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RESEARCH ARTICLE



Made by her vs. him: Gender influences in product preferences and the role of individual action efficacy in restoring social equalities

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Abstract

In response to the growing standardization and impersonalization of the market side effects of new technology and business automation—consumers increasingly seek more personized purchase experiences, such as buying products directly from the producer. While extant literature has documented the positive effects of personizing market offerings, there is surprisingly little insight about whether knowing who made a product influences consumers' product preferences. We aim to fill this gap by focusing on the critical role of the producer's gender. In 13 studies, including field and online experiments ($n_{total} = 2978$), we observe a general preference for products made by women over products made by men, with female consumers consistently showing a strong preference for products made by women and male consumers showing no systematic preference for either product. We find that this difference between female and male consumers' product preferences occurs because female consumers, in relation to male consumers, hold stronger action efficacy beliefs—beliefs that their individual purchase choices can contribute to restoring gender equalities in business.

KEYWORDS

action efficacy, gender, personizing, product preference, social inequality

INTRODUCTION

Technological progress and the increasing application of new technologies have undoubtedly enhanced efficiency across business sectors, with clear benefits in terms of availability, cost, and convenience. Such advancements, however, also contribute to a highly standardized marketplace where consumer-producer interactions are circumvented and purchases often comprise rather impersonal activities (van Osselaer et al., 2020). This estrangement between producers and consumers eventually suppresses the overall value attached to a purchase, motivating consumers toward alternative courses of action. Indeed, consumers increasingly seek to get in touch with and know more about producers and their products. For instance, more and more consumers buy craft directly from the producer. The North American handicraft market alone is projected to reach a value of \$402 billion in 2024 (BusinessWire, 2020). Etsy, the world's largest online platform for handmade products, has had more than 80 million active buyers in 2020 (Statista, 2020). The recent success of handmade products-what The Economist (2018) has dubbed "a handmade tale"-is largely driven by consumers' desire for unique and personal purchases that standard, mass-produced products cannot satisfy (Cheng, 2018; Johnson, 2016). In line with

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this, research findings show that personizing product offerings by labeling (vs. not labeling) products as handmade (Fuchs et al., 2015) or by providing (vs. not providing) information about producers (Fuchs et al., 2021) can effectively increase consumers' product preferences.

Although extant literature has documented the positive effects of personizing market offerings, there is surprisingly little insight about whether and how consumers' product preferences are influenced by who made a product. Our research aims to fill this gap by exploring the role of the producer's gender in consumers' buying behavior. The gender of the producer is a critical factor for two main reasons. First, psychological literature considers the identification of people's gender a fundamental process of social categorization that is both intuitive and profound (Brewer, 1988; Rhodes & Baron, 2019). Indeed, research suggests that, among primates, humans are uniquely susceptible to gender-based categorizations which can (un)favorably influence decision making and subsequent behavioral tendencies (Hackel et al., 2017; Oyserman, 2009; Reed, 2004). Second, consumers can easily identify producers' gender just by drawing on simple cues such as a name or a picture. In fact, on online platforms where individuals sell their self-made products, such as Etsy, ArtFire, Zazzle and Amazon Handmade, such cues are already prominently displayed alongside the products.

In one field and 12 online experiments ($n_{\text{total}} = 2978$), combining conventional and incentive-compatible measures, we examine consumers' preferences for products made by women versus men. In doing so, we initially discuss how gender influences in consumers' product choices are expected to unfold under different theoretical lenses, acknowledging that alternative theoretical paradigms are warranted in shaping what is to be expected. In this spirit, and instead of forcing our investigation into a strictly deductive narrative, we first conduct seven studies to explore the phenomenon and identify the appropriate explanatory framework in conversation with the empirical data (Janiszewski & van Osselaer, 2021). Following, we take on a deductive approach and outline a formal theoretical account of what is to be expected and why. In four new studies, we formally test the pattern of results obtained in the exploratory phase and offer process evidence. Finally, two additional studies (one reported in the Methodological Details Appendix [MDA]) serve as robustness tests of the proposed account, utilizing consequential dependent measures and considering parallel mechanisms, while also accounting for potentially confounding influences.

Overall, we observe a general preference for products made by women over products made by men and find that female consumers consistently prefer products made by women, while male consumers do not display a clear preference. We attribute this phenomenon to relative differences in action efficacy beliefs, which we define as beliefs that engaging in a particular action can effectively contribute toward achieving a collective goal (Greenaway et al., 2016; van Zomeren et al., 2013). We theorize that because women are perceived to beand indeed are-disadvantaged in business (England et al., 2020; International Labour Organization, 2019), buying products made by women can function as restorative behavior against gender inequalities. With prospective identity threats being directly pertinent to them, female consumers are more sensitized and hold higher action efficacy beliefs about the contribution of their individual actions relative to male consumers. Thus, female consumers demonstrate stronger restorative behavior, manifested in preferring products made by women (vs. men). Corroborating the proposed action efficacy account, we find that (a) decision settings where product choices contribute equally to restoring gender equalities and (b) individual differences that render restorative action less necessary (such as weak beliefs of gender discrimination against women and low motivation to restore gender equality), significantly attenuate the relative difference in preference for products made by women (vs. men) between female and male consumers. Finally, the results show that differences in action efficacy beliefs between female and male consumers mediate preference for products made by women (vs. men) beyond differences in perceived manufacturing expertise of the producer and consumers' self-congruence judgments.

Our studies add to the social identity literature by supporting the idea that the perception of social inequality is necessary, yet not sufficient, to make people engage in restorative behavior. Social justice prescribes an equitable distribution of power and resources across people of different gender and it is essential for the well-being of a society that strives to maintain it (van den Bos, 2003). While egalitarian sentiments encourage support for the disadvantaged gender, consumers' beliefs about the efficacy of their individual actions in contributing against gender inequalities seem critical in driving behavior. Our findings show that, compared to male consumers, female consumers have stronger preferences for products made by women (vs. men). This is attributed to the fact that, in relation to male consumers, female consumers believe more strongly that their product choices can meaningfully contribute to changing gender inequalities in business. Our results support this notion while offering evidence against the idea that gender-based influences in product choices are governed by individuals' social dominance orientation. In addition, we find that the observed effects are independent of in-group favoritism, as conditions that suppress action efficacy beliefs attenuate or even eliminate genderconsistent product choices among female consumers. We also consistently do not detect any own-gender bias for male consumers. Overall, our findings suggest that taking on restorative action requires consumers to not only perceive gender discrimination and be intrinsically motivated to act against it but also to believe that a given action can effectively contribute to restoring gender equality.

Investigating gender-based influences on consumers' product preferences can help identify potential prejudice and prosocial behavior in the marketplace, bringing forward important practical and societal implications. Our findings imply that social change may often be hindered by people's belief that their individual efforts are futile. Accordingly, we propose that by emphasizing the idea that small and seemingly trivial actions can contribute to social change, restorative behavior can be effectively motivated and work against social inequalities.

CONCEPTUAL FRAMEWORK

In response to the increasing standardization and impersonalization of the market-side-effects of new technology applications and business automationcompanies and customers are turning to alternative ways of creating purchase value. Satisfying their desire for unique and personal products, consumers increasingly seek to buy products directly from the producer (Cheng, 2018; Johnson, 2016). Accordingly, platforms that allow smaller, independent producers and crafters to connect with customers are gaining significant popularity throughout the world (Gebel, 2020; The Economist, 2018). Such platforms create a marketplace where prospective buyers have access to various information about producers' characteristics, the most common one being their gender. Overall, handmade products represent a dynamically growing market where purchases are naturally more personized and gender-related information is typically rather salient, providing an ideal context for investigating producer gender influences in product preferences.

Extant literature documents people's susceptibility to gender-related information in judgment and decision making (Koch et al., 2015). Consistent with social identity theory (Tajfel & Turner, 1979), gender-related information triggers in-group biased judgments (i.e., own gender preference), as individuals have an inherent psychological need toward enhancing their self-esteem and maintaining a positive social identity for their group membership (Rudman & Goodwin, 2004). In a market context this implies that, other things being equal, consumers are expected to demonstrate identity-congruent behavior and, thus, prefer products made by producers of the same gender. From an in-group favoritism perspective, we would thus expect male consumers to prefer products made by men and female consumers to prefer products made by women.

