes of these experimental conditions within studies (in Table 1, information on conditions within studies are included in italics). The moderator analysis was significant and supported Hypothesis 5 (see Table 2, inconsistency between roles). In situations involving cues in line with the female gender role, the gender difference was insignificant and descriptively even reversed (see Table 2, low inconsistency); in situations involving cues in line with the male gender role, the effect was medium sized and significant (see Table 2, high inconsistency).

Methodological moderators. To test the influence of methodological differences between studies on the gender difference, we conducted methodological moderator analyses. As shown in Table 2, the study design (field vs. laboratory) and sample characteristics (students vs. employees) had no significant influence on the main effect. Only the way initiation of negotiation was measured (actual behavior vs. retro/prospective vs. imagined scenario vs.

disposition) exhibited a significant influence on the gender difference. However, this effect was caused by the only study assessing initiation of negotiation as a disposition ($k = 1$), which found a medium gender difference (see Table 2, disposition). When excluding this study, the remaining types of measurement no longer affected the gender difference ($Q_{between}(2) = 1.13$, p = .563; $Q_{within}(51) = 134.98$, $p < .001$). As the significant influence was caused by a type of measure used in one study only, and thus cannot be generalized, we did not further consider the result.

Additional Analysis

In the introduction, we referred to theory and research highlighting that gender differences in initiating negotiation are particular relevant in the work context, especially when it comes to salaries and career opportunities. Therefore, we conducted an additional analysis investigating the gender difference when the negotiation topic was salary or career ($k = 30$). The effect was small (and even somewhat smaller than the overall effect) but significant ($g = 0.15$, SE = 0.04, $Z = 3.55$, $p < .001$, 95% CI [0.07, 0.23]).

Discussion

Do men and women systematically differ in their likelihood of initiating negotiations? In the current meta-analysis, we determined that overall, *women are less likely to initiate negotiations than men*, supporting Hypothesis 1. We derived Hypothesis 1 from social role theory (Eagly, 1987; Stuhmacher & Linnabery, 2013), a theory that suggests that the negotiator role is consistent with the male gender role but inconsistent with the female gender role.

Overall *the gender difference was small* ($g = .20$), a result that is in line with gender differences found in other areas of social behavior, including negotiation behaviors and effectiveness (cf. Eagly & Wood, 2012). For example, Mazei et al. (2015) reported an overall gender difference in negotiation effectiveness of $g = .20$, 95% CI [0.11; 0.29]. However, the small magnitude of the effect size does not imply irrelevance: The effect indicates that men

initiate negotiations roughly one and a half times more often than women. And missing out on even a single negotiation can have severe consequences for individuals' lives. Furthermore, when combining the main finding of our meta-analysis with the findings of other meta-analyses (e.g., Mazei et al., 2015; Stuhlmacher & Walters, 1999), one can conclude that women are less effective in their overall fewer negotiations compared to men.

Moreover, the studies included in the meta-analysis showed a *high degree of heterogeneity*. We were able to explain some of the studies' heterogeneity with *moderators* also derived from social role theory: the degree of situational ambiguity regarding the appropriateness of negotiation and the degree of (in)consistency between the female, male, and negotiator roles.

In situations with low *situational ambiguity* (i.e., situations that were clearly identifiable as negotiations), the gender difference was smaller than in situations with high situational ambiguity (i.e., situations that were not clearly identifiable as negotiations). This effect, which supported our Hypothesis 2, is consistent with other empirical evidence identifying ambiguity as a moderator of gender differences (e.g., Bowles et al., 2005; Mazei et al., 2015; Miles & LaSalle, 2008). When situational ambiguity is low, "negotiating" constitutes the dominant behavioral script for the situation – for men and women alike. When situational ambiguity is high, a clear behavioral script is missing and gender roles provide a fallback script.

Influences on the *degree of (in)consistency* between the female, male, and negotiator roles were assumed to stem from broader societal contexts (i.e., time and culture) as well as the immediate negotiation situation. Supporting Hypothesis 3, the gender difference decreased as *time* passed. The male and the female roles were assumed to have become more aligned over time, resulting in decreasing gender differences (e.g., Donnelly & Twenge, 2016; Twenge, 1997, 2001). Disproving Hypothesis 4, the gender difference did not vary across *cultures*, a result that has also been reported in other research areas (e.g., Costa et al., 2001). In our study, the absence

of cultural influences might have been rooted in the restricted variance across the studies included in the meta-analysis: 78% of the studies were conducted in the US or Germany. Again in line with our assumptions (supporting Hypothesis 5), *situational cues* that were aligned with the female gender role mitigated the gender difference, whereas situational cues aligned with the male gender role aggravated the gender difference. The female cues presumably decreased the inconsistency between the female and negotiator roles, enabling women to negotiate without violating their gender role (Kray & Thompson, 2005).

Theoretical Implications

Theoretical implications for the area of gender differences. Our meta-analysis adds to the growing body of meta-analyses predicting gender differences on the basis of social role theory (e.g., Archer, 2004; Eagly, & Johnson, 1990; Eagly, Karau, & Makhijani, 1995; Mazei et al., 2015). Applying social role theory to the specific context of initiating negotiation proved to be useful. First, social role theory offered a comprehensive yet parsimonious framework that allowed us to specify hypotheses for main and moderation effects. Second, the predictions could be meaningfully linked to the model of initiating negotiation (Reif & Brodbeck, 2014). Thereby, we were able to offer detailed arguments regarding the cognitive and motivational mechanisms underlying the main and moderation effects. Third, our meta-analysis provided support for social role theory, as the majority of our predictions were supported.

