

A Cross-National Study of Evolutionary Origins of Gender Shopping Styles: She Gatherer, He Hunter?

Charles Dennis, J. Joško Brakus, Gemma García Ferrer, Charles McIntyre, Eleftherios Alamanos, and Tamira King

Journal of International Marketing
 2018, Vol. 26(4) 38-53
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 DOI: 10.1177/1069031X18805505
journals.sagepub.com/home/jim



Abstract

By investigating gendered shopping styles across countries, the authors explore whether the differences between male and female shopping styles are greater than the differences in shopping styles exhibited by consumers across countries. With a conceptual model, this study tests an extant convergence hypothesis that predicts that men and women should grow more similar in their shopping styles as traditional gender-based divisions in wage and domestic labor disappear. The results of a survey of shopping behavior across 11 countries indicate though that men and women are evolutionarily predisposed to different shopping styles. These differences in shopping styles also are greater in countries with higher levels of gender equality. Empathizing, or the ability to tune in to others' thoughts and feelings, mediates shopping styles more for women; systemizing, or the degree to which a person possesses spatial skills, mediates shopping styles more for men. These results suggest that gender-based retail segmentation is more strategically relevant than country-based segmentation. The authors discuss the implications of their findings for international marketing theory and practice.

Keywords

shopping styles, gender, evolutionary psychology, international market segmentation

Online supplement: <https://doi.org/10.1177/1069031X18805505>

When it comes to shopping, “evidence” from popular psychology asserts that “women are from Nordstrom’s and men are from Sears” (Knowledge@Wharton 2007). In other words, men and women have different shopping styles. Women tend to browse and enjoy shopping for its own sake. They examine information in shops more comprehensively and focus on both emotional and social-experiential elements of shopping. In contrast, men tend to know what they want and leave the store as quickly as possible. Consumer research generally supports these characterizations (Passyn, Diriker, and Settle 2011), though research into international consumer behavior has neglected gendered shopping styles or gender as a theoretically significant construct (cf. Ashraf, Thongpapanl, and Auh 2014). By attempting to explain the origins of gendered shopping styles and investigate their consistency across countries, we seek to test the validity of two claims frequently made in international marketing studies.

First, we question whether the antecedents and theoretical accounts of consumer behavior in different international markets are universally valid (Cleveland, Papadopoulos, and

Laroche 2011). Empirical evidence for this claim remains inconclusive (Askegaard, Arnould, and Kjeldgaard 2005; Papadopoulos and Martin Martin 2011). Second, researchers assert that international differences in consumer behavior are diminishing due to the globalization of markets (e.g., Wilk 1998), but it is unclear whether globalization-driven social changes contribute to either the convergence of consumption practices in general (Sobh, Belk, and Gressel 2014; Sobol, Cleveland, and Laroche 2018) or gendered shopping styles in particular. Explaining why men and women shop differently and then

Charles Dennis is Professor, Business School, Middlesex University (email: c.dennis@mdx.ac.uk). J. Joško Brakus is Professor, Leeds University Business School, University of Leeds (email: J.Brakus@leeds.ac.uk). Gemma García Ferrer is Professor, Department of Business Economics, Marketing Area, Universidad Rey Juan Carlos (email: gemma.garcia@urjc.es). Charles McIntyre is Senior Lecturer, Bournemouth University (email: cmcintyre242@gmail.com). Eleftherios Alamanos is Senior Lecturer, Newcastle University Business School, Newcastle University (email: Eleftherios.Alamanos@newcastle.ac.uk). Tamira King is Senior Lecturer in Marketing, Cranfield University (tamira.king@cranfield.ac.uk).

examining whether these differences in how they shop are stable across international markets can enable us to determine whether an observable antecedent (i.e., gender) of a specific consumer behavior (i.e., shopping style) affects shopping behavior consistently in different international markets. Moreover, if the societal changes brought about by globalization and other social movements (e.g., feminism) have increased the economic independence of women, perhaps women's and men's shopping styles have converged toward greater similarity in countries with greater gender equality. We examine this possibility as well.

Despite considerable research on gender differences, in the marketing domain, these studies tend to be fragmented and descriptive rather than theoretical (Meyers-Levy and Loken 2015). Prior findings on gendered shopping styles reflect a selectivity hypothesis, revealing agentic male versus communal female gender roles (Meyers-Levy and Loken 2015), but we still do not know *why* women and men shop differently. The current research attempts to address two gaps in our understanding of gendered shopping styles. First, we uncover and theoretically explain the origins of gender-based differences in shopping behavior. Second, we investigate whether these differences converge across international markets, a question that has yet to be addressed in international marketing literature.

The potential convergence of gendered shopping styles is important in international marketing for both theoretical and practical reasons. Theoretically, we base our research on evolutionary psychology and social structural theory, two broad theories often used to explain gender differences. Social structural theory includes Eagly and Wood's (1999) convergence hypothesis, which predicts that men's and women's psychologies converge with increasing gender equality. This hypothesis has not been convincingly confirmed or rejected in any literature (Schmitt 2012), let alone international marketing. Whether the convergence hypothesis holds might depend on the specific domain of gendered behavior. Applied to shopping, the convergence hypothesis predicts that men and women become more similar in their shopping styles as the traditional gendered division between wage labor and domestic labor disappears. The best test way to test this hypothesis is to examine the stability of the differences between women's and men's shopping styles across countries that vary in their level of gender equality.

From a practical perspective, an ongoing challenge for global companies is to understand whether differences in gendered shopping styles hold across international markets. Universal (hybrid) segmentation strategies seek similarities across world markets (Agrawal, Malhotra, and Bolton 2010; Bolton and Myers 2003; Cleveland, Papadopoulos, and Laroche 2011; Papadopoulos and Martin 2011; Steenkamp and Hofstede 2002), which requires determining whether the differences between male and female shopping styles are greater than the differences in shopping styles across consumers in different country-specific markets. Resolving this question helps international marketers predict whether a segmentation strategy that

focuses on gendered shopping styles will be more effective than one that focuses on country-level differences. A dichotomous approach to international market segmentation, using either gender or country, may not be practical, but this study's contributions suggest a stronger segmentation metric (i.e., gendered shopping style) that international marketers can leverage to decide how to segment their international markets.

Consumer research in international marketing also has overwhelmingly relied on sociocultural explanations of consumer behavior (Agarwal, Malhotra, and Bolton 2010; Chelminski and Coulter 2007; Tang 2017; Westjohn, Roschk, and Magnusson 2017). Typically, this research indicates that specific consumer behaviors tend to be culturally determined, and Hofstede's (2003) cultural dimensions offer explanations for why they vary across countries. An exception is Dawar and Parker's (1994) evaluation of whether consumers respond consistently to signals of quality (e.g., brand, price) across countries. When these authors detect consistency in consumers' responses, they explain it in terms of the cultural consistency across the markets and rely on a formal logic for determining criteria for universality. We consider evolutionary theory as a complementary means to explain the consistency (vs. inconsistency) of specific consumer behaviors across international markets. Unlike sociocultural explanations, evolutionary theory posits that if a specific behavior is stable across societies, it is probably evolutionarily determined rather than socioculturally constructed (Tooby and Cosmides 2005). Applied to our study context, if differences between women's and men's shopping styles are stable across international markets, such differences likely are intrinsic rather than socioculturally constructed.

To test empirically *why* and *how* the shopping styles of men and women differ across markets, we first present arguments about whether their respective shopping styles arise from socialization or are innate. We also review two dimensions of female and male psychology—empathizing and systemizing (Baron-Cohen et al. 2003)—that may mediate the shopping styles of the two genders. Then we conduct a cross-country “nature versus nurture” study, in which we investigate two competing explanations—evolutionary and sociostructural—of the differences in gendered shopping styles in countries marked by high versus low levels of gender equality. To test the two competing explanations, we conduct a survey of adult consumers in 11 countries (combined $N > 3,000$). Finally, we discuss the theoretical contributions and practical implications of our findings.