However, other things are not always equal, and gender-related information also makes issues related to gender discrimination and social inequality come to the surface. Especially in business, and although gender inequalities in other societal domains have been considerably alleviated over the years, women continue to hold a disadvantaged position (England et al., 2020; Koch et al., 2015). Such social inequalities may encourage behavior that goes beyond in-group favoritism and complicate matters for predicting gender influences in consumers' purchase decisions.

On the one hand, literature drawing on system justification theory postulates that societies may tend to minimize group conflict by accepting or even preferring circumstances that sustain social inequality (Li et al., 2021; Overbeck et al., 2004). More specifically, research on social dominance orientation (SDO) argues that people often strive to maintain the status quo in social hierarchies under the premise that hierarchical differences among social groups are warranted and well deserved (Li et al., 2021). Such beliefs prescribe support for the dominant group, imply resistance to social change, and eventually legitimize discrimination (Li et al., 2021; Pratto et al., 2000). As such, SDO would be associated with a general tendency in favor of products made by men (the dominant group in business) rather than women. Considering that men systematically display higher SDO than women across major cultural or situational factors (Pratto et al., 2000; Sidanius et al., 1994), this stream of literature would further specify that the overall preference for products made by men is driven more strongly by male rather than female consumers.

On the other hand, literature on egalitarianism points to a different prediction and rests on the premise that a just, democratic society should favor equality and act against any form of oppression or domination (Axelsen & Bidadanure, 2019). Human nature is characterized by prosocial and egalitarian sentiments and, thus, people will be motivated to engage in restorative actions whenever they experience social imbalance and inequalities (Boehm, 2009; van den Bos, 2003). Indeed, research findings suggest that humans have rather strong evolutionary incentives to promote social equality (Fowler et al., 2005; Silk & House, 2011). For instance, evidence in behavioral game theory shows that, in restoring inequalities, individuals tend to monetarily reward the poor and punish the rich, even at their personal cost (Dawes et al., 2007). Similar findings suggest that perceived inequality triggers negative emotions toward those who benefit from such inequality (Dawes et al., 2007; Fehr & Fischbacher, 2004) and that altruistic behavior and restorative actions in multilateral human interactions are driven more strongly by promoting equality rather than by self-interest or in-group cooperation (Dawes et al., 2007; Fowler et al., 2005). Hence, this theoretical paradigm would predict that, in an attempt to alleviate gender inequalities in business, consumers, in general, demonstrate a preference for products made by women over products made by men.

We acknowledge that both theoretical paradigms above are warranted in shaping what is to be expected regarding gender influences in consumer product preferences. We thus initially adopt an inductive, exploratory approach to identify the appropriate explanatory framework in conversation with the empirical data (Janiszewski & van Osselaer, 2021) and, then, take on a deductive approach, generating specific predictions that are submitted to confirmatory hypothesis testing.

OVERVIEW OF STUDIES

In 13 studies, we seek to answer whether and why consumers prefer products made by women versus men. The first set of studies (Studies 1, 2A, 2B, 3, 4A, 4B, and 5) gathers data from field and online experiments to explore the phenomenon and empirically establish the main effects. Analyzing multiple study replicates offers inductive insight and allows for generating a concrete theoretical account that explains the anticipated effects (Bastos, 2019). Four new studies (Studies 6, 7A, 7B, and 7C) confirm the pattern of results obtained in the exploratory phase and offer process evidence. Two final studies (Studies 8 and 8S; the latter reported in the MDA) test the robustness of the proposed account.

This research complied with all relevant ethical regulations regarding human participants. Informed consent was obtained from every participant. In all experiments, participation was voluntary, and participants could leave at any time. Across studies, all manipulations and measures are reported, and no participant was excluded from the analyses. All details about the experimental material used in the studies as well as power analyses are provided in the MDA. The data and materials for the studies are publicly available on the Open Science Framework (https://osf.io/axprb/?view_only=81a03bfd43 334eafaele8838dc3af1a2).

EXPLORING GENDER INFLUENCES IN PRODUCT PREFERENCES

The first set of empirical studies explores consumer preferences for products made by women versus men. Study 1 draws on a field experiment using actual purchase data. Studies 2A and 2B utilize different product categories and invite participants to indicate their preference using a discrete choice measure in more controlled experimental settings. In Study 3, participants make a consequential choice between a product made by a woman versus a product made by a man across two new product categories. Studies 4A, 4B, and 5 involve two additional product categories and different stimulus exposure settings to examine relative preference for products made by women versus men on a continuous scale.

Study 1

Study 1 investigates whether the producer's gender affects consumer purchase decisions in a field experiment where participants could buy handmade face masks produced either by a woman or by a man.

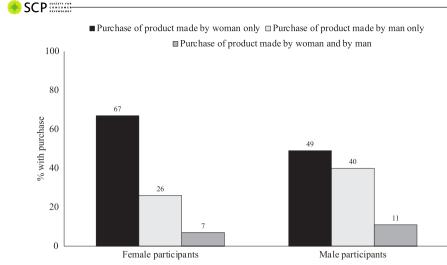
Method

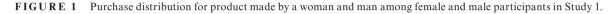
Two students at a major European university collected the data for this field study. The students approached participants through multiple social media channels and informed them that they have the option to buy handmade face masks from two producers, Sarah and Paul. Interested participants were forwarded to an online survey website displaying pictures alongside information about the masks. The price for each face mask was €3.00. We produced four different types of face masks that differed in color (blue vs. green) and design (with vs. without filter pocket). The position of the producer (left vs. right), as well as the type of mask offered (color and design) by each producer, was counterbalanced (the same type of mask was not offered by both producers at the same time; see MDA B1 for study materials). Participants could buy up to three face masks either from one of the two or both the producers. A sample of 160 participants (87 females) bought at least one face mask and was, thus, used in the analysis. Actual purchase behavior served as the dependent variable.

Results

A total of 190 face masks were sold, of which 115 were made by a woman. On average, participants bought more face masks made by a woman (M = 0.72, SD = 0.54) than made by a man (M = 0.47, SD = 0.61; t[159] = 3.02, p = 0.003, d = 0.44). Female participants bought, on average, more face masks made by a woman (M = 0.76, SD = 0.48) than made by a man (M = 0.36, SD = 0.53; t[86] = 3.92, p < 0.001, d = 0.42). Among male participants, in contrast, the average number of face masks bought from a female producer (M = 0.67, SD = 0.60) was not significantly different from the average number of face masks bought from a male producer (M = 0.60, SD = 0.68; t[72] = 0.52, p = 0.60, d = 0.06).

A chi-squared test revealed that the pattern in terms of buying face masks (a) only made by a woman, (b) only made by a man, or (c) from both producers marginally significantly differed across participants' gender ($\chi^2[2] = 4.94$, p = 0.09, Cramer's V = 0.18; see Figure 1). Among participants who bought face masks that were either only made by a woman or only by a man (91%), more participants bought face masks made by a woman (59%) than face masks made by a man





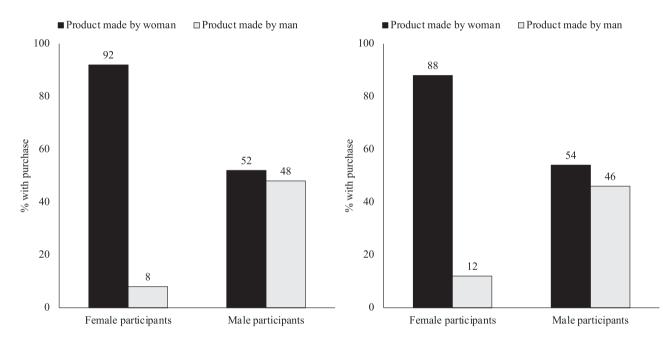


FIGURE 2 Preference distribution for product made by woman and man among female and male participants in Study 2A (left) and Study 2B (right).

(33%; Z = 3.38, p < 0.001). In detail, more female participants bought face masks made by a woman (67%) than face masks made by a man (26%; Z = 3.93, p < 0.001). However, the male participants who bought face masks made by a woman (49%) were not significantly more than those who bought face masks made by a man (40%; Z = 0.81, p = 0.42). For a detailed analysis of the simple main effects and pairwise comparisons see the MDA B2.