Whereas other major theories focusing on gender differences (for reviews see Eagly & Wood, 2012, 2013; Hyde, 2014; Stewart, & McDermott, 2004; Wood & Eagly, 2010) would have also predicted the overall main effect, these theories would not have predicted the specific set of moderators proposed in our meta-analysis. In particular, other major theories on gender differences fail to predict the moderators that explain variations in the gender difference in initiating negotiation (a) across situations including cues in line with one gender role or the other

and (b) across situations varying in the degree of situational ambiguity regarding the appropriateness of negotiating.

For example, situations including cues in line with one gender role or the other do not necessarily offer selection advantages for any one gender – the mechanism for gender differences proposed by *evolutionary theories* (Buss, 1995; Buss & Schmitt, 2011; Mealey, 2000)*;* furthermore, these situations do not necessarily alter power structures between men and women – the mechanism for gender differences proposed by theories emphasizing *status differences between men and women* (e.g., Carli & Eagly, 1999; Miles & Clenney, 2010; Ridgeway & Diekema, 1992; Stewart & McDermott, 2004). Situations with different degrees of situational ambiguity regarding the appropriateness of negotiating could potentially vary in only very small details: for example, in whether the word "negotiation" is used to frame the situation (e.g., Leibbrandt & List, 2015; Small et al., 2007). Such small situational differences are unlikely to be linked to experiences of rewards, punishments, or role models that individuals have experienced in their lives – the mechanism proposed by *social constructionist and learning theories* (Bohan, 1993; Bussey & Bandura, 1999; Gergen, 2001); they are also unlikely to alter general expectations about succeeding in negotiations or the importance of the negotiation (ignoring the social costs of negotiating suggested by social role theory) – the mechanism proposed by *expectancy x valence theories* (Eccles, 1994; Wigfield & Eccles, 1992).

We conclude that social role theory is best suited to predicting gender difference *and* deriving the moderation effects. However, we do not want to call the predictive power of the other theories into question. They also make potential predictions about moderators. For example, favorable/unfavorable sex ratios in groups might influence whether individuals try to distinguish themselves by negotiating (cf. *evolutionary theories*); power variations between negotiation partners might influence whether women feel empowered to negotiate (cf. *theories*

emphasizing status differences between men and women); the presence/absence of female role models initiating negotiations might influence whether women decide to initiate negotiations (cf. *social constructionist and learning theories*); and successful/unsuccessful negotiations in individuals' pasts might raise expectations and valences about negotiations in the future and thus the likelihood of initiating negotiations (cf. *expectancy x valence theories*). However, given that such moderators were rarely investigated in primary studies (for exceptions see e.g., Bowles et al., 2007; Magee et al., 2007), we were not able to test predictions from other theories and contrast predictions from diverse theories (as suggested by Eagly & Wood, 2012).

Theoretically developing predictions for the context of (initiating) negotiation from diverse theoretical perspectives could stimulate future research that allows these predictions to be tested and contrasted – ultimately in further meta-analyses. In developing predictions in the area of initiating negotiation, we found it helpful to link theory on gender differences (i.e., social role theory) to theory on initiating negotiation (i.e., model by Reif & Brodbeck, 2014). Thereby, we were able to apply generic assumptions about gender differences to individuals' cognitive and motivational processes.

Theoretical implications for the area of initiating negotiation. Our meta-analysis contributes to the literature on *initiation of negotiation*, an area that has been neglected in past research (as has been argued by e.g., Pruitt & Kugler, 2014; Reif & Brodbeck, 2014). Our meta-analysis showed that developing theory addressing how, why, and when individuals start negotiating is important – not least because gender differences exist that may contribute to unequal distributions of resources between men and women. Importantly, theory and research on the initiation of negotiation thus far is rather isolated and disconnected from other psychological theories and research areas. Therefore, we suggest theoretically linking the model of initiating negotiation to other areas.

First, influences on the determinants of initiating negotiation proposed by the model of initiating negotiation (i.e., a perceived discrepancy, an emotional reaction, a desired outcome, expectations of success, and an assessment of costs/benefits, Reif & Brodbeck, 2014) could be explored. In our meta-analysis, we suggested that gender is one such influencing factor, but also that the influence varies depending on the proposed moderators. For example, we suggested that women anticipate higher social costs in comparison to men due to their violation of the female gender role when initiating a negotiation. On the one hand, the link between gender and negotiation could be developed more comprehensively in a theoretical model on gender and the initiation of negotiation. On the other hand, links to other theories could unearth other influences on initiating negotiation (e.g., a link to the theory of motivated information processing could shed light on the information that is processed when expectations about the negotiation are formed, De Dreu, Koole, Steinel, 2000).

Second, the consequences of initiating negotiations could be theoretically explored by connecting the model to theories of negotiation behaviors and processes – an area which has received a lot of attention but has neglected the pre-negotiation phase (e.g., De Dreu et al., 2007). Why, how, and when individuals start a negotiation could have consequences for the entire negotiation process and its outcomes. For the specific area of gender differences, it would be interesting to systematically link gender differences in the initiation of negotiation to gender differences in negotiation processes (e.g., Walters et al., 1998), negotiation outcomes (e.g., Mazei et al., 2015), and social consequences like backlash (e.g., Rudman & Fairchild, 2004). The importance of theoretically elaborating on the influence of initial conditions (like the initiation of negotiation) on subsequent social processes (like the negotiation and its outcomes) becomes apparent when considering related areas. For example, theory and research on conflicts (e.g., Liebovitch et al., 2008; Vallacher et al., 2013) and difficult marital discussions (e.g., Gottman,

Swanson, & Swanson, 2002) have highlighted the decisiveness of initial conditions.