Gender and Shopping Styles

Previous research on gender differences and shopping, though not on shopping styles specifically, focuses mainly on Western societies (Balabanis and Diamantopoulos 2008; Nelson et al. 2006; cf. Ashraf, Thongpapanl, and Auh 2014). To define shopping style, we adapt Sproles and Kendall's (1986) definition of consumers' decision-making styles to the specific context of shopping: It is a mental orientation characterizing a

consumer's approach to shopping choices. Prior research exploring the dimensions of shopping styles in various international contexts includes studies from Korea (Hafstrom, Chae, and Chung 1992), China (Hui et al. 2001), Germany (Mitchell and Walsh 2004), and North America (Wesley, LeHew, and Woodside 2006). These studies indicate that shopping styles may be unstable across countries (Walsh, Mitchell, and Hennig-Thurau 2001), implying the need for cross-national research. The results from Germany, e.g., indicate that Sproles and Kendall's (1986) consumer decision-making style scale has construct validity for women, but the results are questionable for men (Mitchell and Walsh 2004).

Scant research in international marketing focuses theoretically on gender, especially gender-based differences in shopping styles. Existing research on gender-based differences in shopping styles has been descriptive, focusing mainly on specific shopping aspects. For example, compared with men, women tend to be perfectionists, take pleasure in shopping, and exhibit higher fashion consciousness (Wesley, LeHew, and Woodside 2006). Women's shopping experience tends to be more emotional (Lewis, Haviland-Jones, and Barrett 2010), particularly with regard to goods and services related to appearance improvement, image, and self-esteem, such as apparel, cosmetics, and perfumes (Habimana and Massé 2000). These results imply that women tend to have a more hedonic shopping style than men (Babin, Darden, and Griffin 1994), though it remains to be demonstrated whether men have a more utilitarian shopping style. In addition, previous research suggests that men score higher on materialism measures than women (Cleveland, Laroche, and Papadopoulos 2017).

The female shopping style reportedly involves more searching, comparing, finding the best value, and taking pride in the activity. For women, shopping is also leisure and an engaging social activity (Bakewell and Mitchell 2004). Women tend to visit more stores than men (Luceri and Latusi 2012) and make more in-store purchase decisions (Inman, Winer, and Ferraro 2009). When they shop, women are more motivated than men to socialize and seek sensory stimulation (Kotzé et al. 2012). In contrast, men tend to simplify their shopping tasks, shop quickly, and rely on cues such as familiar brands, sales clerk recommendations, and price, and they either visit a familiar store and buy quickly or are indifferent to store selection (Bakewell and Mitchell 2004). There are exceptions, however. When consumers purchase technical products, these stereotypes reverse (Dholakia and Chiang 2003). In addition, some men who have achieved "gender role transcendence" exhibit a more feminine shopping style (Otnes and McGrath 2001).

The shopping styles of men and women also differ in ways consistent with reported differences in their information-processing strategies (Meyers-Levy and Maheswaran 1991). International consumer behavior studies identify the impact of men's and women's different information-processing strategies on their respective decision making and preferences. Previous research suggests, for example, that international marketing communications targeting women should contain strongly emotional, country-specific associations (Herz and

Diamantopoulos 2013) and that women are more likely than men to identify a brand's country of origin correctly (Balabanis and Diamantopoulos 2008). However, none of these studies hypothesize the observed gender differences a priori (i.e., gender serves as a control or descriptive variable). International studies of consumer behavior, including segmentation studies, often report null effects of gender, likely because gender is seldom the research focus, so the research does not account theoretically for its effects (e.g., Ashraf, Thongpapanl, and Auh 2014; Herz and Diamantopoulos 2017; Hofstede, Steenkamp, and Wedel 1999; Morgeson, Sharma, and Hult 2015). As an exception, Cleveland, Laroche, and Papadopoulos (2009) show that men are less likely than women to hold cosmopolitan consumer values, because men care more about agentic goals, such as self-assertion and mastery.

Yet an important theoretical question remains: What causes gender differences in information-processing strategies and, particular to our research, shopping styles? Men and women may have been socialized to perform different shopping roles, or their styles may be driven by innate differences in male and female psychology. Research on perceptions in cognitive psychology and consumer behavior traditions identifies differences in information-processing strategies, but it does not explain them (Meyers-Levy and Loken 2015). Considering that human female ancestors were gatherers and male ancestors were hunters (Tooby and Cosmides 2005) and that society conditions men and women to adopt different gender-specific roles, we consider whether evolutionary psychology might explain gendered shopping styles and how sociostructural theory might predict how these styles have changed over time.

Theory and Hypotheses

A possible explanation for gender-based differences in shopping styles is that, similar to other observed differences in male and female psychology, they result from socialization (Gentry, Commuri, and Jun 2003). Social structures and the different roles that men and women traditionally have held in workplaces, institutional settings, and families contribute to gendered behavior. How men and women view themselves largely has been determined by cognitions acquired in childhood and defined by then-current, socially and culturally constructed, prototypical "male" and "female" behaviors (Bem 1974; Eagly and Wood, 2013; Wood and Eagly 2012). Consequently, different gendered shopping styles may be examples of "learned" behaviors.

Evolutionary psychology instead posits that psychological differences between men and women remain relatively stable across societies, because human psychology has been shaped by the universal need to evolve and adapt to survive (Broom 1933). If differences between male and female shoppers are stable across societies, such differences may be intrinsic rather than socially constructed. On a continuum representing the evolution of the human race, 98% of humans have been hunters and gatherers who seek to survive and reproduce in relatively open landscapes (Orians 1980). According to the Savanna

Hypothesis (Broom 1933), for male humans, survival and finding a mate required being good hunters; in contrast, female humans needed to excel at gathering the best food for the family. Miller (2001) argues that, in consumer societies, gathering translates into comparison shopping, and hunting implies earning money to support the family. If there is truth to this claim, women might be “better” shoppers than men because they have evolved that way, but as the equality gap narrows, men might “catch up” in their shopping effectiveness and enjoyment. If this logic holds, we expect female shoppers to behave more like “gatherers” (i.e., browsers who like the company of fellow shoppers) and male shoppers to behave more like “hunters” (i.e., purpose-driven loners who want to get the job done). However, even if these differences are biological inevitabilities, they may be moderated by socialization.

Eagly and Wood (1999) question whether gender differences arise from evolution or societal roles. If women must spend considerable time at home nursing children and shopping for the family, they can devote little time to developing other specialized skills, but “To the extent that traditional sexual division between wage labor and domestic labor disappears and women and men become similarly distributed into paid occupations, men and women should converge in their psychological attributes” (Eagly and Wood 1999, p. 421). In support of this argument, cross-national studies indicate that “gender differences in mate preferences (with presumed evolutionary roots) decline proportionally to increases in nations’ gender parity” (Zentner and Mitura 2012, p. 1176). Modern drivers of this convergence appear in findings that show that in the United States, younger men and men in households in which the woman works full time are more likely to be involved in meal planning and preparation (though not necessarily in shopping, which remains fairly consistent at 27% male participation) (Harnack et al. 1998).