Studies 2A and 2B

Studies 2A and 2B explore whether the producer's gender affects consumers' product choice in a more controlled setting utilizing two different product categories. The basic experimental paradigm involved asking participants to imagine that they are looking for a certain product online. After browsing the internet for a while, they discover a platform on which people sell their handmade products and, subsequently, spot two products (one *made by a woman* and one *made by a man*) that are of equal quality, are both priced below their budget, and that they equally like. Participants' choice between the product made by a woman versus a man is the focal outcome measure.

Study 2A

Participants (n = 100, $M_{age} = 34.78$, 52 females) from the U.S. were recruited from Amazon's Mechanical Turk and

JCP

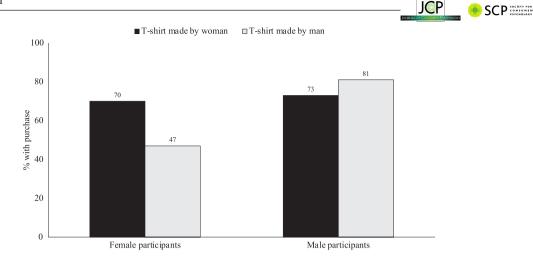


FIGURE 3 Preference distribution for T-shirt (vs. jute bag) made by woman and man among female and male participants in Study 3.

indicated their preference for a belt on a binary measure coded as 0 (*I would prefer the product made by a man*) and 1 (*I would prefer the product made by a woman*) (see MDA C for study materials). The results reveal that participants, in general, showed a stronger preference for the product made by a woman versus a man (71% vs. 29%; Z = 4.20, p<0.001). In addition, product preference depended significantly on participants' gender ($\chi^2[1] = 19.15$, p<0.001, Cramer's V = 0.44; see Figure 2). Whereas female participants showed a strong preference for the product made by a woman versus a man (92% vs. 8%; Z = 6.06, p<0.001), preference between the two products did not significantly differ among male participants (52% vs. 48%; Z = 0.28, p = 0.78).

Study 2B

We recruited a new sample of U.S. consumers (n = 102, $M_{age} = 34.39$, 54 females) using Prolific Academic in a study that was identical to the previous one, the only difference being that the target product was a smartphone case. As shown in Figure 2, the results fully replicated the findings of Study 2A (see MDA D1 for study materials and D2 for detailed results).

Study 3

Study 3 invited participants to make a consequential choice between a personalized T-shirt and a personalized jute bag produced either by a woman or a man. Instead of explicitly stating the producers' gender, Study 3 employed a more subtle manipulation based on the name and picture of the respective producer.

Method

Participants were 140 graduate students from a Central European University ($M_{age} = 24.73$, 89 females) who

participated voluntarily in the study. The participants were told that they would see two screenshots of Etsy shops offering personalized products. One of the screenshots featured personalized T-shirts (our focal product), while the other one featured personalized jute bags. Participants were informed that they will enter a raffle for the chance to win one of the two products. Along with the products, the stimulus screenshots displayed the name and picture of a female or male producer. The Etsy shops also slightly varied in terms of customer star ratings. The position of the product (top vs. bottom), the respective producer, and the star ratings of the Etsy shop were counterbalanced. After reviewing the two Etsy shops, participants selected the product they would choose to receive in case they win the raffle (see MDA E1 for study materials). This choice served as our dependent variable. Participants finally completed a four-item Perceived Awareness of the Research Hypothesis (PARH) scale (Rubin, 2016; $\alpha = 0.86$).

Results

We first found that the overall share of participants choosing the T-shirt was marginally significantly higher when the product was made by a woman (71%) versus a man $(57\%; \chi^2[1] = 3.11, p = 0.08$, Cramer's V = 0.15). Following, we regressed product choice $(0 = jute \ bag, 1 = T-shirt)$ on producer of the T-shirt (0 = man, 1 = woman), participant gender (0 = male, 1 = female), and their respective interaction in a binary logistic regression. Results revealed a nonsignificant effect of producer (b = -0.44, p = 0.53, Wald $\chi^2 = 0.40$), a significant effect of participant gender $(b = -1.57, p = 0.012, \text{Wald } \chi^2 = 6.30)$, and a marginally significant interaction effect (b = 1.41, p = 0.09, Wald $\chi^2 = 2.90$; see Figure 3). The share of female participants choosing the T-shirt was higher when the T-shirt was made by a woman than when the T-shirt was made by a man (70%)vs. 47%; Z = 2.16, p = 0.031). In contrast, the share of male participants choosing the T-shirt did not differ between producer genders (73% vs. 81%; Z = -0.62, p = 0.54).

This pattern of results did not change when controlling for participants' perceived hypothesis awareness (PARH scale). Besides, regressing product choice on participant gender, producer gender, participants' perceived hypothesis awareness, as well as the respective interactions produced nonsignificant effects for interactions involving participants' perceived hypothesis awareness (see MDA E2 for details). It is, thus, unlikely that the findings were driven by experimental demand.

Studies 4A and 4B

Studies 4A and 4B employed the same experimental paradigm as Studies 2A and 2B but now asked participants to indicate their product preferences on a continuous, relative scale.

Study 4A

Study 4A involved a convenience sample collected by a student at a major European university through various social media channels (n = 320, $M_{age} = 35.93$, 145 females). Participants were asked to indicate their relative preference for a smartphone case using a six-point, semantic differential scale (1 = I would prefer the product made by aman, 6 = I would prefer the product made by a woman) (see MDA F for study materials).

Replicating the result of the previous studies, participants overall preferred the product made by a woman $(M = 3.90, \text{ SD} = 1.40; t[319]_{3.5} = 5.14, p < 0.001, d = 0.29).$ However, female participants showed stronger preference for the product made by a woman (M = 4.28, SD = 1.45) than male participants did (M = 3.59, SD = 1.29; t[318] = 4.54, p < 0.001, d = 0.50; see Figure 4). While female participants demonstrated a clear preference for the product made by a woman over the product made by a man $(t[144]_{3,5} = 6.52, p < 0.001, d = 0.54)$, no such difference was observed among male participants $(t[174]_{3.5} = 0.91, p = 0.36, d = 0.07).$

Study 4B

This study involved 201 U.S. consumers ($M_{age} = 33.54, 97$ females) recruited from Amazon's Mechanical Turk and was identical to the previous one but used coffee mugs as the focal product category. As shown in Figure 4, the results replicated those of Study 4A (see MDA G1 for study materials and G2 for detailed results).

Study 5

In Study 5, we focused again on the relative preference for a product made by a woman versus a man. However, we utilized an alternative, more subtle manipulation of producers' gender and also varied the product's design and price to examine whether the producer gender influences occur in the presence of other important product differences.

Method

Two hundred and two U.S. consumers ($M_{age} = 39.08$, 89 females) were recruited from Amazon's Mechanical Turk. Participants were told to imagine they were looking

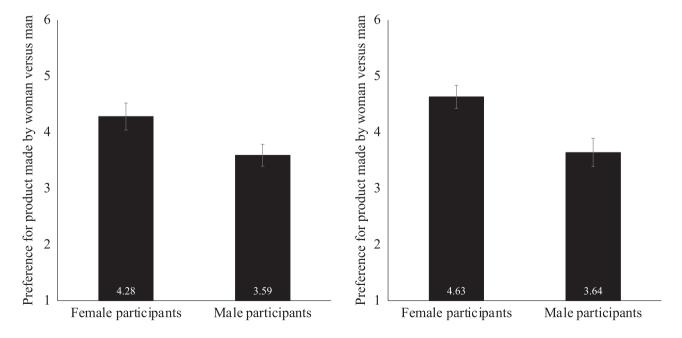


FIGURE 4 Mean product preferences for product made by man (=1) versus woman (=6) in Study 4A (left) and Study 4B (right). Error bars indicate ±1 SEM.

for a set of coffee mugs and had finally narrowed down all available options to two alternatives. Next, they were presented with two different sets of coffee mugs, one labeled "Made by Sarah's Ceramics" and one labeled "Made by Joe's Ceramics". The two options also varied in terms of design (white vs. blue/gray) and price (\$16 vs. \$18). The position of the producer (left vs. right), the design, and the price of the products were counterbalanced, resulting in eight alternative versions (see MDA H1 for study materials).

After reviewing the two options, participants indicated their relative product preference (1 = I would prefer the set on the left, 6 = I would prefer the set on the right). Participants also responded to an attention check ("What was the capacity of the mugs you just saw?"; <math>0 = 7FL oz, 1 = 10 FL oz, 2 = 13 FL oz) and completed the fouritem PARH scale ($\alpha = 0.94$).