Limitations and Agenda for Future Research

Limitations. It is important to bear in mind the limitations of the current meta-analysis, which mainly have their origin in the limited set of primary studies. First, we obtained only a relatively small number of effect sizes ($k = 55$) despite an extensive study identification process across a broad array of research domains (see Figure 1). Especially for some moderator analyses, the number of primary studies was rather small (e.g., $k = 3$ for high/low inconsistency, see Table 2) or limited in variability (e.g., three quarters of effect sizes were based on German or US samples, see Table 1). Thus, we want to emphasize that the interpretation of our results ought to be commensurate with the number of studies included in the corresponding analysis and should not be overstated.

Second, even though we were able to explain some of the primary studies' heterogeneity with our moderator analyses, a significant portion of heterogeneity remained unexplained (for similar results see Mazei et al., 2015; Walters et al., 1998). This result suggests that other important moderators on gender differences in the initiation of negotiation exist. Therefore, the meta-analysis cannot be considered a comprehensive view on conditions influencing gender differences in the initiation of negotiation.

Third, by linking gender role theory to the model of initiating negotiation, we proposed cognitive and motivational mechanisms underlying gender differences in the initiation of negotiation. Given that the mechanisms were rarely explored in primary studies, we were not able to test these assumptions.

Agenda for future research. The limitations just outlined speak to a need for more research including systematic analyses of moderating conditions as well as systematic analyses of mediators specifying underlying psychological mechanisms. We address moderators first, before

elaborating on mediators.

Theoretically, the *moderators* influencing the gender difference in the initiation of negotiation could be derived from social role theory (including the moderating principles suggested in our meta-analysis and other moderating principles) as well as other theoretical perspectives (for examples, see "Theoretical Implications"). Given that the current set of studies is rather scattered, we suggest using a systematic approach in future research. For example, moderators could be structured as follows: moderators based on the negotiator; the relationship between the negotiating parties; the negotiation content (e.g., topic or beneficiary); the immediate situational context; and the broader context. Let us give an example for each category, including diverse theoretical approaches.

First, experience in negotiating could be a moderator based on the negotiator. As individuals gain experience, they develop a script for effective negotiation, which reduces ambiguity around negotiating and raises expectations about their ability to successfully negotiate. Experienced men and women should thus not use the gender fallback script when negotiating, reducing the gender difference (cf. Mazei et al., 2015). Second, theories focusing on power structures between men and women suggest that gender differences in negotiations change depending on the negotiation partner's gender (i.e., moderator based on the relationship between the negotiating partners). In same-sex negotiations, gender differences triggered by power differences should not exist and vice versa (cf. Bowles et al., 2007; Eriksson & Sandberg, 2012). Third, self-advocating women violate the gender role more than women who negotiate on behalf of others, because caring for others aligns with the female gender role (i.e., moderator based on negotiation content; cf. Mazei et al., 2015). Fourth, distance between the parties (i.e., the immediate situational context) reduces the salience of others – including gender roles (Stuhlmacher & Citera, 2005). For example, gender roles should be less salient in virtual

settings, reducing the gender difference in the initiation of negotiation. Fifth, we have argued that a culture's degree of gender inequality should influence the gender difference in the initiation of negotiation. Even though this assumption was not supported, we refrain from rejecting the hypothesis given the methodological problems (i.e., limited variance in primary studies). Ideally, future research will be conducted cross-culturally, thereby revisiting Hypothesis 4. Similarly, organizational cultures could vary in their degree of gender inequality, thus influencing gender differences in the initiation of negotiation in the given organizational setting.

Besides focusing on conditions influencing the gender difference, future research should also explore *the psychological mechanisms* underlying the gender difference in the initiation of negotiation by focusing on *mediators*. A starting point for systematically exploring mediators is offered by the model of initiating negotiation (Reif & Brodbeck, 2014). The model specifies cognitive and motivational determinants of the decision to (not) initiate a negotiation (i.e., a perceived discrepancy, an emotional reaction, a desired outcome, expectations of success, and an assessment of costs/benefits, Reif & Brodbeck, 2014). By linking the model to theories on gender differences, it will be possible to make precise predictions about the cognitive and motivational mechanisms underlying the gender difference in the initiation of negotiation. For example, by linking the model to social role theory, we proposed that gender roles influence people's perceived expectancy of being able to successfully negotiate and people's instrumental thoughts (i.e., the perceived benefits/costs of negotiating).

Ideally, research on psychological mechanisms undergirding gender differences in the initiation of negotiation will include experiments, and longitudinal designs. Such research will shed light on the causal dynamics instead of bidirectional relationships.

Implications for Practice

Our meta-analysis has practical implications that should be especially valuable for those

involved in organizations, politics, and economic decision-making situations where negotiating is a common means for reaching goals. In the following paragraphs, we assume that organizations and decision-makers of societal relevance strive for gender equality.

The gender differences that exist in the initiation of negotiation may indeed cause an unequal distribution of resources between men and women. For example, gender differences in the initiation of negotiation may contribute to or reinforce phenomena such as the gender wage gap and the glass ceiling, given that organizational resources such as salaries and careers are often negotiated (e.g., Babcock et al., 2006; Greig, 2008; Small et al., 2007). This assumption was supported by our additional analysis highlighting that the gender difference in initiating negotiations also exists when analyzing negotiations about salaries and careers only.