Previous research also suggests that innate, gender-related, hardwired behaviors (e.g., female tendencies to be more empathetic) are changeable through socialization processes (Phillips 2006). Eagly and Wood (1999) point out that gender differences tend to diminish in societies marked by high gender equality, such as Scandinavian ones. Applying Eagly and Wood’s (1999) argument to shopping styles, we predict that the differences between men and women are less prominent in high-gender-equality societies. However, these more gender-equal countries (e.g., Scandinavian) also tend to be wealthier (i.e., positive correlation between gender equality and gross domestic product [GDP] per person; World Economic Forum 2013). In more prosperous societies, individual needs typically take precedence over collective needs (Burgess and Nyajeka 2006), leading to a greater influence of intrinsic, individual gratification on shopping motivations (Evanschitzky et al. 2014). Greater autonomy and egalitarianism, coupled with greater social and economic independence, tend to result in greater autonomy among men and women in wealthy, high-gender-equality countries.

In typical Western families, women’s increasing power also has changed the internal family dynamics (Edgar 1997) and

perhaps driven men and women farther apart in terms of their shopping behavior. Women in high-gender-equality countries have more money and freedom to shop (cf. than traditionally); they also care more about it. For example, shopping has greater social and symbolic value for women than it does for men (Bakewell and Mitchell 2004). Evidence from New Zealand indicates that young adult women are more likely to express their status, uniqueness, and age through the products they purchase than are young adult men (Renu, Hyde, and Lee 2012).

Diary-based research further demonstrates that in developed Western countries, women’s share of unpaid work (e.g., housework, cooking, cleaning) has been decreasing since the early 1960s, while men’s share has been increasing. This decline in the amount of unpaid work performed by women has been offset by growth in the time spent shopping (Gershuny, Sullivan, and Robinson 2014). Sociologists also argue that in modern Western societies, socializing is often expressed through shopping (Ritzer 2009). Shopping-related socializing rituals tend to be gender specific, despite the increasing presence of women in the workforce and the impact of second-wave feminism on contemporary social conditions (Coskuner-Balli and Thompson 2013). Such research draws its data from Western sources, yet contemporary non-Western shoppers are more likely to embrace Western values and brands than the other way around, creating further globalization momentum (Alden, Steenkamp, and Batra 2006; Guo 2013; Zhou and Hui 2003). However, women in societies with less gender equality likely have less economic power and less time to shop.

Therefore, we argue that men’s and women’s shopping styles reflect their respective, evolutionarily determined societal roles—that is, hunters and gatherers. Gender equality and economic development also magnify the differences in gendered shopping styles, because greater economic power enables women to enjoy and appreciate shopping more than they can in less gender-equal countries. We summarize the preceding arguments in the following hypothesis:

H₁: Differences in shopping styles between women and men are greater in gender-equal societies than in gender-unequal societies.

In effect, this hypothesis is the reverse of Eagly and Wood’s (1999) convergence argument.

Empathizing and Systemizing Traits

We argue that men and women cannot easily escape their evolutionary nature, and how they shop reflects their hardwired tendencies to be hunters and gatherers. Specifically, we theorize that “empathizing” and “systemizing,” as typical, hardwired, female and male traits, respectively (Baron-Cohen et al. 2003), affect how men and women shop. The *Oxford English Dictionary* (2015) defines empathy as “the ability to understand and share the feelings of another.” Empathizing thus represents a person’s skill in “spontaneously and

naturally tuning in to [another] person's thoughts and feelings" (Baron-Cohen 2004, p. 23). Systemizing instead refers to a person's spatial and mechanical skills (Baron-Cohen 2004). According to Eagly and Wood's (1999) argument (i.e., socio-cultural explanation of differences in male and female psychology), societies have charged women with caring for infants. Thus, the socialization of girls emphasizes nurturing and an acute ability to empathize. Extending this argument, we assert that societies tend to expect men to do those tasks that women have not been socialized to do, namely, those that require systemizing skills.

In turn, women may be more inclined to rely on empathy when interpreting various social situations. These situations once included collective food gathering trips; they share similarities with shopping trips in the modern world. Women care more about the social aspects of shopping than men (Bakewell and Mitchell 2004; Kotzé et al. 2012) and view shopping as an opportunity to socialize, irrespective of the societal context (Noble, Griffith, and Adjei 2006). The ability to systemize instead is more important for hunters, who tend to have specific, well-defined goals that may translate into the typical behavior of male shoppers. Empathizers may be likely to exhibit a more feminine shopping style, characterized by enjoying the shopping activity for its own sake (Noble, Griffith, and Adjei 2006) and socializing with other shoppers and sales personnel, which includes "reading" and interpreting others' feelings. Systemizers instead likely exhibit a more masculine shopping style, because in a retailing context, they are driven by needs (Noble, Griffith, and Adjei 2006) and focus on reaching their goals efficiently, navigating the retail space ably, and minimizing the amount of time required to make a purchase. Thus, both empathizing and systemizing should mediate the relationship between gender and shopping style. Formally:

H_{2a}: Empathizing mediates gendered shopping styles, such that women who are high empathizers are more likely to be rated as more feminine in their shopping style; conversely, men who are low empathizers are more likely to be rated as more masculine (i.e., less feminine) in their shopping style.

H_{2b}: Systemizing mediates gendered shopping styles, such that women who are low systemizers are more likely to be rated as more feminine in their shopping style; conversely, men who are high systemizers are more likely to be rated as more masculine (i.e., less feminine) in their shopping style.

We expect that men and women are more similar in their abilities to empathize and systemize in low-gender-equality societies than in high-gender-equality societies, based on two arguments. First, in lower-gender-equality societies, which are also relatively poorer (World Economic Forum 2013), men and women depend more on one another. Second, members of poorer societies tend to have little "me" time. Their days revolve around satisfying the needs of the entire (often large) family (Gershuny, Sullivan, and Robinson 2014; Harnack et al. 1998). They search for deals and seek greater value for their

money. Women in such societies have less leisure time than women in more gender-equal societies (Manrai and Manrai 1995). Thus, we expect that women in lower-gender-equality societies are more acute systemizers than women in higher-gender-equality societies.

We also argue that compared with lower-gender-equality societies, consumers in higher-gender-equality societies—both empathizers and systemizers—have fewer constraints on expressing their evolutionarily determined characteristics through shopping. The greater gender gap with respect to empathizing in wealthier, higher-gender-equality societies should lead to a stronger influence of empathizing on shopping style. The increased tendency of women in poorer, less-gender-equal societies to systemize relative to those in wealthier, more-gender-equal societies also implies that men and women may be more similar in their systemizing in less-gender-equal societies. In other words, we predict that systemizing is more of a differentiator, and the gender gap related to systemizing is more influential, in wealthier, high-gender-equality societies.

H_{3a}: Social context moderates the mediating effect of empathizing, such that its degree of mediation of shopping styles is greater in higher-gender-equality societies than in lower-gender-equality societies.

H_{3b}: Social context moderates the mediating effect of systemizing, such that its degree of mediation of shopping styles is greater in higher-gender-equality societies than in lower-gender-equality societies.

Method

A literature search identified measurement items from prior research that describe male and female shoppers (Babin, Darden, and Griffin 1994; Bakewell and Mitchell 2004; Sproles and Kendall 1986; Wesley, LeHew, and Woodside 2006). We subjected those items to two stages of purification, based on the Cronbach's alpha values and exploratory factor analysis (EFA), with respondents from several countries (for details, see Web Appendix A). We confirmed the dimensions in the EFA with a subsequent confirmatory factor analysis (CFA) with a holdout sample that also included respondents from several countries. To demonstrate the degree to which gendered shopping style is distinct from empathizing and systemizing, we evaluated both construct reliability and discriminant validity. Finally, we evaluated model fit and metric equivalence across four groups: Spanish, U.K.–Caucasian, U.K.–South Asian, and Chinese respondents. We also applied the purification procedures to the empathizing and systemizing scales.

