The effect of brand spokesperson on consumers' brand gender perceptions

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ABSTRACT

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This research aims to explore the influence of brand spokesperson gender on consumers' brand gender perceptions. Past research examined and found that spokesperson could contribute to consumers' brand gender perceptions of an originally gender-neutral brand. Extending past research, and using a between-subject design, this research presents both brand design elements and spokesperson at the same time, and explores how gender congruity/incongruity between brand design and spokesperson influences consumers' perceptions. The results indicate that consumers do not process advertisements from a gender congruity/incongruity perspective, and discusses possible causes. This research finds that compared to female consumers, male consumers perceive a higher level of both brand femininity and brand masculinity. We also find that brand femininity has a stronger association with spokesperson compared to brand design elements; on the contrary, brand masculinity has a stronger association with brand design elements, in comparison with spokesperson. Moreover, we find that distinct brand gender increases consumers' brand recall, and that brand attitude has a stronger association with brand masculinity, rather than brand femininity. The results of this research provide both theoretical and managerial implications, and limitations and future research directions are also discussed.

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This thesis would not have been possible without a number of individuals who accompanied me during my graduate study. First, I would like to express my sincere gratitude to my dear supervisor Professor Grohmann for her continuous patience and support. Her knowledge, encouragement, and guidance has always been my motivation. I have learned so much from her, not only how to conduct research, but also the attitude of an expert researcher. Besides, my gratitude goes to my committee members, Dr. Bodur and Dr. Li, for their review and valuable suggestions. I would also like to thank my friends who accompanied me during my graduate studies. Finally yet importantly, I would like to thank my parents, for their unconditional love, understanding, and support.

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Introduction

A brand's spokesperson is an important source of brand personality perception, and using spokesperson in advertisements can increase marketing effectiveness (Maehle & Supphellen, 2011; Misra & Beatty, 1990). Grohmann (2009) suggested that a brand's spokesperson contributes to a brand's gendered personality, which consists of brand femininity and masculinity. She found that for a gender-neutral brand, a masculine spokesperson could increase the brand's masculinity, while a feminine spokesperson could increase the brand's femininity (Grohmann, 2009). However, it is unknown whether the use of a male (female) spokesperson further increases consumers' brand gender perceptions for feminine (masculine) brands.

Brand gender is a crucial predictor of a brand's consumer-based equity (Lieven, Grohmann, Herrmann, Landwehr & Tilburg, 2014). Researchers found that an androgynous brand (i.e., a brand high in masculinity and femininity and thus not owning a distinct feminine/masculine personality) does not necessarily generate better consumer response. In contrast, when a brand owns a distinct brand gender (i.e. high feminine/low masculine or high masculine/low feminine), a comparably higher level of consumer-based brand equity will be generated (Lieven et al., 2014). Moreover, extant literature suggests that a distinct brand personality can enhance consumers' brand preference, brand loyalty, and stimulate positive attitudinal responses (Fournier, 1998; Grohmann, 2009), and that the congruence between consumers' sex role and the brand's gender will lead to positive consumer responses towards the brand (Debevec & Iyer, 1986; Grohmann, 2009).

Researchers have focused on the factors that influence consumers' brand gender perceptions. Extant literature has identified several marketing-mix factors which contribute to building brand masculinity and brand femininity, such as type font, brand name, or color (e.g. Grohmann, 2016; Tilburg, Lieven, Herrmann & Townsend, 2015). Nevertheless, the influence of spokespeople on building a strong and distinct brand gender has not been researched in depth. For example, the role of endorsers/spokespeople in advertisements and marketing campaigns in the generation of brand gender perceptions has not been widely examined. The current research intends to address this gap in literature by examining the following research questions: Firstly, how will a

spokesperson influence consumers' perception of a brand's gendered personality? Secondly, when consumers' gender/sex-role identity and brand gender are incongruent, how will the incongruity influence consumers' brand recall and brand attitude? Finally, this research intends to develop a conceptual model of consumers' perception of a brand's personality by exploring a series of moderators and mediators, such as brand-self-concept congruity and brand recall. In other words, this research examines underlying process of how a brand endorser influence consumers' congruity/incongruity perception, which in turn influence their brand gender perception and subsequently influence consumers' recall and brand attitude.