One could counter that the overall gender difference in initiating negotiation (g = .20) and to an even greater extent the gender difference in initiating negotiations regarding salaries and careers (g = .15) were very small. However, even small effects can have severe consequences for individuals (Babcock et al., 2006, Bowles et al., 2005, Eagly, 1996). The overall effect indicated that men initiate negotiations roughly one and a half times more often than women. And missing out on even one negotiation can have a cumulative impact, as illustrated by Babcock et al. (2006): "Suppose that a man and a woman begin work at age 25 for the same employer at the same salary and their employer offers both of them 2% raises every year. If the woman accepts the raise but the man negotiates his raise to receive a 3% increase every year, then after 40 years on the job, the woman will be earning 67.7% as much as the man" (p. 240).

In addition to the overall gender difference in the initiation of negotiation, the current results highlighted that the gender difference depends on the context. Whereas in some contexts the gender difference had up to medium effect sizes, in other contexts it was not significant (see Table 2). Our moderator analyses suggested two starting points for endeavors aimed at

mitigating the gender difference: (a) reducing the ambiguity regarding the appropriateness of negotiating in a given situation; (b) reducing the inconsistency between the female gender role and the negotiator role.

Reducing the ambiguity regarding the appropriateness of negotiating is probably the meta-analysis' most apparent recommendation for mitigating gender differences. Actively communicating when negotiating is appropriate might encourage women in particular to initiate negotiations. For example, organizations could specify negotiable issues and implement negotiations in organizational structures and job specifications. In taking such steps, management and organizational culture ought to support (and not sanction) women who initiate negotiations. Consequently, developing appropriate organizational cultures is another practical implication. Furthermore, women could be trained to actively gather information about the appropriateness of negotiating in order to reduce perceived situational ambiguity.

Our meta-analysis also suggests that the gender difference in initiating negotiation could be mitigated by reducing the inconsistency between the female gender role and the negotiator role. One option would be to broaden both roles. In this context, broadening implies adding new characteristics to the social roles (e.g., the negotiator role would be broadened if it were made to encompass cooperative in addition to competitive characteristics). Broadening instead of shifting roles (e.g., the negotiator role would be shifted if it were made to encompass cooperative instead of competitive characteristics) may prevent unintended negative consequences. Merely "feminizing" the negotiation context – and thus shifting social roles – might cause a reverse gender difference. Descriptively (even though not significantly), the meta-analysis found such a reversed gender difference in the initiation of negotiation in contexts that emphasized purely feminine characteristics (see Table 2 "low inconsistency"). In practice, one could broaden the female gender role by publicizing women who negotiate; once negotiating becomes part of the

female gender role, women could negotiate without violating their female gender role. One could broaden the negotiator role by emphasizing cooperative (and thus female) tactics in addition to competitive (and thus male) tactics in negotiation trainings; again, once the image of a "good negotiator" includes not only competitive but also cooperative tactics, women would be able to negotiate without violating their female gender role.

Conclusion

We set out to test whether men and women systematically differ in their likelihood of initiating negotiations, given that the empirical evidence was heterogeneous. We conclude that overall, women are less likely to initiate negotiations than men. The difference in initiating negotiation potentially reinforces gender inequality in contexts such as the gender wage gap and the glass ceiling. However, we also found that the gender difference is highly variable, and we were able to explain some variation by focusing on predictions derived from social role theory, which were linked to the theoretical model of initiating negotiation. Therefore, the meta-analysis also offers suggestions on how the gender difference may be reduced in practice in order to foster equal opportunities for men and women. For example, by clearly communicating that a salary is negotiable, women should start a negotiation just as often as men when offered an unsatisfactory salary.

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Footnotes

[1] In the US in 2015, the median weekly earnings for full-time working women were $726, compared to $895 for men (Bureau of Labor Statistics, 2016). In the European Union in 2013, a man earned on average 17% more than a woman (European Commission, 2015).

[2] In 2015 across the S&P 500 companies in the US, women held 4% of CEO positions, 19.2% of board seats, 25% of executive/senior-level manager positions, and 37% of first/mid-level manager positions even though women constitute 45% of the workforce (Catalyst, 2016). In the European Union in 2015, the proportion of women among CEOs was 4%, and was 15% among senior executives (European Commission, 2015).

[3] The following statistics show that most employees are affected by job changes in the course of their professional lives: In the US, individuals born 1957-1964 held on average 11.7 jobs from age 18 to age 48 (Bureau of Labor Statistics, 2015). A survey of the European Union including employees aged 15 and older showed that 13% had not yet changed jobs, 60% had changed jobs one to five times, and 27% indicated they had changed jobs more than five times (European Commission, 2010).

Idiosyncratic work arrangements imply that the terms of employment are not set a priori but individually negotiated between the employee and employer (Hornung, Rousseau, & Glaser, 2008; Rousseau, Ho, & Greenberg, 2006).

[4] Please note that the present meta-analysis did not attempt a fully-fledged model test given that the suggested variables in the model are not sufficiently and comprehensively covered by the body of empirical research that constitutes the basis of the meta-analysis.

[5] Even though cross-cultural support has been found for the overall relationship between gender and agentic as well as communal characteristics, the influence of societal culture on gender stereotypes should not be disregarded (e.g., Cuddy et al., 2015).

[6] Please note that the cited references confirming women's increase in agency refer mainly to research conducted in first-world countries during the last 50 years. We do not intend to generalize from this limited amount of countries to all other countries. But given that the majority of research about initiating negotiations was conducted over the last 50 years in first world countries, the cited findings are most relevant to our meta-analysis.

[7] Note that Reif et al. (2012, Study 3) recruited participants in three countries (UK, US, and Germany); we averaged the three countries' indices (i.e., Gender Inequality Index and Labor Force Participation Ratio) for our analysis.