In the U.K.-based sample, we assigned respondents to Caucasian or South Asian origin groups, to account for potential sociocultural idiosyncrasies of the two groups and any possible impact on the socialization—and shopping styles—of members of the respective ethnic groups. According to U.K. census data, Caucasians account for 87.1% of the U.K. population (Office for National Statistics 2013), and the second-largest ethnic

group is people of South Asian origin (i.e., of Indian, Pakistani, or Bangladeshi origins). This group accounts for 4.9% of the U.K. population. Of all the U.K. inhabitants with an Asian origin, South Asians account for 70.4%. Considering these percentages, it is unlikely that the ethnic origin of our U.K.-based respondents will affect the results. Nevertheless, we control for this possibility by splitting the U.K. sample. We do not have a similar control for the samples from the other countries. Compared with the United Kingdom, other countries in our sample are either more ethnically homogeneous or do not have a dominant ethnic minority; the United States is a “melting pot” and nation of immigrants fully assimilated into a common culture (Fearon 2003).

Questionnaire Design

The questionnaire used five-point Likert scales. We included 14 questions for female shopping style, 3 of which were reverse coded (see Web Appendix A). To reduce response bias, we included 7 reversed (i.e., more masculine) shopping-style questions that alternate with the female shopping-style questions (we omit these 7 questions from Web Appendix A in the interest of brevity), yielding 21 items in total. The items thus indicate gendered shopping styles: More feminine shopping styles have higher values, and more masculine shopping styles have lower values. Hereafter, we refer to this variable simply as “shopping style.”

To measure empathizing and systemizing, we included scales based on simplified versions of Baron-Cohen’s (2004) “Empathy Quotient” and “Systemizing Quotient” (see Web Appendix A). We avoided global scales of femininity and masculinity—such as the Bem Sex-Role Inventory (Bem 1974), the Personal Attributes Questionnaire (Spence and Helmreich 1978), and the Femininity Scale of the California Psychological Inventory (Torke 1988)—because they measure constructs that are not innate but result mainly from social conditions. We aimed to apply scales that would be reasonably stable across societies. The systemizing scale includes items that tap into spatial navigation and orientation (e.g., map reading skills), which we predict will relate positively to male shopping styles, as well as other, conceptually related, typical male, “hardwired” skills, such as a grasp of machinery and do-it-yourself (DIY) skills. Although these skills might not relate directly to gendered shopping styles, we include them in our measure of systemizing for two reasons. First, they are part of the original Systemizing Quotient scale (Baron-Cohen 2004). Second, theoretically, men are evolutionarily predisposed to acquire these conceptually interrelated skills. Analogous to any priming procedure in which the prime triggers conceptually related knowledge structures or skills (Barsalou 2008), men’s spatial and mechanical skills “prime” how they shop—that is, purposefully and efficiently. To reduce the potential for hypothesis guessing and common method variance (CMV), we alternated the empathizing and systemizing questions. We include the final set of items in Table 1.

To obtain a useful sample, according to cost constraints and the absence of a sampling frame, we employed a snowball sampling procedure. We recruited new respondents by emailing an electronic version of the questionnaire to a convenience sample of marketing and retailing academics across multiple countries. We asked them to complete the questionnaire or invite their students and colleagues to do so. Overall, 51% of the respondents were women. As the country breakdown suggests (Web Appendix B), the respondents tended to be younger than the general population across the countries sampled; household income (reported in British pounds equivalent) was distributed relatively evenly. Most respondents were students (50%) or employed (44%), and the majority of employed respondents had administrative, managerial, or supervisory positions. Broadly speaking, these respondents might be described as opinion leaders, which is useful for this study because they likely influence other consumers and thus hold particular interest for international marketers. In short, the sample is adequate and relevant to the study’s objectives (Cleveland, Papadopoulos, and Laroche 2011).

The resulting sample facilitated the EFA and CFA evaluations across the following ethnic groups: Spanish ($n = 981$), U.K.–Caucasian ($n = 528$), U.K.–South Asian ($n = 328$), and Chinese ($n = 147$). As we anticipated, splitting the U.K. sample into two segments did not affect our results. We used EFA and CFA to assess the discriminant validities of the shopping, empathizing, and systemizing constructs. We first subjected the data to the EFA, confirming a stable three-factor (shopping style, empathizing, and systemizing) structure for each group. The three-factor solution explains 42%–53% of the variance in the data, depending on the country (12%–17% is captured by the shopping-style factor, 16%–19% by the empathizing factor, and 12%–15% by the systemizing factor, depending on the country). The dimensions also hold consistently in a holdout sample ($n = 2,578$), consisting only of respondents not included in the prior calibration stages (see Table 1).

Confirmatory Factor Analysis

The confirmatory factor analysis (CFA) on the holdout sample yields a good fit ($\chi^2 = 753$, d.f. = 116; comparative fit index [CFI] = .921; root mean square error of approximation [RMSEA] = .046), and all item loadings are greater than .5. We also establish discriminant validity, because the average variance extracted for each of the three constructs is greater than the squared correlation between them. With a multigroup CFA, we investigate whether the item loadings are invariant among the four largest respondent-assigned ethnic groups. We drop items with loadings less than .5 (Table 1 vs. Figure 1). The resulting measurement model, with four items per construct, yields a good fit for the holdout sample ($\chi^2 = 220$, d.f. = 51; CFI = .966; RMSEA = .036). The final purified scales again exhibit discriminant validity.

Table 1. Standardized Component Loadings for Four Groups and the Holdout Sample.

	Spanish	U.K.–Caucasian	U.K.–South Asian	Chinese	Holdout
Gender Shopping Style (Final Items)					
Shopping (the whole process, not just buying) is a leisure activity.	.643	.750	.685	.699	.674
When shopping, I probably visit more shops than necessary.	.593	.636	.671	.715	.567
The social aspect of shopping is important for me.	.591	.655	.654	.552	.644
I shop more often than I really need to.	.545	.696	.532	.606	.588
I like to spend longer shopping than I really need to.	.522	.746	.637	.737	.606
Variance explained	12.5	17.7	16.6	15.4	14.0
Empathizing					
I am usually good at predicting how someone will feel.	.689	.664	.555	.662	.659
I am good at understanding other people's thoughts and feelings.	.686	.719	.611	.658	.685
If someone in a group is feeling awkward or uncomfortable, I can spot it quickly.	.624	.664	.575	.579	.608
It is easy for me to put myself in another person's shoes.	.603	.659	.581	.559	.624
If someone says one thing but means another, I can usually tell quite quickly.	.579	.570	.571	.581	.573
I find it easy to see why some things upset some people so much.	.537	.678	.628	.613	.595
I find it easy to tell if someone else wants to join a conversation.	.528	.543	.576	.548	.548
Variance explained	17.3	19.8	16.8	17.5	17.6
Systemizing					
I am fascinated by how machines work.	.624	.723	.683	.625	.630
I like to read articles or web pages about new technology.	.593	.664	.597	.601	.601
I usually find it easy to understand instruction manuals.	.562	.655	.601	.606	.590
I find maps easy to read and understand.	.533	.573	.617	.705	.582
If there was a problem with my home electrical wiring, I'd be able to fix it myself.	.525	.562	.573 #	.647	.549
Variance explained %	12.2	15.8	14.5	15.6	13.2
Total variance explained %	42.0	53.3	47.9	48.5	44.8

Notes: Principal component analysis with Varimax rotation. No cross-loadings exceed .3 except those marked by # (cross-loading on empathizing = .354).