Results

We recoded responses to product preferences such that 1 denotes preference for the product made by a man and 6 denotes preference for the product made by a woman. While no clear general preference was observed in this study (M = 3.66, SD = 2.00; $t[201]_{3.5} = 1.16$, p = 0.25, d = 0.08), the differences in preference for the product made by a woman (vs. man) between female and male participants closely replicated the pattern obtained in the previous studies with female participants preferring the product made by a woman and male participants showing no clear product preference (see MDA H2 for detailed results). Also, the results did not change when controlling for PARH nor did participants' gender interact with the latter in predicting product preference, indicating that such demand artifacts were unlikely to drive the results (see MDA H3 for details). Finally, excluding 28 participants who failed the attention check did not affect the results (see MDA H3).

Discussion

Seven empirical studies explored whether the producer gender affects consumers' actual purchase behavior (Study 1), product choice (Studies 2A, 2B, and 3), and relative product preference (Studies 4A, 4B, and 5). The studies utilized different product categories, explicit manipulations of producers' gender keeping other product attributes such as price, liking, and quality constant (Studies 2A, 2B, 4A, and 4B) as well as more subtle manipulations of producers' gender while varying important product attributes (Study 1: design; Study 3: design, customer reviews; Study 5: design, price).

Across studies, we obtained a consistent pattern of results. First, participants, in general, displayed a preference for products made by women over products made by men. Second, the producer's gender had a stronger influence on female, as opposed to male, participants; female participants clearly preferred products made by women over products made by men, while male participants showed no systematic preference for either product.

It becomes evident that drawing on system justifying theories as an explanatory paradigm to describe producer gender influences in consumers' product choices is incompatible with these findings. To cope with the challenges of social development, individuals need to believe that they live in a world that is orderly and where people get what they deserve (Lerner & Miller, 1978). In a similar sense, to avoid potential conflicts, societies often foster beliefs that the system is just and that the hierarchical relationships permeating societal groups are well-warranted (Li et al., 2021). According to social dominance theory, group-based inequalities are seen as morally and pragmatically legitimate, with individuals generally supporting the dominant group, regardless of where in the hierarchy their in-group stands (Pratto et al., 2000; Sidanius et al., 1994). Under this theoretical paradigm, a general preference for products made by men would be predicted—even more so among male participants. This, however, seems completely at odds with the empirical data.

The observed overall preference for products made by women (vs. men) conforms with the perspective of egalitarianism according to which discrimination and social inequality call people to take on restorative action toward equilibrium (Boehm, 2009). In this line, women's persisting disadvantaged position in business (England et al., 2020; Koch et al., 2015) should generally motivate behaviors toward restoring gender equality in businessrelated contexts. In purchase choices, such restorative behavior could be reflected in a greater preference for products made by women (vs. men); a pattern consistently found across the seven studies reported above. Interestingly, our studies also show that such restorative behavior is significantly more pronounced among female rather than male participants. We investigate this asymmetrical influence in the following six studies. More specifically, having identified the theoretical paradigm that describes the general preference for products made by women best, we now follow a deductive approach where we hypothesize and test the proposition that the observed discrepancy between female and male consumers' preference for products made by women (vs. men) can be explained by relative differences in action efficacy beliefs.

ACTION EFFICACY BELIEFS

Being motivated to take action toward a certain goal makes little difference unless the action is perceived as an

effective means to bring about the desired end. Such perceptions of action efficacy are largely a matter of subjective interpretation and contingent on the contextual specifications at hand. For instance, people may generally celebrate actions toward immigrant assimilation. However, donating a language book may be perceived as less or more effective in contributing to this end, depending on whether an individual has an immigration background or not. Arguably, what one may perceive as relevant concerning a certain objective depends on where one stands.

We argue that differences in action efficacy beliefs between female and male consumers can explain the documented differences in preferring products made by women (vs. men). Female consumers are members of the disadvantaged social group and, thus, prospective gender identity threats should be more psychologically proximal to them. Consistent with work on identity threat (Ward & Broniarczyk, 2011), this should give female consumers stronger reflexes toward restorative actions that could potentially strengthen their vulnerable identity. This is in line with recent empirical evidence drawing on identity-based threats pertinent to anti-immigration, race-based police aggression, and the Coronavirus pandemic. These results suggest that independent event observers who share the harmed social identity become vicarious victims of the event and are more prone to threat-suppressing behaviors (Leigh & Melwani, 2022). Accordingly, female consumers share the underprivileged social identity and should be more sensitized to any individual contribution that could potentially work toward improving the current status quo. For them, even a seemingly trivial action such as buying a product from a female (vs. female) producer should be perceived as being more able to close the gender gap in business than no action at all. This should not be the case among male consumers who, despite their inherent motivation to restore gender inequalities, are less likely to see the act of buying products made by women as an effective form of restorative behavior.

Overall, we predict that female (vs. male) consumers' have stronger preferences for products made by women (vs. men) because female, compared to male, consumers hold stronger beliefs that their purchase decisions can effectively contribute to restoring gender equalities in business. We test these propositions across multiple studies that utilize different product categories and outcome measures, including both self-reports and consequential data.

Study 6

Study 6 tests whether action efficacy beliefs mediate the observed difference between female and male consumers' preferences for products made by women (vs. men). In addition, Study 6 also considers the moderating role of gender identification. Our action efficacy account rests on the assumption that being a member of the disadvantaged social group increases the perceived efficacy of individual actions that supposedly contribute to restoring social equalities. Thus, the more (less) individuals identify with their gender, the more (less) pronounced the discrepancy in action efficacy beliefs should be.

Method

Participants from the U.S. (n = 301, $M_{age} = 33.61$, 139 females) were recruited from Prolific Academic. They were presented with the same scenario as in Studies 4A and 4B and were asked to indicate their relative preference for a leather wallet (1 = I would prefer the product made by aman, 6 = I would prefer the product made by a woman; see MDA I1 for study materials). Following this, we measured action efficacy beliefs using two items asking which option would contribute more to (a) "...changing disparities between women and men in business?" and (b) "... promoting equality between women and men in business?" (1 = Buying the product made by a man, 6 = Buyingthe product made by a woman; r = 0.76). Finally, and after participants had indicated their gender, we measured gender identification on two items ("Being a [woman/ man] is an important part of my self-image" and "Being a [woman/man] is an important reflection of who I am"; 1 = Strongly disagree, 7 = Strongly agree; r = 0.87).

Results

Participants, in general, preferred the product made by a woman over the product made by a man (M = 4.06,SD = 1.06; $t[300]_{3.5} = 9.21$, p < 0.001, d = 0.53). Female participants had higher preferences for the product made by a woman (M = 4.63, SD = 0.99) than male participants (M = 3.58, SD = 0.87; t[299] = 9.77; p < 0.001, d = 1.13). Once again, female participants preferred the product made by a woman $(t[138]_{35} = 13.44, p < 0.001, d = 1.14)$, while male participants showed no clear preference for either product $(t[161]_{3.5} = 1.18, p = 0.24, d = 0.09)$. In addition, female participants had higher action efficacy beliefs (M = 4.91, SD = 0.86) than male participants (M = 3.86, SD = 1.02; t[299] = 9.57, p < 0.001, d = 1.11). Female participants also identified more strongly with their own gender (M = 5.68, SD = 1.13) than male participants (M = 4.84, SD = 1.41; t[299] = 5.64, p < 0.001, d = 0.67).

A mediation analysis (Hayes, 2012; Model 4, n = 5000 bootstraps) with participant gender (0 = male, 1 = female) as independent variable, product preference as dependent variable, and action efficacy beliefs as mediator revealed a significant indirect effect (b = 0.53, SE = 0.08, 95% CI [0.37, 0.70]). Participant gender affected action efficacy beliefs (b = 1.05, SE = 0.11, p < 0.001), which in turn predicted product preference (b = 0.50, SE = 0.05, p < 0.001).