Table 1

Summary of the Studies Included in the Meta-Analysis

					Moderators						
						Situational ambiguity					
Study	Hedges' g	SE	p	N	Country	Manipulation of ambiguity[a]	Negotiation topic[b]	Manipulation of inconsistency between roles[a]	Study design	Sample character-istics	Initiation of negotiation measure
Babcock, 2016	0.05	0.20	.798	123	*USA*		Low ambiguity: purchase		Lab	Students	Actual behavior
- Condition A	*-0.59*	*0.30*	*.048*	*64*		*(n/a)*		*Low inconsistency: feminine topic*			
- Condition B	*0.71*	*0.30*	*.018*	*59*		*(n/a)*		*High inconsistency: masculine topic*			
Babcock et al., 2006	0.33	0.14	.014	227	USA	(n/a)	(Not specified)	(n/a)	Field	Employees	Retro-/ prospective
Bear & Heller, 2015											
Study 1	0.31	0.16	.049	161	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	(Not specified)	Scenario
Study 2	0.26	0.15	.079	185	USA		Low ambiguity: salary, career		Field	(Not specified)	Scenario
- Condition A	*-0.08*	*0.22*	*.715*	*87*		*(n/a)*		*Low inconsistency: feminine stereotype*			
- Condition B	*0.53*	*0.21*	*.010*	*98*		*(n/a)*		*High inconsistency: masculine stereotype*			
Study 4	0.23	0.10	.024	417	USA	(n/a)	Low ambiguity: Salary, career	(n/a)	Field	(Not specified)	Scenario
Study 5	0.15	0.08	.067	612	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	(Not specified)	Scenario
Bear & Segel-Karpas, 2015	0.23	0.24	.332	73	Israel	(n/a)	Low ambiguity: salary, career	(n/a)	Field	(Mixed)	Scenario
Beninger, 2009	0.25	0.20	.213	140	USA	Low ambiguity: prompt to negotiate	(Compensation)	(n/a)	Lab	Students	Actual behavior

Table 1 (continued)

						Moderators					
						Situational ambiguity		Manipulation of inconsistency between roles[a]			
Study	Hedges' g	SE	p	N	Country	Manipulation of ambiguity[a]	Negotiation topic[b]		Study design	Sample character-istics	Initiation of negotiation measure
Bowles & Al Dabbagh, 2013	0.05	0.08	.542	155	Saudi Arabia	(n/a)	Low ambiguity: salary, career	(n/a)	Lab	Students	Scenario
Bowles et al., 2007	0.06	0.05	.280	341	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Lab	(Mixed)	Scenario
Carlson et al., 2008	0.01	0.27	.978	54	USA	(n/a)	Low ambiguity: purchase	(n/a)	(not specified)	Students	Scenario
Crosby, 2015	0.13	0.11	.230	324	USA	(n/a)	(Not specified)	(n/a)	Field	Employees	Retro-/ prospective
Crothers et al., 2010	0.08	0.14	.551	303	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Retro-/ prospective
De Riemer et al., 1982	0.13	0.13	.318	444	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Retro-/ prospective
Douglas & Miller, 2015	-0.95	0.84	.259	25	USA	(n/a)	High ambiguity: compensation	(n/a)	Field	Students	Actual behavior
Eriksson & Sandberg, 2012	0.30	0.14	.033	202	Sweden	Low ambiguity: prompt to negotiate	(Compensation)	(n/a)	Lab	Students	Actual behavior
Exley et al., 2016	0.19	0.26	.473	82	USA	Low ambiguity: prompt to negotiate	(Compensation)	(n/a)	Lab	Students	Actual behavior
Gerhart & Rynes, 1991	0.27	0.24	.255	205	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Students	Retro-/ prospective
Greig, 2008	0.57	0.19	.002	303	USA	(n/a)	High ambiguity: compensation	(n/a)	Field	Employees	Actual behavior
Guthrie et al., 2009	0.35	0.14	.013	228	USA	(n/a)	(Not specified)	(n/a)	Field	Employees	Retro-/ prospective
Holliday et al., 2014	-0.16	0.06	.011	1,256	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Retro-/ prospective
Jung et al., 2010	0.01	0.21	.974	108	USA	Low ambiguity: prompt to negotiate	(Compensation)	(n/a)	Lab	Students	Actual behavior

Table 1 (continued)

						Moderators					
						Situational ambiguity		Manipulation of inconsistency between roles[a]			
Study	Hedges' g	SE	p	N	Country	Manipulation of ambiguity[a]	Negotiation topic[b]		Study design	Sample character-istics	Initiation of negotiation measure
Kaman & Hartel, 1994	0.37	0.13	.005	238	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Students	Scenario
Kapoutsis et al., 2014a	0.19	0.20	.363	95	Greece	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Scenario
Kapoutsis et al., 2014b	0.14	0.21	.504	89	Greece	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Scenario
Lammers et al., 2008	-0.07	0.20	.713	101	USA	(n/a)	Low ambiguity: purchase	(n/a)	Lab	Students	Scenario
Leibbrandt & List, 2015	-0.04	0.09	.642	863	USA		(Salary, career)		Field	(Job seekers)	Actual behavior
- Condition A	*-0.09*	*0.14*	*.526*	*435*		*High ambiguity: no prompt to negotiate*		*(n/a)*			
- Condition B	*0.00*	*0.12*	*.987*	*428*		*Low ambiguity: prompt to negotiate*		*(n/a)*			
Leier, 2015	0.16	0.56	.774	86	USA	(n/a)	High ambiguity: compensation	(n/a)	Lab	Students	Actual behavior
Leifsson & Sigurðardóttir, 2010	0.40	0.23	.082	94	Iceland	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Students	Scenario
Magee et al., 2007	0.84	0.29	.004	58	USA	(n/a)	Low ambiguity: purchase	(n/a)	Lab	(Mixed)	Scenario
Marks & Harold, 2011	0.00	0.16	1.000	143	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Retro-/ prospective
McGraw et al., 2016	0.26	0.20	.191	106	USA	(n/a)	Low ambiguity: purchase	(n/a)	(Not specified)	Students	Scenario
McLaughlin & Hesli, 2013	-0.07	0.09	.432	1,399	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Retro-/ prospective