Cross-Cultural Measure Equivalence

In a repeated multigroup analysis ($\chi^2 = 547$, d.f. = 255; CFI = .941; RMSEA = .023), the item loadings for shopping and empathizing remain invariant among the four groups (Spanish, U.K.–Caucasian, U.K.–South Asian, and Chinese) ($p > .05$). We achieve partial metric invariance ($\Delta\chi^2 = 39$, Δ d.f. = 4, $p = .073$) for systemizing by releasing the constraints of equality on the items “I usually find it easy to understand instruction manuals” and “If there was a problem with my home electrical wiring, I'd be able to fix it myself.” These results indicate that (for groups with sufficient observations) the measures are configurally and metrically equivalent across ethnic groups (cf. systemizing, for which metric invariance is partial) (Krautz and Hoffmann 2017).

Common Method Variance

To address the possibility of common method variance (CMV), we used a marker variable (Podsakoff et al. 2003), respondents' sexual orientation (i.e., heterosexual/homosexual). No significant relationship emerges between the marker variable and the latent variables, indicating that CMV does not adversely affect the results (see Web Appendix C).

Overall Scale Means

The overall mean for the shopping style scale is 3.35 for women and 2.70 for men ($F(1, 3129) = 469$, $p < .001$, Cohen's

d effect size = .712). The means for women in each of the four ethnic groups, as well as for Taiwan ($n = 96$), Greece ($n = 85$), and the United States ($n = 65$), are significantly higher than the means for men (all $ps < .001$ except for Taiwan, $p < .05$). Overall, 69.4% of the male respondents scored at or below the median (3.00) for shopping style, whereas 60.9% of the female respondents scored at or above the median.

The overall mean of the empathizing scale is 3.74 for women versus 3.49 for men ($F(1, 3129) = 228$, $p < .001$, Cohen's d effect size = .413). The means for women in each of the four ethnic groups, Taiwan ($n = 96$), Greece ($n = 85$), and the United States ($n = 65$) are higher than the means for men. Overall, 68.8% of the male respondents scored at or below the median (3.75) for empathizing, whereas 63.6% of the female respondents scored at or above this median.

The overall mean of the systemizing scale is 2.67 for women versus 3.39 for men ($F(1, 3129) = 760$, $p < .001$, Cohen's d effect size = .863). The means for women in each of the four ethnic groups, Taiwan ($n = 96$), Greece ($n = 85$), and the United States ($n = 65$) are significantly lower than the means for men (all $ps < .001$ except for the United States, $p < .1$). Overall, 77.4% of the male respondents scored at or above the median (3.00) for systemizing, whereas 73.6% of the female respondents scored at or below the median.

The mean values of the three constructs—shopping style, empathizing, and systemizing—for men and women within each country (or ethnic group) appear in Web Appendix D.

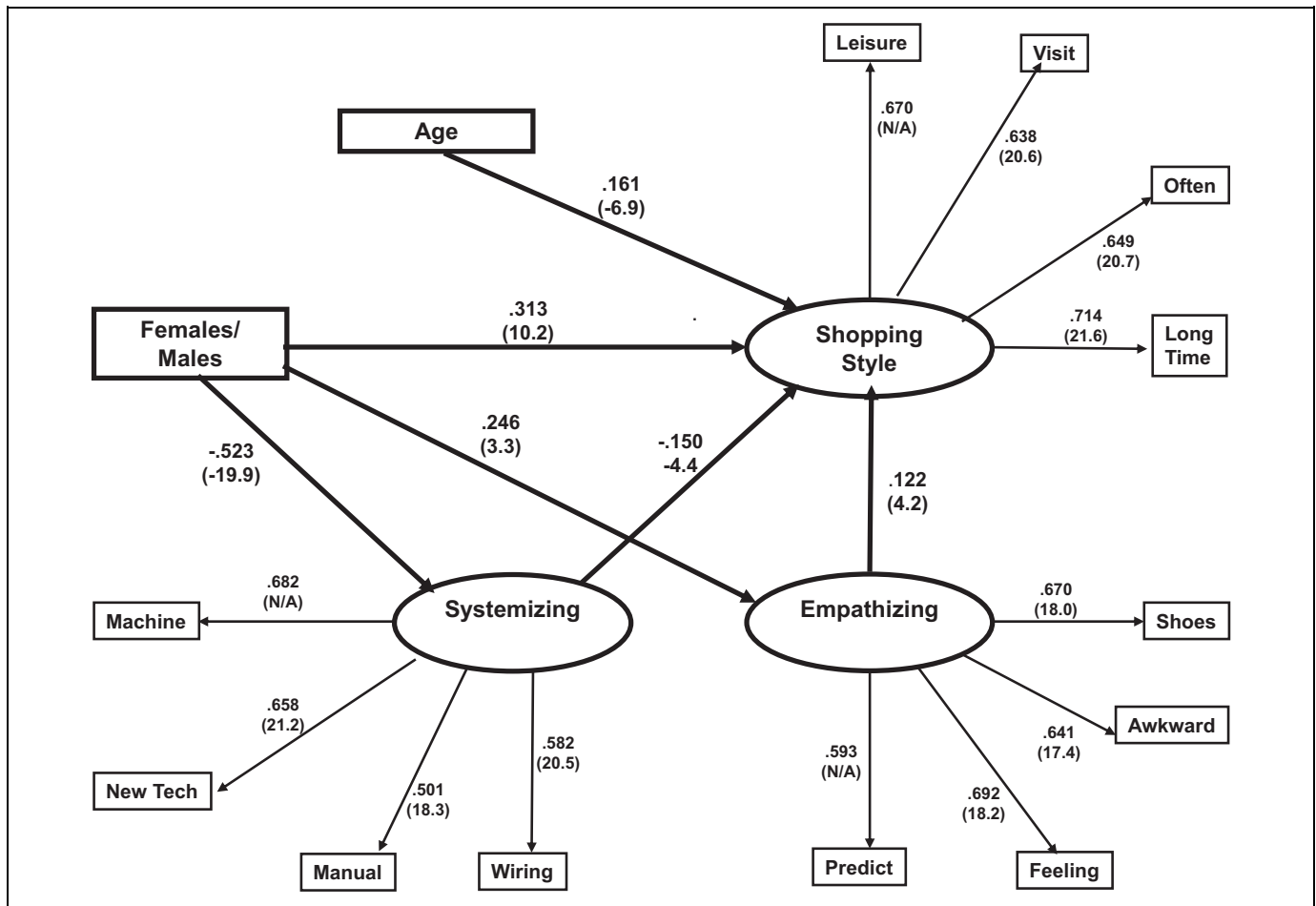


Figure 1. Shopping style, empathizing, and systemizing: relationships with gender (overall model).
 Notes: This figure presents standardized coefficients (t-values); all p-values < .001. Maximum likelihood method, $\chi^2 = 340$, d.f. = 72, confirmatory fit index = .953, root mean square error of approximation = .041. Male = 0, and female = 1.

These results demonstrate the criterion validity of the shopping style, empathizing, and systemizing scales, in that the differences in means for women and men are consistently in the expected directions (though two differences for empathizing and one for systemizing do not reach the threshold for significance).

Hypothesis Tests

Although we do not express our hypotheses in terms of cultural dimensions, we note that the 11 countries in our sample vary substantially on cultural constructs that might relate to shopping styles—specifically, masculinity, indulgence, and individualism (Hofstede 2003). Indulgent societies allow relatively unimpeded gratification of human desires related to enjoying life and having fun. People from countries that are more masculine (vs. feminine) and restrained (vs. indulgent) may have a more generally utilitarian, masculine shopping style. Also, men and women in collectivist societies may be more similar in their shopping styles than their counterparts in individualistic societies.