To test the moderating effect of participants' gender identification, we included gender identification (mean-centered) as a moderator in the model (Hayes, 2012; Model 7, n = 5000 bootstraps). This analysis produced a significant participant gender × gender identification interaction (b = 0.25, SE = 0.09, t = 2.79, p = 0.006). As expected, the discrepancy between female and male participants' action efficacy beliefs was more pronounced among participants who identified more with their own gender (84th percentile: b = 1.33, SE = 0.15, t = 8.84, p < 0.001) than among participants who identified less with their own gender (16th percentile: b = 0.72, SE = 0.17, t = 4.26, p < 0.001). Overall, the analysis produced a significant index of moderated mediation (b = 0.12, SE = 0.05, 95% CI [0.03, 0.23]). The indirect effect of participant gender on product preference through action efficacy beliefs was stronger for participants who identified more with their own gender (b = 0.67, SE = 0.12, 95% CI [0.45, 0.91]) than for those who identified less with their own gender (b = 0.36, SE = 0.09, 95% CI [0.18, 0.63]). In the MDA I2, we document alternative mediation models, demonstrating that gender identity does not mediate the effect of participant gender on product preference, which further corroborates the idea that egalitarian sentiments can encourage behavior that goes beyond in-group favoritism.

Discussion

Study 6 provides correlational evidence that female (vs. male) consumers' greater action efficacy beliefs can explain their preference for products made by women (vs. men). Female, in relation to male, consumers believe more strongly that buying products made by women (vs. men) can contribute to restoring gender equalities in business and, thus, demonstrate stronger relative preferences for products made by women. Furthermore, we find that this effect is increased for participants who identify more strongly with their own gender. Overall, the findings show that female consumers hold stronger beliefs that their purchase choices can function as meaningful restorative behavior against gender inequalities and, consequently, display stronger preferences for the product made by a woman. As expected, male consumers' product preferences did not show evidence of ingroup favoritism. However, their action efficacy beliefs do not seem to be strong enough to make them prefer the product made by a woman.

Studies 7A to 7C aim to further corroborate the proposed psychological mechanism by investigating cases where individuals' action efficacy beliefs are suppressed either due to the configuration of the purchase decision context (Study 7A) or due to how consumers approach gender discrimination and inequality in business (Study 7B and 7C). 519

Study 7A

Study 7A manipulates action efficacy by varying the purchase decision context between high and low product choice dependence: whether the revenues from the sales go to the individual producers who sell the products (high choice dependence) or to a non-profit organization supporting gender equality in business irrespective of the purchased product (low choice dependence). If female (vs. male) consumers' stronger preference for products made by women (vs. men) can be attributed to greater action efficacy beliefs, then in the low choice dependence condition such preference should be less pronouncedsince both purchase options now contribute to restoring gender equality. Thus, we expect that female consumers' preferences for products made by women (vs. men) will be attenuated when choice dependence is low (i.e., the revenues go to the non-profit organization) as opposed to high (i.e., revenues go to the individual producer). This should not be the case for male consumers. Under the assumption that male consumers already hold significantly lower action efficacy beliefs about their purchase decisions, their product preferences should not differ across conditions.

Method

Participants from the U.S. (n = 502, $M_{age} = 38.74$, 238 females) were recruited from Amazon's Mechanical Turk and imagined looking for a set of coffee mugs on a platform that sells handmade products (see MDA J for study materials). Before participants indicated their product preference (1 = I would prefer the set made by a man, 6 = I would prefer the set made by a woman), we manipulated the extent to which restoring gender equalities depends on their product choice by telling them either that on this platform (a) all revenues go directly to the producers of the products (high product choice dependence) or (b) all revenues go directly to a nonprofit organization committed to changing disparities between women and men in business (low product choice dependence).

Results

A 2 (participant gender)×2 (product choice dependence) ANOVA on product preference revealed a significant main effect of choice dependence ($M_{high} = 4.24$, SD = 1.26 vs. $M_{low} = 3.81$, SD = 1.26; F[1, 498] = 17.19, p < 0.001, $\eta_p^2 = 0.03$). The main effect of participant gender was also significant (F[1, 498] = 83.99, p < 0.001, $\eta_p^2 = 0.14$), with female participants demonstrating a stronger preference for the product made by a woman versus a man (M = 4.48, SD = 1.17) than male participants (M = 3.55, SD = 1.21). Importantly, this main effect was qualified by a significant participant

gender \times product choice dependence interaction (F[1, $[498] = 8.88, p = 0.003, \eta_p^2 = 0.02$; see Figure 5), indicating that our choice dependence manipulation differentially affected female and male participants. While female participants preferred the product made by a woman (vs. man) in both the high choice dependence condition $(M = 4.87, SD = 0.94; t[111]_{3.5} = 15.47, p < 0.001, d = 1.47)$ and the low choice dependence condition (M = 4.13,SD = 1.24; $t[125]_{3.5} = 5.77$, p < 0.001, d = 0.51), their preference for the product made by a woman was significantly lower in the low (vs. high) choice dependence condition $(F[1, 498] = 24.09, p < 0.001, \eta_p^2 = 0.05)$. In contrast, male participants showed no preference for either product in both the high choice dependence condition (M = 3.61,SD = 1.20; $t[131]_{3,5} = 1.09$, p = 0.28, d = 0.09) and the low choice dependence condition (M = 3.49, SD = 1.21; $t[131]_{35} = -0.07$, p = 0.94, d = -0.001) and this pattern was similar across conditions (F[1, 498] = 0.72, p = 0.40, $\eta_p^2 = 0.001$). In sum, the difference between female and male participants' preference for the product made by a woman (vs. man) was significantly greater when choice dependence was high (F[1, 498] = 71.52, p < 0.001, $\eta_{\rm p}^2 = 0.14$) than when choice dependence was low (F[1, 498] = 19.74, p < 0.001, $\eta_{\rm p}^2 = 0.04$).

Study 7B

In Study 7B, we examine female and male consumers' product preferences in relation to how strongly they believe that women currently face gender discrimination in business (i.e., female discrimination beliefs). If female (vs. male) consumers' greater preference for products made by women (vs. men) is driven by action efficacy beliefs, then beliefs about the extent to which women actually face gender discrimination should more strongly influence product preferences among female consumers than male consumers. The more (less)

female consumers believe that women are discriminated against in business, the more (less) they should engage in restorative action manifested in preferring products made by women. Such an effect should be significantly less pronounced among male consumers whose action efficacy beliefs are not strong enough to drive preference for products made by women in the first place. Put differently, the level of female discrimination beliefs (low vs. high) should matter less for male consumers, as they are less convinced that their purchase decision can effectively contribute to restoring gender equality. Along these lines, we expect that the discrepancy between female and male consumers' product preferences is attenuated when consumers hold low (vs. high) female discrimination beliefs.

Method

Participants from the U.S. (n = 202, $M_{age} = 38.51$, 103 females) were recruited from Amazon's Mechanical Turk and indicated their preference for a smartphone case (1 = I would prefer the product made by a man, 6 = I would prefer the product made by a woman) (see MDA K1 for study materials). In addition, we measured female discrimination beliefs on three randomized items ("Women in business currently face gender discrimination," "In the business world today, discrimination against women is pervasive," and "At present, discrimination against women is widespread in business"; 1 = Strongly disagree, 7 = Strongly agree; $\alpha = 0.94$).

Results

Overall, participants preferred the product made by a woman over the product made by a man (M = 3.76, SD = 1.31; $t[201]_{3.5} = 2.86$, p = 0.005, d = 0.20). In addition,

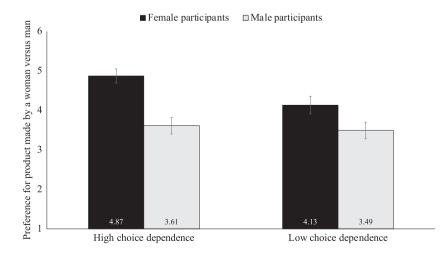


FIGURE 5 Mean product preferences for product made by man (=1) versus woman (=6) among female and male participants as a function of product choice dependence in Study 7A. Error bars indicate ± 1 SEM.

female participants had higher preferences for the product made by a woman (M = 4.17, SD = 1.24) than male participants (M = 3.34, SD = 1.25; t[200] = 4.70; p < 0.001, d = 1.10). Female participants preferred the product made by a woman $(t[102]_{35} = 5.45, p < 0.001,$ d = 0.54), while male participants showed no clear preference for either product $(t[98]_{3,5} = -1.25, p = 0.21,$ d = -0.13). Female participants also held higher female discrimination beliefs (M = 4.95, SD = 1.63) than male participants (M = 4.39, SD = 1.58; t[200] = 2.50, p = 0.013, d = 0.34). Of note, a mediation analysis (Hayes, 2012; Model 4, n = 5000 bootstraps) revealed a nonsignificant indirect effect of participant gender (0 = male, 1 = female) on product preference through female discrimination beliefs (b = 0.06, SE = 0.04, 95%) CI [-0.002, 0.16]; see MDA K2 for details).