Table 1 (continued)

					Moderators						
						Situational ambiguity					
Study	Hedges' g	SE	p	N	Country	Manipulation of ambiguity[a]	Negotiation topic[b]	Manipulation of inconsistency between roles[a]	Study design	Sample character-istics	Initiation of negotiation measure
Meister, 2014											
Study 1	0.50	0.04	<.001	2,220	Germany	(n/a)	Low ambiguity: purchase	(n/a)	Field	(Mixed)	Disposition
Study 2	-0.04	0.09	.609	543	Germany	(n/a)	Low ambiguity: purchase	(n/a)	Field	(Mixed)	Retro-/ prospective
O'Shea & Bush, 2002	-0.24	0.22	.275	211	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Retro-/ prospective
Petrescu & Petres-cu-Mag, 2016	0.09	0.15	.519	197	Romania	(n/a)	(Not specified)	(n/a)	(Not specified)	(Mixed)	Scenario
Probert, 2005	0.24	0.23	.307	181	Australia	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Retro-/ prospective
Reif et al., 2012											
Study 1	0.14	0.16	.362	261	Germany		(Salary, career)		Lab	Students	Scenario
- Condition: A	*-0.32*	*0.26*	*.224*	*90*		*Low ambiguity: negative discrepancy*		*(n/a)*			
- Condition B	*0.40*	*0.27*	*.139*	*93*		*High ambiguity: no discrepancy*		*(n/a)*			
- Condition: C	*1.07*	*0.45*	*.017*	*78*		*High ambiguity: positive discrepancy*		*(n/a)*			
Study 2	0.20	0.06	.002	1,299	Germany	(n/a)	High ambiguity: grade	(n/a)	Field	Students	Retro-/ prospective
Study 3	0.96	0.37	.009	32	Germany, USA, UK	(n/a)	(Not specified)	(n/a)	Field	Employees	Retro-/ prospective
Reif et al., 2016	0.33	0.11	.003	358	Germany	(n/a)	(Diverse Topics)	(n/a)	Field	(Mixed)	Scenario

Table 1 (continued)

						Moderators					
						Situational ambiguity					
Study	Hedges' g	SE	p	N	Country	Manipulation of ambiguity[a]	Negotiation topic[b]	Manipulation of inconsistency between roles[a]	Study design	Sample character-istics	Initiation of negotiation measure
Reif & Mehner, 2013	0.61	0.17	<.001	143	Germany		(Salary, career)		Field	(Mixed)	Scenario
- Condition A	*0.24*	*0.27*	*.381*	*52*		*Low ambiguity: negative discrepancy*		*(n/a)*			
- Condition B	*0.74*	*0.32*	*.020*	*41*		*High ambiguity: no discrepancy*		*(n/a)*			
- Condition C	*0.98*	*0.30*	*.001*	*50*		*High ambiguity: positive discrepancy*		*(n/a)*			
Reif & Neser, 2013	0.24	0.16	.136	167	Germany		Low ambiguity: salary, career		Field	(Mixed)	Scenario
- Condition A	*0.44*	*0.23*	*.049*	*88*		*(n/a)*		*High inconsistency: competition*			
- Condition B	*0.03*	*0.23*	*.908*	*79*		*(n/a)*		*Low inconsistency: cooperation*			
Saari, 2015	-0.07	0.17	.700	134	Canada	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Students	Retro-/ prospective
Simmer, 2013	0.01	0.07	.917	1,011	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	(Mixed)	Retro-/ prospective

Table 1 (continued)

						Moderators					
						Situational ambiguity					
Study	Hedges' g	SE	p	N	Country	Manipulation of ambiguity[a]	Negotiation topic[b]	Manipulation of inconsistency between roles[a]	Study design	Sample character-istics	Initiation of negotiation measure
Small et al., 2007											
Study 1	1.32	0.59	.026	74	USA	(n/a)	High ambiguity: compensation	(n/a)	Lab	Students	Actual behavior
Study 2	0.97	0.38	.012	67	USA		*(Compensation)*		Lab	Students	Actual behavior
- Condition A	*0.94*	*0.86*	*.274*	*32*		*High ambiguity: no prompt to negotiate*		*(n/a)*			
- Condition B	*1.06*	*0.43*	*.014*	*35*		*Low ambiguity: prompt to negotiate*		*(n/a)*			
Study 4	0.30	0.18	.094	153	USA		*(Compensation)*		Lab	Students	Actual behavior
- Condition A	*1.11*	*0.60*	*.067*	*52*		*High ambiguity: no prompt to negotiate*		*(n/a)*			
- Condition B	*0.29*	*0.24*	*.234*	*101*		*Low ambiguity: prompt to negotiate*		*(n/a)*			
Tellhed & Björklund, 2011	0.64	0.38	.091	116	Sweden	Low ambiguity: prompt to negotiate	(Salary, career)	(n/a)	Lab	Students	Scenario
Traavik, 2008	0.32	0.33	.326	98	Norway	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Retro-/ prospective
Valentich & Gripton, 1977	0.61	0.08	<.001	657	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Field	Employees	Retro-/ prospective
Volkema et al., 2013	0.20	0.19	.290	115	Greece	(n/a)	(Not specified)	(n/a)	(Not specified)	Students	Scenario
Volkema et al., 2016	0.04	0.19	.833	122	Brazil	(n/a)	Low ambiguity: salary, career	(n/a)	(Not specified)	Employees	Scenario
Xiu & Roline, 2015	0.17	0.23	.474	105	USA	(n/a)	Low ambiguity: salary, career	(n/a)	Lab	Students	Scenario

Note. Lab = Laboratory. n/a = not applicable.