Literature Review

Brand Personality

Since personification is often used in advertising, brands are often thought of as human beings. Researchers address the personification of brands, and discuss brands as relationship partners of consumers (Fournier, 1998). However, as suggested by Aaker (1997), brands do not necessarily own the same personalities as human beings do, and it is not appropriate to use human personality scale to measure a brand's personality. Brand personality is therefore defined as "the set of human characteristics associated with a brand" (Aaker 1997, p. 347). Brand personality is a multidimensional construct: Aaker (1997) developed a five-dimensional model of brand personality, consisting of sincerity, excitement competence, sophistication, and ruggedness. Grohmann (2009) complemented the model by adding gender dimensions of brand personality, which are particularly relevant to brand positioning and repositioning strategies. Gender dimensions of brand personality consist of femininity and masculinity (Grohmann, 2009). Compared to functional or utilitarian aspects, brand personality describes and defines a brand from a symbolic perspective. For example, Coca-Cola is associated with a cool and real personality, Dove is perceived as soft and feminine (Aaker, 1997; Grohmann, 2009). The brand itself could receive positive responses if a distinct personality is created. Fournier (1998) suggests that consumers would respond more positively when a brand owns a desirable personality; for example, brand loyalty could be enhanced. From consumers' perspective, brand personality enables consumers to express the self or a specific dimension of the self (e.g., the

actual self vs. the ideal self), and feel connected to a brand (Aaker, 1997; Grohmann, 2009; Malär, Krohmer, Hoyer & Nyffenegger, 2011). For example, researchers hold that consumers are inclined to choose brands that are congruent with their sex role identity, in that they could express and enhance masculinity/femininity by using these brands (Fournier, 1998; Grohmann, 2016). More importantly, consumers are better able to distinguish a brand from others when the brand is imbued with a distinct brand personality (Plummer, 1985).

In terms of how brand personalities are formed, the literature suggests that brand personality is formed both directly and indirectly (Aaker, 1997; Maehle & Supphellen, 2011). Brand personalities are formed directly in situations when a consumer perceives a brand's personality according to the people who are related to the brand, such as brand users, employees, CEO, or endorsers (Aaker, 1997). For example, spokesperson gender can shape a brand's gender image and brand gender (Debevec & Iyer, 1986; Grohmann, 2009). Other than these people-related sources, all of the elements of the marketing mix are considered as indirect sources of brand personality (Maehle & Supphellen, 2011). In addition, researchers found that brand personality can be communicated through brand design, including shape and color of the logo, type font of a brand name, which can influence consumers' perceptions (Labrecque & Milne, 2012; Grohmann, 2016). For example, compared to round brand logos, angular brand logos indicate a more masculine personality; and script type font, compared with display type font, usually leads to a more feminine personality perception (Lieven, Grohmann, Herrmann, Landwehr & Tilburg, 2015; Grohmann, 2016).

Brand gender (i.e., femininity and masculinity dimensions of brand personality) are more distinct and critical compared with the five-dimension model of brand personality, especially when marketers are seeking to enhance consumer-based equity. Lieven and colleagues (2014) found that brand gender has a stronger impact compared with the other five dimensions of brand personality (i.e., sincerity, excitement, competence, ruggedness, and sophistication), when brand personality is used as a prediction of brand equity (Lieven et al., 2014). Hence, brand gender should be considered as an important antecedent of brand equity: when a brand owns a distinct brand gender (i.e. very feminine or very masculine vs. androgynous or undifferentiated), a comparably higher level of consumer-based brand equity will be generated (Lieven et al., 2014).

Furthermore, brand gender influences consumers' purchase likelihood of a brand (Hess & Melnyk, 2016). Hess and Melnyk (2016) found that there is an interaction effect between brand gender and brand competence: For competent brands (e.g., well-known brands which are very familiar to consumers), feminine cues increased a brand's femininity and warmth, and in turn increased consumers' purchase likelihood. On the contrary, for new brands, which do not necessarily have a high level of competence, masculinity cues increased consumers' perception of competence of the brand, and in turn increased purchase likelihood.

Product gender

Similar to brands, products can be imbued with masculinity and femininity. In most cases, the gendered products usually are products that can be used and consumed by both sexes, while the different visible features of the products change consumers' perception of the products' masculinity or femininity (Alreck, 1994). The most common ways to communicate product gender include product designs and mass media, such as advertising (Debevec & Iyer,1986; Hess & Melnyk, 2016). In particular, spokespeople in advertisement has been found to be directly associated with consumers' product gender perception (Debevec & Iyer,1986). Consumers also tend to perceive gender cues through shape and color of products (Lieven et al., 2015).

Being aware of product gender and how consumers perceive a product gender is crucial for positioning strategies because consumers are inclined to be comfortable with using products that match up with their sex-role identity, in terms of the design, color, or other features of the product. In turn, for brands and companies, gendering a product will help them with clearer segmentations, and differentiate themselves from competitors (Alreck, 1994). Therefore, consumers' perception of a product gender can help marketers decide if there is a need for repositioning a product. For example, when a product, designed to be consumed by both genders, is considered as masculine by both female and male consumers, then a repositioning strategy should be considered, because female consumers could possibly be not willing to purchase the product (Milner & Fodness, 1996).