An interaction analysis (Hayes, 2012; Model 1, n = 5000 bootstraps) between female discrimination beliefs (mean-centered) and participant gender (0 = male, 1 = *female*) on product preference produced nonsignificant effects for female discrimination beliefs (b = -0.04, SE = 0.08, t[198] = -0.48, p = 0.63) and participant gender (b = -0.57, SE = 0.53, t[198] = -1.07, p = 0.29) but revealed a significant interaction between the two factors (b = 0.28, SE = 0.11, t[198] = 2.65, p = 0.009). As shown in Figure 6, the discrepancy between female and male participants' product preference is significant when female discrimination beliefs are high (84th percentile: b = 1.23, SE = 0.25, t = 4.95, p < 0.001) but vanishes when female discrimination beliefs are low (16th percentile: b = 0.28, SE = 0.25, t = 1.16, p = 0.25). In line with our prediction, female discrimination beliefs affect preference for the product made by a woman (vs. man) among female participants (b = 0.25, SE = 0.07, t = 3.33, p = 0.001) but not among male participants (b = -0.04, SE = 0.08, t = -0.49, p = 0.63).

Study 7C

Study 7C examines product preferences by factoring in differences in individuals' social change motivation, i.e., the intrinsic motivation to restore equality between women and men. If consumers believe that their individual buying decisions contribute to restoring gender equality in business, then being motivated to bring about social change should positively influence their preference for products made by women. If, however, consumers do not see efficacy in their purchase choices, their motivation to restore gender equalities will less likely manifest in increased support for products made by women. Given that female (male) consumers have stronger (weaker) beliefs that their individual buying decisions can contribute to gender equality, their product preferences should be affected more (less) by their motivation to restore gender equality. Thus, the discrepancy between female and male consumers' product preferences should attenuate with low (vs. high) social change motivation.

Method

A convenience sample was recruited via various social media channels by a student at a major European university (n = 193, $M_{age} = 31.51$, 104 females). We asked participants to indicate their preference for a smartphone case (1 = I would prefer the product made by a man, 6 = I would prefer the product made by a man, 6 = I would their social change motivation using three randomized items ("I have a strong motivation to change disparities between women and men in business," "I am very motivated to change disparities between women and men in business," and "I am highly motivated to promote equality between women and men in business"; 1 = Strongly disa-gree, 7 = Strongly agree; $\alpha = 0.93$) (see MDA L for study materials).

Results

In line with the previous studies, participants preferred the product made by a woman over the product made by a man (M = 4.16, SD = 1.33; $t[192]_{3,5} = 6.83$, p < 0.001, d = 0.50) and female participants had higher preferences for the product made by a woman (M = 4.65, SD = 1.28) than male participants (M = 3.57, SD = 1.16; t[191] = 6.12; p < 0.001, d = 0.88). Female participants preferred the product made by a woman ($t[103]_{3,5} = 9.26$, p < 0.001, d = 0.90), while male participants showed no clear preference ($t[88]_{3,5} = 0.60$, p = 0.56, d = 0.06). Social change motivation did not significantly differ between female participants (M = 5.98, SD = 1.19) and male participants (M = 5.75, SD = 1.29; t[191] = 1.32, p = 0.19, d = 0.19).

An interaction analysis (Hayes, 2012; Model 1, n = 5000 bootstraps) between social change motivation (mean-centered) and participant gender (0 = male, 1 = female) on product preference produced nonsignificant effects for social change motivation (b = 0.15, SE = 0.09, t[189] = 1.60, p = 0.11) and participant gender (b = -1.08, SE = 0.80, t[189] = -1.36, p = 0.18) but a significant interaction effect (b = 0.36, SE = 0.13, t[189] = 2.67, p = 0.008). As Figure 7 shows, the discrepancy between female and male participants' product preference is significantly more pronounced when participants have high social change motivation (84th percentile: b = 1.41, SE = 0.22, t = 6.28, p < 0.001) compared to low social change motivation (16th percentile: b = 0.70, SE = 0.20, t = 3.46, p < 0.001). As predicted, social change motivation affected product preference among female participants (b = 0.51, SE = 0.09, t = 5.38, p < 0.001) but not among male participants (b = 0.15, SE = 0.09, t = 1.60, p = 0.11).

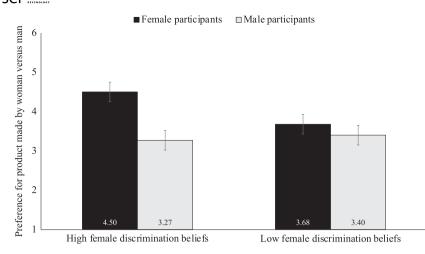


FIGURE 6 Mean product preferences for product made by man (= 1) versus woman (= 6) among participants with high (84th percentile) and low (16th percentile) female discrimination beliefs in Study 7B. Error bars indicate ± 1 SE.

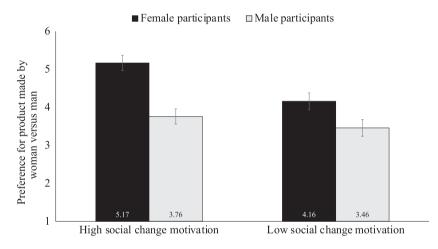


FIGURE 7 Mean product preferences for product made by man (=1) versus woman (=6) among participants with a high (84th percentile) and low (16th percentile) social change motivation in Study 7C. Error bars indicate ± 1 SE.

Discussion Studies 7A to 7C

The findings from Studies 7A to 7C consistently show that female consumers have a stronger preference for products made by women than male consumers do and offer evidence for the action efficacy account proposed in Study 6: female consumers prefer products made by women (vs. men) because, in relation male consumers, they more strongly believe that buying products made by women can contribute to gender equality in business. Supporting the latter, we find that the difference between female and male consumers' preference for products made by women (vs. men) is significantly less pronounced when all product options work against gender inequalities (Study 7A). At the same time, weak beliefs about female discrimination in business (Study 7B) and low intrinsic motivation to change gender inequalities (Study 7C) reduce the support for products made by women among female consumers but do not influence product preference among male consumers.

STUDY 8: ROBUSTNESS OF THE ACTION EFFICACY ACCOUNT

The aim of Study 8 is to test the action efficacy account against two potential rival processes. First, it may be that consumers (especially females) believe that women are better at producing certain types of products, such as those used as experimental stimuli (i.e., face masks, accessories, clothing, pottery). With that in mind, observed differences between female and male consumers' product preferences might merely be due to differential quality perceptions. Second, one might argue that female consumers perceive a greater fit between their self-image and products made by women (vs. men) than male consumers do concerning products made by men (vs. women). Female (vs. male) consumers' greater preference for products made by women (vs. men) might thus be driven by greater perceptions of selfcongruence (Sirgy et al., 1997). Study 8 thus tests whether action efficacy beliefs can explain female (vs. male) consumers' greater preference for products made by women (vs. men) beyond these two alternative mechanisms.

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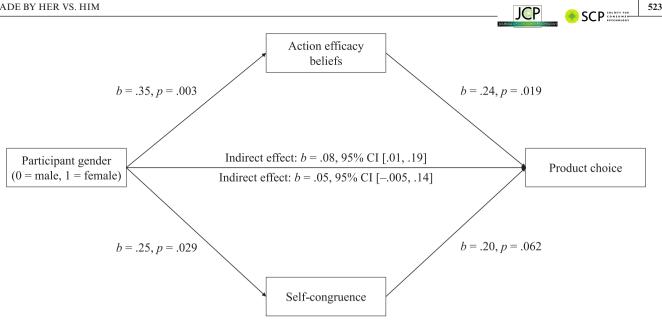


FIGURE 8 Parallel mediation results in Study 8.

Method

Participants were 353 U.S. consumers ($M_{age} = 39.05, 167$ females) recruited from Amazon's Mechanical Turk. All participants were informed that they would see two coffee mugs and that they will enter a raffle for the chance to win one of the two products. We used the same stimuli as in Study 5. After reviewing the two options, participants selected the product they would choose in case they win the raffle. This consequential binary choice served as our dependent variable (see MDA M1 for study materials).