[a] Several studies included different conditions (i.e., subsamples within a study) that were of relevance for our meta-analysis. The authors had conducted experiments using a between-subjects design in which they deliberately manipulated variables that we investigated as moderators (i.e., level of ambiguity and level of inconsistency between roles). When performing the respective moderator analysis we included the conditions within studies in our meta-analysis instead of the overall effect sizes of the studies. The table includes the information regarding the conditions within studies in italic.

[b] Negotiation topics were coded as described in the table. For the analysis "salary", "career", and "purchase" were summarized in one category supposedly eliciting low situational ambiguity; "grades" and "compensation for study" were summarized in a second category supposedly eliciting high situational ambiguity (for details see method section).

Information in parentheses were coded during the coding process, but were not included in the actual analyses of the meta-analysis (for details see method section).

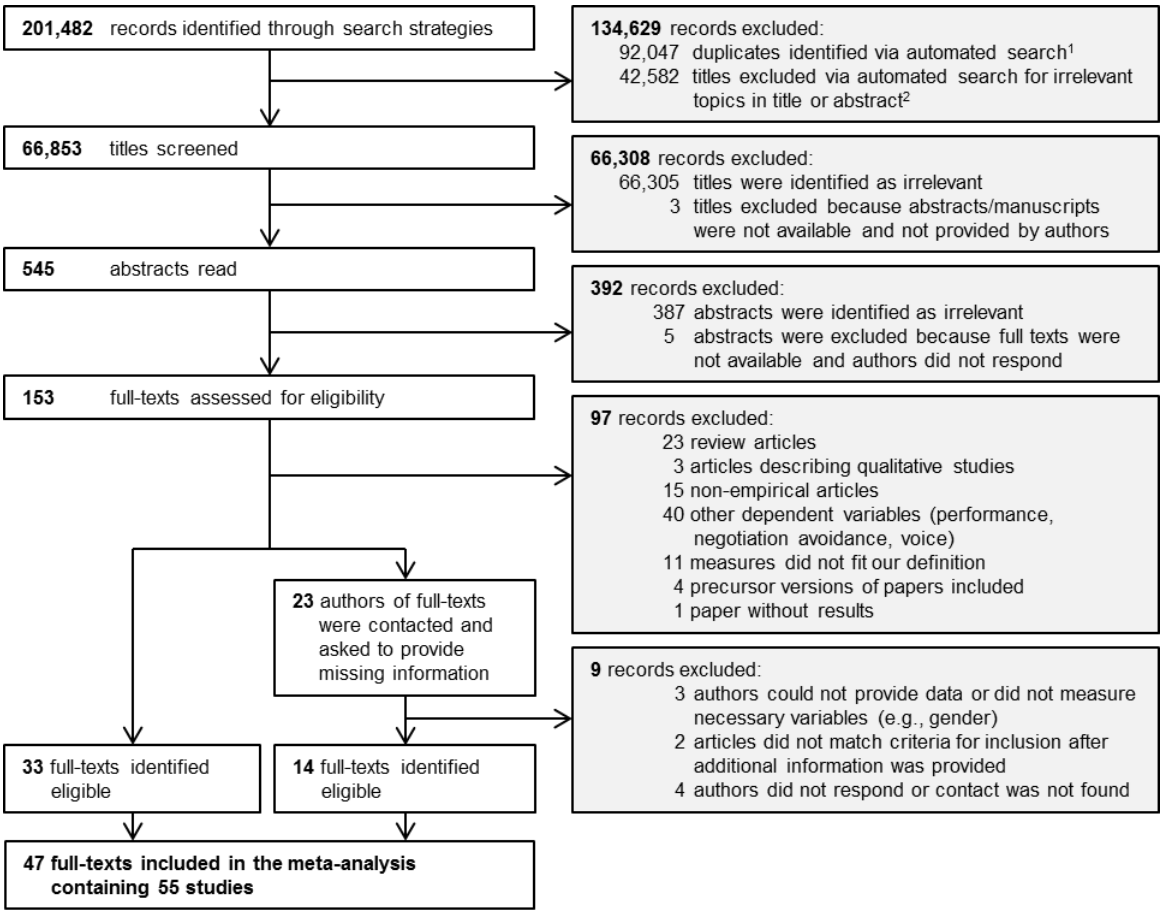
Table 2

Overall Meta-Analytical Effect of Gender on the Initiation of Negotiation, with Moderator Effects and Statistics in Subsamples