According to the data available at www.hofstede-insights.com, our sample contains countries that score very high on masculinity (e.g., United States 91, United Kingdom 89), in the

middle third (e.g., Germany 67, Spain 51, Japan 46), and very low on masculinity (e.g., China 20, Thailand 20, Taiwan 17). Similarly, the countries in our sample vary in indulgence and individualism, as well as on the remaining three cultural dimensions (Hofstede 2003). Therefore, it is beneficial to use these countries to test our hypotheses, because they provide a stringent test context. Furthermore, if gendered shopping styles vary across countries, as we predict, our findings likely hold globally.

In our hypotheses development, we make an implicit assumption that gender equality and GDP relate positively (World Economic Forum 2013). Although this relationship is not essential for our hypothesis testing, we note that they are positively correlated in our sample ($r = .48$, $p = .06$), notwithstanding the small sample and two outliers: Japan (wealthy but gender-unequal) and Thailand (relatively poor but gender-equal) (World Economic Forum 2013).

Data Analysis

We divide the data into two groups, high and low gender equality. There is no simple definition of gender equality or inequality, but we use a quantitative measure derived from four broad

dimensions from the World Economic Forum (2013): health, economy, education, and politics. More details of the components of these dimensions appear in Web Appendix C. We split the sample at the median (.7266 on the World Economic Forum 2013 scale), then draw a gender-balanced (low-gender-equality 50.1% female; high-gender-equality 50.0% female) quota sample by random sampling from the total data set ($n = 2,162$) (Van Herk, Poortinga, and Verhallen 2005). The means comparisons for the hypotheses tests are based on this quota sample, so the values differ slightly from those of the overall sample reported in the “Overall Means of the Shopping, Empathizing, and Systemizing Scales” subsection and in Web Appendix D.

To test H_1 , we analyze the data with a 2 (male vs. females) \times 2 (low vs. high gender equality) between-subjects analysis of covariance (ANCOVA), with shopping style, empathizing, and systemizing as dependent variables and income, age, and marital status (single vs. not single) as covariates. We control for these covariates because higher-income consumers may have a more feminine shopping style (e.g., more hedonic, enjoying shopping for its own sake, spending more money), if their higher income leads to a stronger influence of intrinsic, individual gratification on their shopping motivations (Evanschitzky et al. 2014). Younger shoppers also might exhibit a more feminine shopping style because they tend to care more about social and self-expressive elements of shopping than older people (Bakewell and Mitchell 2004; Renu, Hyde, and Lee 2012). That is, older consumers may have a more masculine shopping style, with purchases that tend to be less exploratory, arousal seeking, or experiential and more utilitarian and cognitively driven (Steenkamp, Hofstede, and Wedel 1999). Similarly, married shoppers may exhibit a more utilitarian style than single consumers. We ran an ANCOVA to test for differences between group means when an extraneous variable (gender) affects the outcome variable (shopping style) and to control for other known extraneous covariates.

Results

Shopping style. Of the control variables, only age is significant. Therefore, we reran the ANCOVA after dropping income and marital status. The results change very little and not significantly when we do not control for age, but we still report the results of the ANCOVA rather than an analysis of variance (ANOVA). The ANCOVA reveals a significant main effect of gender on shopping style ($M_{\text{women}} = 3.37$, $M_{\text{men}} = 2.69$ [values adjusted for the covariate]; $F(1, 2157) = 357$, $p < .001$). The interaction between gender equality and gender also is significant ($F(1, 2157) = 12.3$, $p < .001$) (Table 2). The difference in shopping styles between women and men is greater when the country features high gender equality ($M_{\text{female}} = 3.43$, $M_{\text{male}} = 2.62$; $t(1079) = 3.3$, $p < .001$; mean difference = .81, Cohen's $d = .92$) rather than low gender equality ($M_{\text{female}} = 3.32$, $M_{\text{male}} = 2.76$; $t(1079) = 3.3$, $p < .001$; mean difference = .56, Cohen's $d = .68$). These results support H_1 .

Table 2. Shopping Style, Empathizing, and Systemizing: Average Values for Women and Men by Gender Equality (Adjusted for Age Covariate).

	Low Gender Equality ($n = 1,081$)	High Gender Equality ($n = 1,081$)	Average (for each sex)
Shopping Style			
Women	3.32	3.43	3.37
Men	2.76	2.62	2.69
Effect size Cohen's d (within each gender equality group)	.68	.92	
Empathizing			
Women	3.71	3.78	3.74
Men	3.56	3.41	3.49
Effect size Cohen's d (within each gender equality group)	.26	.58	
Systemizing			
Women	2.72	2.56	2.64
Men	3.37	3.41	3.39
Effect size Cohen's d (within each gender equality group)	.94	1.05	

Notes: All pair-wise comparisons between men and women within each gender equality group and the main effect of gender are significant at $p < .001$.

Empathizing. With regard to empathizing and shopping style, the only significant control variable is age, and we reran the ANCOVA after dropping income and marital status. Again, the results change very little and not significantly when we do not control for age. The ANCOVA reveals a significant main effect of gender on empathizing (Table 2). As we expected, women are more acute empathizers ($M_{\text{women}} = 3.74$, $M_{\text{men}} = 3.49$ [values adjusted for the covariate]; $F(1, 2157) = 95.3$, $p < .001$). Gender equality and gender interact to produce a significant influence on empathizing ($F(1, 2161) = 15.7$, $p < .001$). In line with our expectations, the difference in the degree of empathizing between women and men is greater when there is high gender equality ($M_{\text{female}} = 3.78$, $M_{\text{male}} = 3.41$; $t(1060) > 3.3$, $p < .001$; mean difference = .37, Cohen's $d = .58$) than when there is low gender equality ($M_{\text{female}} = 3.71$, $M_{\text{male}} = 3.56$; $t(1071) > 2.6$, $p < .01$; mean difference = .15, Cohen's $d = .26$).

Systemizing. None of the control variables is significant, so we ran an ANOVA without them. Men are more acute systemizers ($M_{\text{men}} = 3.39$, $M_{\text{women}} = 2.64$; $F(1, 2158) = 535.0$, $p < .001$). Gender equality and gender interact and influence systemizing significantly ($F(1, 2158) = 10.0$, $p < .01$). In line with our expectations, the difference in the degree of systemizing between women and men is greater in countries with high gender equality ($M_{\text{female}} = 2.56$, $M_{\text{male}} = 3.41$; $t(1079) = 17.3$, $p < .001$; mean difference = .85, Cohen's $d = 1.05$) rather than low gender equality ($M_{\text{female}} = 2.72$, $M_{\text{male}} = 3.37$; $t(1079) = 15.4$, $p < .001$; mean difference = .64, Cohen's $d = .94$).

Table 3. Moderation Tests: Invariance Analyses of Structural Paths Between High- and Low-Gender-Equality Cultures.

	$\Delta\chi^2$	High Gender Equality Path (t)	Low Gender Equality Path (t)	Overall Model Standardized Path (t)
Sex → empathizing	44.3	.358 (8.9)	.158 (4.3)	.246 (9.3)
Empathizing → shopping	47.2	.235 (4.7)	.021 (.4) ns	.122 (4.2)
Sex → systemizing	64.7	-.995 (-15.7)	-.666 (-13.1)	-.523 (-19.9)
Systemizing → shopping	40.8	-.165 (-5.0)	-.013 (-.2) ns	-.150 (-4.4)
Sex → shopping	38.1	.421 (7.2)	.449 (8.0)	.319 (10.2)
Age → shopping	47.4	-.012 (-6.4)	-.007 (-3.4)	-.161 (-6.9)

Notes: All Δ d.f. = 13. All structural paths are significant at $p < .001$, except as stated. All structural paths are significantly different between high- and low-gender-equality groups at $p < .001$.