As process variables, we assessed, in a randomized order, (a) participants' action efficacy beliefs using the same two items as in Study 6 (r = 0.65), (b) the extent to which they believe that women are more skilled in producing coffee mugs ("Who would you say produces coffee mugs of higher quality?," and "Who would you say has more expertise in producing coffee mugs?"; 1 = Definitely men, 4 = Equal, 7 = Definitely women; r = 0.78), and (c) the degree to which the chosen product is congruent with their self-image ("The choice I made reflects who I really am," "The choice I made makes me feel true to myself," and "The choice I made makes me feel honest to myself"; $1 = Strongly disagree, 7 = Strongly agree; \alpha = 0.90; Sirgy$ et al., 1997). Following these measures, participants responded to an attention check ("What was the capacity of the mugs you just saw?"; 0 = 7 FL oz, 1 = 10 FLoz, 2 = 13 FL oz) and also completed the PARH scale $(\alpha = 0.94).$

Results

Overall, participants showed no clear preference for the product made by a woman versus a man (53% vs. 47%;

Z = 1.13, p = 0.26). However, participants' product choice significantly depended on their own gender ($\chi^2[1] = 5.06$, p = 0.024, Cramer's V = 0.12). Replicating the results from the previous studies, female participants showed a clear preference for the product made by a woman versus man (59% vs. 41%; Z = 2.33, p = 0.020), while male participants did not show a clear preference (47% vs. 53%; Z = -0.82, p = 0.41).

As hypothesized, female participants indicated higher action efficacy beliefs (M = 5.09, SD = 1.11) than male participants (M = 4.74, SD = 1.04; t[351] = 3.03, p = 0.003, d=0.32). Female participants judged women to be equally skilled in producing coffee mugs (M = 4.20, SD = 0.73) as male participants (M = 4.15, SD = 0.59; t[349] = 0.70, p = 0.48, d = 0.08). Finally, female participants indicated that their chosen products were more congruent with their self-image (M = 5.66, SD = 0.96) compared to their male counterparts (M = 5.41, SD = 1.15; t[351] = 2.19, p = 0.029, d = 0.24).

To investigate the two plausible mechanisms (action efficacy beliefs and self-congruence), we tested a mediation model (Hayes, 2012; Model 4, n = 5000 bootstraps) with participant gender (0 = male, 1 = female) as independent variable, product choice (0 = product made byman, 1 = product made by woman) as dependent variable, and action efficacy beliefs and self-congruence as parallel mediators. The analysis revealed a positive and significant indirect effect through action efficacy beliefs (b = 0.08, SE = 0.05, 95% CI [0.01, 0.19]) but a nonsignificant indirect effect through self-congruence (b = 0.05, SE = 0.04, 95% CI [-0.005, 0.14]; see Figure 8). The results did not change when controlling for PARH, and participants' gender did not interact with PARH in predicting product choice or any of the process measures, suggesting that demand influences have not confounded the results (see MDA M2 for details). Finally, excluding 46 participants who failed the attention check did change the results (see MDA M2).

Discussion

The results of Study 8 suggest that action efficacy beliefs can explain female (vs. male) consumers' stronger preference for products made by women (vs. men) beyond producers' manufacturing expertise and consumers' self-congruence judgments. First, we find that female and male consumers do not differ in how skilled they see women (vs. men) to be in producing the stimulus products (i.e., coffee mugs). A posttest further confirmed that this holds for all of the products used as stimuli across Studies 2 and 4-7 (see MDA N). Second, considering consumers' perceived self-congruence with their product choices as a parallel underlying mechanism, we find that action efficacy beliefs explain the difference between female and male consumers' product preferences above and beyond the influence of self-congruence. These results were replicated in yet another Study 8S which employed an alternative experimental design, utilized a different product category, and explicitly accounted for socially desirable responses as a potential confound (see MDA O). Taken together, Studies 8 and 8 S provide additional support to the action efficacy beliefs account and imply that prosocial consumer behavior is primarily affected by egalitarian concerns and not by self-oriented concerns.

GENERAL DISCUSSION

Thirteen experimental studies, employing different sample populations, different stimulus products, and different study designs suggest that the producer's gender plays an important role in shaping consumers' product preferences. Studies 1-5 establish this phenomenon, demonstrating that female consumers prefer products made by women, while male consumers display no preference between products from producers of a different gender. We hypothesized that this relative difference in preference for products made by women (vs. men) occurs because female, in relation to male, consumers hold higher action efficacy beliefs—beliefs that their product choices can meaningfully contribute against gender inequalities in business. Study 6 offers support for this account while Studies 7A to 7C provide further empirical evidence, indicating that buying conditions and/or consumer perceptions that minimize the relevance of individual purchase decisions for restoring gender equalities decrease the influence of the producer's gender on consumers' product preferences. Finally, Studies 8 and 8S suggest that action efficacy beliefs explain the discrepancy between female and male consumers' preferences for products made by women (vs. men) beyond perceived manufacturing

expertise and judgments of consumers' self-congruence with the product choice. In sum, while we acknowledge that, as with many real-life phenomena, the effect of producer gender on female versus male consumers' product preference is likely multiply determined, we find strong and diverse empirical evidence suggesting that female (vs. male) consumers' stronger preference for products made by women can be explained by a systematic asymmetry in action efficacy beliefs.

Theoretical implications

First, our findings are directly relevant to the growing literature on market personization (van Osselaer et al., 2020). While extant literature has been mainly studying the potential benefits of personized market offerings (Fuchs et al., 2021; Kulow et al., 2021), we shift the focus on whether knowing who made the product can influence consumer behavior. In this context, we investigate consumers' preferences for products made by women versus men. Such gender influences are not straightforward, especially considering that female and male consumers may be differentially affected by producers' gender. The direction of the anticipated effects seems rather unclear to determine a priori, as different theoretical lenses seem to suggest different patterns of results. Acknowledging this theoretical pluralism, our studies identify the best fitting theoretical paradigm to understand the phenomenon at hand and, in doing so, reveal that egalitarian sentiments-driving forces against social inequality-affect seemingly trivial and disconnected decisions, such as whether to buy a product made by a woman or a product made by a man.

Second, in explaining the observed differences between female and male consumers' preferences for products made by women (vs. men), we bring forward the notion of action efficacy beliefs which we defined as the belief that engaging in a particular action (such as making a particular product choice) can effectively contribute toward achieving a collective goal. Action efficacy beliefs are conceptually different from previously investigated forms of efficacy which refer to whether individuals or groups are capable of performing actions to achieve certain individual or collective goals (Bandura, 1977; Gibson et al., 2000; Prussia & Kinicki, 1996; van Zomeren et al., 2013; Yaakobi, 2018). Thus, unlike most previous research focusing on individuals' or groups' capabilities in performing actions, action efficacy concerns the belief that individual actions can effectively bring about certain goals; irrespective of people's general motivation to achieve these goals. Our theoretical explanation rests on the idea that perceived action efficacy is elevated when identity threats are more psychologically proximal to the individual. This proposition resonates with recent research indicating that self-relevant threat

strongly motivates individuals to counteract (Ward & Broniarczyk, 2011) and also draws from work on altruistic behavior suggesting that people are generally more sensitive to inequalities that disadvantage, as opposed to benefit, themselves (Silk & House, 2011). Thus, given that women represent an underprivileged group in business (England et al., 2020; International Labour Organization, 2019), female, as opposed to male, consumers should weigh the potential contribution of their individual purchase decisions more heavily. In line with this, we find a clear relative difference in that female consumers more strongly believe that buying products made by women (action) can contribute to restoring gender equality in business (goal). Overall, our findings contribute to research on efficacy perceptions by emphasizing the action as the point of reference and suggesting that linking a very specific, individual action to a broader collective goal can motivate behavior.

Third, our research contributes to recent work on how social and economic inequality affects consumer behavior (Hagerty & Barasz, 2020; Ordabayeva & Chandon, 2011; Walasek et al., 2018; Winterich & Zhang, 2014). The findings suggest that recognizing gender discrimination against women in business and being intrinsically motivated to restore gender equality are necessary attributes, yet not sufficient on their own to drive restorative behavior. The extent to which consumers meaningfully link the means (purchase choice) to an end (social change) seems critical in driving behavior accordingly.