	Statistics in (sub)sample											Moderator analysis	
			Hedges'			95% CI		Heterogeneity					
	k	*n*	*g*	SE	*Z*	LL	UL	*Q* (df)	I^2	T^2	SE	$Q_{between}$ (df)	Q_{within} (df)
Overall effect	55	17,504	0.20	0.04	5.55**	0.13	0.27	200.37(54)**	73.05	0.04	0.01		
Categorical moderators													
Situational ambiguity [a]												5.01(1)*	203.65(53)**
Low ambiguity	43	13,420	0.16	0.04	3.81**	0.08	0.25	174.25(42)**	75.90	0.05	0.02		
High ambiguity	12	2,536	0.47	0.13	3.58**	0.21	0.73	29.40(11)**	62.58	0.09	0.09		
Inconsistency between roles [a]												10.50(1)**	3.39(4)
Low inconsistency	3	230	-0.17	0.17	-0.99	-0.50	0.17	2.87(2)	30.34	0.03	0.09		
High inconsistency	3	245	0.54	0.14	3.95**	0.27	0.80	0.52(2)	0.00	0.00	0.06		
Study design												0.09(1)	193.74(48)**
Field	34	14,738	0.20	0.05	4.32**	0.11	0.30	170.19(33)**	80.61	0.05	0.02		
Laboratory	16	2,172	0.18	0.06	3.20**	0.07	0.29	23.54(15)	36.29	0.01	0.02		
Sample characteristics												0.00(1)	103.67(38)**
Employees	17	6,112	0.19	0.08	2.41*	0.03	0.34	79.93(16)**	79.98	0.07	0.04		
Students	23	4,043	0.18	0.04	4.87**	0.11	0.26	23.75(22)	7.36	0.00	0.01		
Initiation of negotiation measure												38.26(3)**	134.98(51)**
Actual behavior	12	2,226	0.24	0.09	26.61**	0.06	0.42	22.38(11)*	50.84	0.04	0.04		
Retro- / prospective	18	8,695	0.13	0.06	2.16*	0.01	0.26	82.63(17)**	79.43	0.05	0.02		
Scenario	24	4,363	0.20	0.03	5.75**	0.13	0.26	29.97(23)	23.26	0.01	0.01		
Disposition	1	2,220	0.50	0.04	11.66**	0.42	0.59	0.00(0)	0.00	0.00	0.00		

Note. * $p < .05$. ** $p < .01$. *k* = number of effect sizes included in analyses. *n* = number of participants included in the analyses.

[a] If relevant for the respective moderator analysis, different conditions within a single study were considered separately in the analyses (for details see method section and Table 1).



Note. [1]Further duplicates might have still been included, as some references were not available digitally and could not be screened automatically. [2]Records related to gender identity, disorders, health, violent conflict, genocide, refugees, drugs, intimate and sexual relationships, family, animals as well as archaeology were deleted, if at least one of the following terms was included in the title or the abstract: lesbian, homosex*, queer, bisex*, gay, transsex*, lgbt, HIV, AIDS, disorder, contraception, pharmacological, sexual health, disease, genital, surrogacy, anorexia, cancer, pediatric, sperm, hypertension, depression, insomnia, gestational, vagina, (o)estrogen, fertility, geriatric, oncology androgyny, morbidity, amphetamine, polymorphism, menstrual, chromosom*, peptide, infection, ovary, medical, arterial, castrat*, disability*, special need, menopaus*, psychotic, obesity, psychotherapy, abuse, sexual assault, molest, rape, perpetrator, herass*, genocide, armed conflict, kidnap, soldier, refugee, civil war, international conflict, violen*, diaspora, firearms, cold war, war zone, peace process, religious conflict, ethnic conflict, warfare, Taliban, Holocaust, wartime, trafficking, drug, abstinen*, nicotin, cocain, marriage, pregnan*, erotic, prostitution, marri*, parent-child, sexual relationship, mating, hedgehog, drosophila, chimpanz*, monkey, archaeology.

Figure 1. Flowchart of Study Identification Process

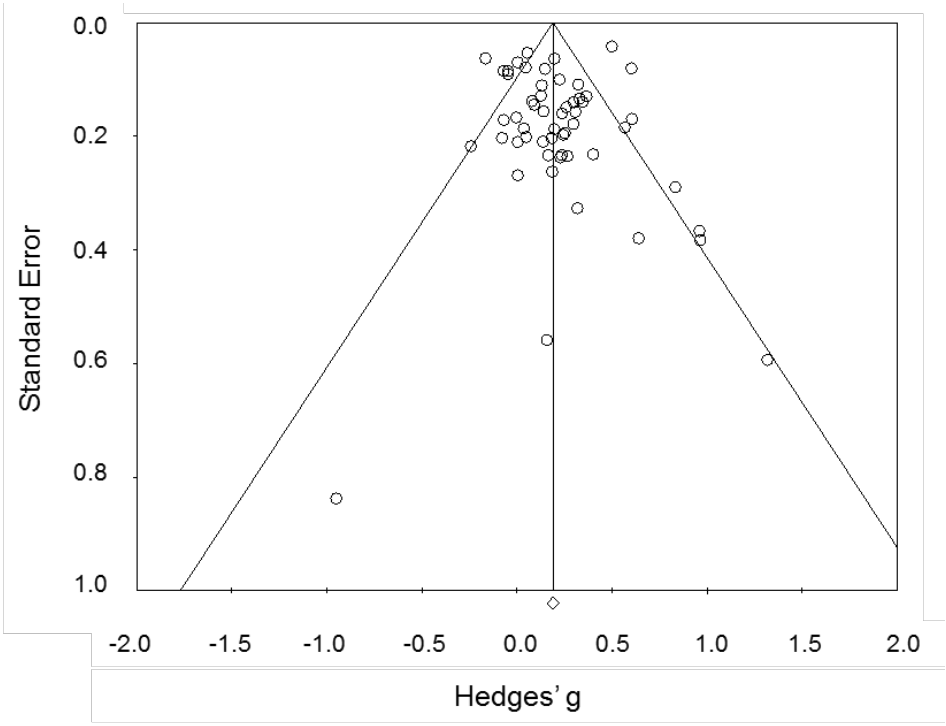


Figure 2. Funnel Plot of Standard Error by Hedges' g