Mediation analysis. To test H_2 and H_3 , we estimate structural equation models (SEMs) with the data set that contains low- and high-gender-equality samples (total $n = 2,162$). First, we identify a significant ($p < .001$) positive correlation between gender and shopping style (R^2 for shopping style = .208, standardized direct path coefficient of gender on shopping style = .456) in the absence of the mediation paths. As we predict in H_1 , women score higher on the gendered shopping style scale than men (i.e., women shop more often, are more hedonic shoppers, spend more time shopping, and visit more stores than men).

Second, we estimate a SEM that includes the potential mediators of empathizing and systemizing between gender and shopping style. This SEM facilitates our simultaneous examination of the relationships among the measured and latent constructs. Initially, we included age, income, and marital status as drivers of shopping style. Income and marital status are non-significant, so we dropped them. The modified model, with age included as a control variable, yields a good fit ($\chi^2 = 340$, d.f. = 72; CFI = .953; RMSEA = .041). Predictably, age is negatively correlated with shopping style; older consumers are more likely to exhibit a male shopping style. In other words, older consumers tend to shop based on necessity and appear more utilitarian (vs. hedonic).

The mediation paths are significant ($p < .001$), with an R-square value of .241 for shopping style. The direct path from gender to shopping style remains significant, though the path coefficient decreases to .319 (Sobel test statistics: 3.09 for empathizing [$p < .01$] and 4.92 for systemizing [$p < .001$]), which indicates a mediating effect, in support of both H_{2a} and H_{2b} . The standardized path weights (with the age control variable) appear in Table 3.

To investigate the moderating effect of high versus low gender equality, we ran multigroup analyses between the high- and low-gender-equality groups (again, after relaxing the constraints of equality for two indicators of systemizing, such that the metric invariance was partial for systemizing) (Table 3). The results demonstrate that all mediation paths are significantly stronger in countries with high rather than low gender equality; the moderation is significant (Sobel test statistics for empathizing: high gender equality = 3.30, $p < .001$; low gender equality = .35, n.s.; Sobel test statistics for systemizing: high gender equality = 5.16, $p < .001$; low gender equality = .25, n.s.). Thus, the

mediation is insufficient to reach significance for low gender equality. These results support H_{3a} and H_{3b} . The direct effect of gender on shopping style is lower for the high-gender-equality sample than for the low-gender-equality sample, due to the greater mediation in the former. The total effect of gender on shopping style is greater in high-gender-equality (.669) than in low-gender-equality (.461) settings. In addition, younger people earn more feminine ratings on shopping style than older people, and the effect is significantly greater with high versus low gender equality.

In summary, these results indicate consistently that the differences between men and women are greater than the differences among countries. For all three variables—shopping, empathizing, and systemizing—the differences between men and women also are more pronounced in conditions of high gender equality than low gender equality.

To compare our results more directly with Eagly and Wood's (1999) proposition about the distribution of men and women in paid employment, we also investigate the extent to which the observed differences in shopping style between men and women in each country (i.e., dependent variable) may be predicted by the country-specific "female economic participation and opportunity" dimension of the World Economic Forum's (2013) scale. In an ordinary least squares model, we use the values for countries for which we have at least 30 respondents (i.e., United Kingdom, Spain, China, United States, Greece, Japan, Italy, France, Thailand, and Germany; for Taiwan, we could not find relevant information on female economic participation, so in this regression model, we include 10 rather than 11 data points). We also add three country-level controls to the model: individualism, masculinity, and indulgence scores for each country in the sample (data from www.hofstede-insights.com).

The results indicate a significant trend in the opposite direction to that predicted by Eagly and Wood's (1999) proposition that gender differences arise not from evolution but from societal roles. Instead, we observe that the greater women's economic participation in a society, the greater are the differences between men and women in their shopping styles ($\beta = .63$, $R^2 = .40$, $t = 2.3$, $p(\text{two-tailed}) = .05$). The estimated coefficients for individualism, masculinity, and indulgence are not significant ($t = 1.29$, .29, and 1.13, respectively; each $p > .2$). If we replace overall gender equality with female economic

participation and opportunity as a predictor, we also find support for all our hypotheses again.

Robustness of gender shopping styles. Our data set includes additional demographic and lifestyle information. Although this information is not theoretically critical for our predictions or the estimated model, it enables us to evaluate the robustness of gendered shopping styles. Therefore, we examine characteristics of “misclassified” shoppers in our sample—that is, men who “shop like women” and women who “shop like men.” For this purpose, we use additional, ad hoc, single-item, self-reported measures, including the extent to which our respondents conform to stereotypes such as “the new man” (sensitive men who engage in housework and childcare) or “tomboys” (women who behave in more traditionally boyish manner), as well as the extent to which they are asexual (i.e., not interested in or not wanting sex), androsexual (i.e., their style of personal appearance minimizes sex and gender differences), and metrosexual (i.e., heterosexual men who pay particular attention to their personal appearance, grooming, and use of fragrance). For additional details pertaining to these measures, please see Web Appendix C.

Women with a more masculine shopping style (one standard deviation [SD] or more below the mean of 2.49) are significantly older (61.8% are at least 25 years of age, compared with 40.3% of those who are at least 25 years of age with more feminine shopping styles, $\chi^2 = 42.1(4)$, $p < .001$) and significantly less likely to be single (57.5% vs. 73.1% for those with a more feminine shopping style; $\chi^2 = 30.9(4)$, $p < .001$). This result is consistent with our theorizing: Compared with the shopping style of a younger, single woman, that of an average older, married woman tends to be more utilitarian and less hedonic, likely driven by necessity-related concerns, which leave less opportunity for socialization.

In contrast, men with a more feminine shopping style (one SD or more above the mean of 3.55) are significantly greater empathizers (3.65) than more “typical” men (3.46; $F(1, 1518) = 15.6$, $p < .001$) and lower systemizers (3.23 vs. 3.42; $F(1, 1518) = 12.1$, $p = .001$). They are also significantly more likely to consider themselves “new (sensitive) men” (43.9% new men vs. 32.1% for others; $\chi^2 = 11.8(4)$, $p < .05$). In other words, these men exhibit gender transcendence when it comes to shopping styles (Otnes and McGrath 2001); they regard shopping as a pleasurable, social activity in itself, which is facilitated by their considerable empathizing skills.

Although self-reported scores on the gendered shopping style scale cannot perfectly match the actual gender of our participants—not least because of the myriad individual differences for which we do not account—the proposed theory gives a good account of the discrepancies. Age, e.g., affects the shopping styles of both genders in a predictable manner. Younger shoppers, both male and female, tend to exhibit a more feminine shopping style—as long as they are (relatively) low systemizers and have the necessary means—such that they tend to care more about the social and self-expressive elements of shopping than older people (Bakewell and Mitchell 2004;

Renu, Hyde, and Lee 2012). Older, single women have a more feminine shopping style than older, married women, because they are relatively independent; as long as they have sufficient income, they can enjoy the hedonic and symbolic aspects of shopping. In general, the influence of age on shopping style is stronger in societies in which the two genders are more independent—that is, more prosperous, gender-equal countries.

Discussion and Implications

Our results show that men’s and women’s shopping styles reflect their respective, evolutionarily determined, and societal roles as hunters and gatherers. Men and women cannot easily escape their evolutionary natures, which affect how they shop too, because they are hardwired to shop as hunters and gatherers and possess relevant hardwired skills (i.e., systemizing and empathizing) that then influence their shopping styles. Male shoppers behave like “hunters”: They tend to be needs-driven and seek to minimize the amount of time required to make a purchase. They can do so because they are hardwired to be good systemizers. Analogously, women are hardwired to rely on their ability to empathize to interpret social situations, including shopping trips. Even though shopping is an activity that (as far as we know) has existed for only a couple of millennia or so, the capacity for empathizing and systemizing is likely as old as humans and has been determined largely by evolution. As a result, empathizing and systemizing can help predict how women and men shop. Gender equality magnifies these differences. Because greater gender equality (and prosperity) makes women less dependent on men, in high-gender-equality countries, men and women are “truer” to their evolutionarily determined characters, at least when it comes to shopping. In such countries, men and women also differ to a greater extent in their respective capacities to empathize and systemize, which makes their shopping styles more divergent. Social conditions in high-gender-equality countries may “condition” both genders to express their innate identities through, among other things, distinct shopping styles.