Finally, our work contributes to the recent debate about the deductive paradigm that dominates research in consumer behavior (Janiszewski & van Osselaer, 2021). We avoided forcing our investigation into a strictly deductive narrative, and instead adopted a more flexible paradigm, combining exploratory and confirmatory empirical findings, which enabled us to identify several theoretical and methodological nuances pertinent to the phenomenon at hand. Our investigation critically reflected how gender influences in consumers' product choices could unfold under different theoretical lenses. Inductively, we drew on a series of studies and revisited our theorizing in light of the empirical data, identifying egalitarianism as the paradigm best describing the observed effects. Deductively, we then outlined a formal theoretical account which we tested across multiple confirmatory studies. We hope that our approach can motivate other scholars to adopt open and more flexible practices in developing and reporting their research projects.

Practical implications

Our findings suggest that female producers selling their products on electronic platforms, such as Etsy, or other media, may gain relative benefits over their male 525

ers seems to be an overall effective strategy to secure sales against male competitors. To do so, female producers should communicate and emphasize their gender to potential buyers. For example, female producers may use their actual name (in case their name is identifiable as female), a shop name implying that products are made by a woman (e.g., "Sarah's Accessories"), and pictures that identify them as women. Female producers can also highlight their gender in personal communication with prospective buyers or their shop description (e.g., "Hi! This is Sarah. I make these bags.").

The managers of such electronic platforms and marketplaces can also utilize our findings in boosting sales by promoting products made by women. For instance, managers can encourage prospective customers by reinforcing action efficacy beliefs, especially among male customers, using relevant prompts (e.g., "Promote women in business. Your choice matters!" or "Support women in business. Every penny counts!"). Another way to motivate action efficacy beliefs might also be to highlight stories of successful female producers such as Amy Yee, who started selling refurbished vintage clothes on Etsy in 2012 and now owns several stores in New York (Brucculieri, 2018). Consumers are increasingly looking for ways to make an impact through their consumption choices (Haller et al., 2019). In this context, our findings imply that electronic marketplaces can benefit from leveraging the societal contribution of their business.

Finally, our research provides policymakers with important insights on how to close the gap between consumers' beliefs about social inequality and their corresponding actions. Our findings suggest that even when consumers recognize that women face gender discrimination in business and even when consumers are motivated to change respective gender inequalities, whether or not they align their actions accordingly depends on the perceived efficacy of those actions. Our findings suggest that policymakers should educate consumers about the potential impact of their individual product choices and deflect "drop in the ocean" perceptions. Broadly speaking, policy interventions can promote socially responsible consumption behavior by acknowledging social anomalies and by connecting individual responsibility with the collective good, emphasizing that seemingly trivial actions can meaningfully contribute to social change.

Future research opportunities

Producer characteristics

Our work offers fruitful ground to explore the broader nomological network in which the observed effects are expected to unfold as well as to identify additional

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mechanisms underlying these influences. For instance, it may be that women producers are perceived as more caring and considerate by female, but not male, buyers and, thus, be differentially preferred. Future studies might test whether such beliefs can explain the documented differences in preferences for products made by women (vs. men) between female and male consumers. Scholars can also extend this work by looking at demographic characteristics other than gender. Would consumers belonging (vs. not belonging) to an ethnic minority prefer products made by producers from ethnic minorities? Or would they opt for products offered by ethnic majorities as part of their acculturation process? Unlike in our study, where essentially two social categories (females and males) are involved, power and status distribution across several disadvantaged groups (i.e., multiple ethnic minorities) might suppress action efficacy beliefs and not sufficiently encourage support for a specific minority group. That said, it may be that such social categorizations (i.e., that involve imbalance across multiple categories) trigger antagonistic feelings against the dominant, high-status group.

Product characteristics

Although we varied product characteristics other than the producer gender in several of our studies (e.g., design, price, star ratings), the relevant variations were counterbalanced across the producer gender conditions. We acknowledge that systematic differences in these characteristics may influence the results and, thus, warrant further investigation. For example, it may be that consumers find themselves in a situation where they need to make a trade-off between a product made by a woman versus a man with the latter being of higher quality. Moreover, while we found that women and men are perceived to be equally skilled in producing the kind of products we used in our studies, some products are stereotypically considered men's products, such as handmade tools and furniture. Would female consumers still prefer the product made by a woman or would they sacrifice the collective good in the face of individual interest? Consistent with prior work on altruistic behavior (Silk & House, 2011), our findings imply that prosocial consumer behavior is more driven by concerns for the welfare of others and less by individualistic concerns and self-interest. However, more research is necessary to explicitly account for the intersection between self-centered and altruistic motives in consumers' product choices.

Consumer characteristics

Future research could also explore whether the observed discrepancy in preferences for products made by women (vs. men) between female and male consumers is explained by differences in self-verification tendencies. One could argue that being a member of a disadvantaged social group leads female consumers to have a stronger desire for seeking self-verifying product options (Chen et al., 2004; Stuppy et al., 2020). Consistent with recent work by Stuppy et al. (2020), researchers could employ verbalization tasks about choices between products made by women (vs. men) and subsequently explore response protocols to identify whether decision making is guided by a desire to confirm their self-views.

Future research should also consider our findings in more idiosyncratic consumer segments. Our work rests on the assumption that egalitarianism, and gender equality, in particular, are shared beliefs among members of society. In this context, we considered individuals' sense of own gender (all studies), gender identification strength (Study 6), female discrimination beliefs (Study 7B), and social change motivation (Study 7C). Importantly, our results show that regardless of any relative differences, both female and male consumers hold rather strong beliefs that women are discriminated against in business (Study 7B) and are rather highly motivated in restoring gender equalities in business (Study 7C). Nonetheless, there might be a specific segment of-both female and male-consumers characterized by a particularly high social dominance orientation (Sidanius et al., 1994). Among those consumers, overall preference for products made by men might increase, with female consumers showing less preference for products made by women and male consumers showing a higher preference for products made by men. Likewise, we cannot exclude the possibility that there may be a specific segment of malevolent women who-possibly driven by feelings of envy-would choose products made by men over products made by women. Although envious and illintentioned feelings do not reflect a general behavioral tendency, it may be that in contexts characterized by increased competition for limited resources, anti-social or anti-egalitarian behaviors can be observed. On the other hand, there may be a particular set of male consumers who hold strong enough action efficacy beliefs to prefer products made by women over products made by men. Witnessing discrimination against (close) female coworkers, for example, or having friends tell them about their experiences of gender discrimination may make the issue more psychologically proximal to men, increasing their action efficacy beliefs.

On a broader scale, our investigation is limited to Western (predominantly U.S.) consumers segments and does not apply to cultures, political systems, and religions subscribing to fundamental differences in the role men and women play in human society (Inglehart et al., 2002; Poushter & Fetterolf, 2019). Drawing on Studies 7B and 7C, we would anticipate that the general preference for products made by women is less pronounced, or even reversed, in socio-cultural contexts where gender equality is not desired or even frowned upon.

Market context

Our investigation focused on one-off purchases and did not consider multiple or repeated purchases. It would certainly be interesting to explore behavioral consistency and wear-out effects. Will the observed pattern of results still materialize when considering second, third, and fourth purchase decisions? Under the assumption that repeated purchases do not change the inherent belief that buying decisions meaningfully contribute to restoring gender equalities in business, one would expect the effect to also hold true or even be reinforced. However, it may also be that the effect fades away with multiple purchases, similar to the attenuation effects found in individuals' support for social issues on social media (Kristofferson et al., 2014).

Finally, future research may investigate whether our findings hold beyond the market for handmade products. We chose to focus our investigation on electronic platforms where individuals sell their self-made products because gender cues are displayed prominently along with the products in this market. However, another peculiarity about this context is that the individual producer is the sole beneficiary of the purchase (besides the platform), which maximizes the potential impact of a purchase for the sellers. The belief that a purchase can contribute to gender equality in business may thus be particularly high in this context. Future studies may explore gender effects on product preferences in other contexts in which information about gender may be known to consumers, such as female-run companies. On the one hand, one could argue that buying from a company with a female (vs. male) CEO may further strengthen this company's position in the marketplace and thereby contribute to gender equality. On the other hand, exposure to a female-run company might suppress perceptions of gender inequality. Most importantly, it is unclear whether buying products from a female-run company predominantly supports women, men (who may also work in the company), or both. Ambiguities in terms of who is being supported would thus confound with individuals' efficacy beliefs that their purchase decisions contribute to restoring gender equality in business.

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CONFLICTS OF INTEREST

The authors report no conflicts of interest.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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