Theoretical Implications

Focusing on shopping style as a specific example of consumer behavior, this research demonstrates that men and women shop in consistently different manners in various international markets. We also show that the differences in how they shop do not converge across international markets when gender equality increases. Although our results are specific to our study context—namely, gendered shopping styles—they contribute to the stream of literature in international marketing that investigates whether globalization contributes to the convergence of consumption practices across countries (Askegaard, Arnould, and Kjeldgaard 2005; Papadopoulos and Martín Martín 2011; Sobh, Belk, and Gressel 2014; Sobol, Cleveland, and Laroche 2018). Wilk (1998) acknowledges that consumer cultures differ between developing and developed countries, yet our results do not support his claim that international consumer behavior

differences, in the form of shopping styles exhibited by men and women, are diminishing with increasing globalization. Our results instead support the predictions of Krautz and Hoffmann (2017), who anticipate standardization in general of international marketing across different countries but not different consumer segments; we find the differences between men and women to be greater than the differences among countries. Dawar and Parker (1999) try to explain the universality—rather than consistency—of specific consumer responses across international markets, but they report null effects of gender. Their sample is unbalanced (83.9% male) though, and their theoretical focus is cultural.

Our research also contributes to literature on cross-country consumer behavior by offering another theoretical lens that might explain the consistency of specific consumer behaviors across international markets. Most studies of consumer behavior in international marketing focus on behavioral inconsistencies across countries. Inevitably, such research favors cultural explanations for behavioral inconsistencies and idiosyncrasies (Hofstede 2003). We instead offer evolutionary theory (and evolutionary psychology) as a complement to culturally specific accounts of consumer behaviors across countries. The differences between how women and men shop are predictably stable across international markets, such that these predilections likely are evolutionarily rather than socio-culturally constructed. However, the social context (i.e., country-specific level of gender equality) interacts with evolutionarily determined traits to shape how women and men shop. That is, the evolutionary explanation complements the socio-structural explanation.

On a more general level, social structural theory is widely used to explain gendered behavior. Eagly and Wood's (1999) convergence hypothesis expresses the basic tenet of this theory: Men's and women's psychologies should converge with increasing gender equality. In our opinion, the validity of the convergence hypothesis depends on the specific domain of gendered behavior though. Applied to the context we study, this hypothesis would predict that men and women become more similar in their shopping styles as traditional gendered divisions between wage and domestic labor disappears, but our results show that this is not the case.

An evolutionary psychology perspective can benefit and enrich studies of consumer behavior (Pham 2013), and international markets are a natural setting for investigating consumer behavior phenomena that may be driven by evolutionary rationales. Research on attitude and behavioral differences between women and men often appears to favor evolutionary psychology or social structural theory. Our research bridges these two traditions. We agree with Cohen and Bernard (2013), who assert that inherited factors drive many behaviors but that socially mediated information transmission also can affect how consumers inherit behaviors. When it comes to shopping styles (and empathizing and systemizing), our results—especially the gender equality \times gender interactions—stress “the importance of [sociocultural] explanations of consumer behavior that operate on an intermediate time scale: a

longer timeframe than the typical psychological explanation favored today (e.g., information processing or behavioral decision theory), but a shorter timeframe than that of human evolution” (Pham 2013, p. 350). The issue we address—gendered shopping styles—is not one of nature *versus* nurture but rather one of nature *and* nurture.

Managerial Implications

We have demonstrated that shopping style, empathizing, and systemizing each is a one-dimensional latent variable, with scales that remain stable across countries (even if the metric invariance of the systemizing scale is only partial). Because they are reflective, these scales are convenient and easy to administer; they can be represented by just a few indicators. Thus, brand and retail managers can apply these findings to their own customers to create profiles of their shopping styles and characteristics, which then can inform marketing and sales strategies. The stability of our scales across countries is important, not least because the development of online shopping has facilitated the global presence of most brands.

The results demonstrate that gender-based differences with respect to all three variables are greater than the differences among country-specific markets. Therefore, market segmentation strategies for women and men are more consequential than country-level segmentation strategies, suggesting the potential of gendered global brands (e.g., apparel, cosmetics). Our results in general support country-level standardization but consumer segment-level adaptation (Krautz and Hoffmann 2017), and specifically gender-based adaptation.

The differences between men and women are greater in high-gender-equality countries (typically Western) than in low-gender-equality countries. However, contemporary non-Western consumers also are influenced by Western culture. Drawn to the “good life” promised by this dominant hegemony (Ustuner and Holt 2007), non-Western consumers embrace Western cultural values more so than the other way around; they want to be able to afford its symbols (e.g., brands). As long as globalization and economic development keep progressing, there is a strong indication that gendered retail mixes developed in Western countries also will be popular in less-developed countries.

Differences in shopping styles between women and men are mediated by the extent to which people empathize and systemize. Although in many countries, explicit sexism in marketing communications is culturally undesirable (Orth and Holancova 2004; Sengupta and Dahl 2008), advertising for female-targeted offerings might highlight empathizing aspects, such as feelings and relationships, while male-targeted offerings could focus on systemizing attributes, such as functionality and technological innovation.

Limitations and Further Research

Although this study examines general differences across a range of countries and cultural contexts, it is limited in that the

country-specific sample sizes are small, except for those from the United Kingdom, Spain, and China. Nevertheless, the results support our predictions, even if their predictive power and generalizability are somewhat limited.

For our main study, we recruited participants by emailing the questionnaire to colleagues at universities in different countries, who then recruited additional participants by forwarding these emails. It is possible that our respondents have a better education, on average, than typical consumers in the countries in our sample, especially considering that 50% of respondents were students. If there is an upward education bias in our sample however, it affects each country-specific group in a similar way, and our predictions are supported even with this circumstance.

We also note that the shopping styles of men and women are category specific. Men tend to care more than women about, e.g., cars and technology (Dholakia and Chiang 2003). Our theory can explain this “reversal” of shopping styles in specific categories: Men possess the relevant, hardwired, systemizing skills—grasp and mastery of technology, spatial navigation, DIY skills—that enable them to be “better” shoppers than women in technical categories. Still, our results are appropriate for broad shopping categories, which we described in the questionnaire as “household products, clothing, cosmetics, groceries, etc.”

Our results confirm that empathizing and systematizing mediate gendered shopping styles, but we also acknowledge that the influence of empathizing on men’s shopping styles may be more ambiguous than our theorizing indicates. Men in relatively poorer, lower-gender-equality societies are more strongly inclined to empathize than men in wealthier, higher-gender-equality societies. However, a different side of this argument may be that the former countries tend to be characterized by more traditional cultures, in which men, even if prone to empathize, may not consider it appropriate to engage in activities usually associated with women, such as shopping. The resulting effect could be a more pronounced separation of gender roles, often leading to emotional detachment among men in less-gender-equal countries. We leave this issue for further research.

Finally, though culture—captured with individualism, masculinity, and indulgence scores for each country in our sample—does not affect our results, we cannot completely rule out its possible influence. Continued research should sample more countries (and more shoppers in each of them) to explore this issue in greater depth.

Associate Editor

Bulent Menguc served as associate editor for this article.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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