Product gender changes with time and changes in user segments (i.e., men vs. women using the product); Fugate and Phillips (2010) found that social changes influence product gender: for example, toothpaste has shifted from a masculine product to an androgynous product, and wine, originally perceived as a masculine product, has developed into a feminine product. They also suggest that it is not possible to re-gender or de-gender a product through limited efforts such as a marketing campaign. Rather than changing with one or limited numbers of marketing campaigns, product gender only changes when the whole industry re-genders a product category (Fugate & Phillips, 2010).

Researchers found that consumers' gender has a moderation effect on consumers' attitude of a gendered product. Fugate and Phillips (2010) suggest that consumers not only distinguish product gender, but also react differently to gendered products: compared with female consumers, male consumers are more inclined to select products that are congruent with masculinity.

The literature suggests that product gender is associated with brand gender: As pointed out by Lieven and colleagues (2015), "…a brand position that is more congruent with product category femininity/masculinity reinforces brand masculinity/femininity and benefits the brand", product gender positively influences consumers' brand gender perception (p. 153). Lieven and colleagues have also proved that congruence between brand gender and product gender influences consumers' brand preference positively (Lieven et al., 2015).

Spokesperson and celebrity endorsement

Spokespeople are important in advertisements in that they help brands in creating brand image and enhancing brand equity (Choi & Rifon, 2012). Among the few human-related sources, brand endorsers influence consumers' perception of brand personality significantly, not only because they appear so frequently in advertisements.

Non-celebrity spokespeople and celebrity spokespeople create different advantages for a brand. Non-celebrity spokespersons, which are created by a brand to represent and develop the

characters are more strongly linked to the brand, while celebrity spokespersons are weakly linked to the brand because they are associated with many other things (Erdogan, 1999). However, compared with non-celebrity spokespersons, celebrity endorsers can generate more positive outcomes (especially sales percentage) towards both the advertisement and the endorsed brand, regardless of their experiences with a brand (Erdogan, 1999). For example, celebrity endorsers are more effective in terms of increasing awareness and recall of a product, and can increase consumers' confidence in the endorsed brand and brand loyalty (Atkin & Block, 1983; Misra & Beatty, 1990). Therefore, nowadays celebrity endorsement has been widely adopted by marketers as a communication strategy, which connects brands and consumers.

The selection of a celebrity endorser is closely associated with the success of marketing strategies. Researchers have examined factors that influence the effectiveness of a celebrity endorser, and a series of models have been proposed, including a source attractiveness model, source credibility model, match-up hypothesis, and a meaning transfer model (McGuire, 1985; Hovland, Janis & Kelley, 1953; McCracken, 1989; Erdogan, 1999). Based on consumers' liking of an endorser, endorser's trustworthiness and expertise, the extent of endorser-brand fit, these models lead to the conclusion that celebrities get more attention, increase credibility and memorability of advertisements, and transfer affect and meanings that are linked to the celebrity to a brand. Especially when there is a brand-celebrity congruence, the affect linked to the celebrity tends to transfer to the brand (Misra & Beatty, 1990). The transferred affect reinforces the symbolic level of a brand: since consumers construct the self through selecting and purchase of a brand, in which process consumers very possibly obtain the meanings from the endorser of the brand (McCracken, 1989). When consumers obtain transferred meaning from the celebrity endorser, and the information is congruent with consumers' self-concept, they tend to hold more favorable attitude and increase purchase intention of the brand's product (Choi & Rifon, 2012).

Spokespeople in advertisements shape consumers' perception of brand gender. However, limited research has examined to what extent a spokesperson shapes brand gender. For example, Grohmann (2009) examined how a spokesperson shape consumers' perception of a brand's masculinity and femininity. She found that for a gender neutral brand, a masculine spokesperson could increase masculinity perception, and a feminine spokesperson could increase femininity

perception, which shed light on how consumers' perception of a brand gendered personality arises. This study intends to further examine, in terms of masculinity and femininity, whether more positive brand attitudes and better recall arise from spokesperson-brand congruence or incongruence: How will a masculine spokesperson influence consumers' perception of a feminine brand, and in turn how will a feminine spokesperson influence consumers' perception of a masculine brand?

Brand Recall, Brand Attitude, and Schema Congruity Theory

Extant literature identifies schema congruity as situations in which the incoming information is consistent with the existing schemas in one's mind, such as cognitions, thoughts, feelings, or behaviors (Mandler, 1982; Jarge, Watson & Watson, 2001; Lee & Thorson, 2008). Mandler (1982) developed a model and theorized different levels of schema congruity: schema congruity, slight schema incongruity, and severe schema incongruity. In contrast to schema congruity, schema incongruity is defined as "case of interruption of expectations and predictions" (Mandler 1982, p. 21). It is suggested that moderate schema incongruity could generate more favorable evaluations, compared to either schema congruity or extreme schema incongruity (Mandler, 1982). Interestingly, Lee and Thorson (2008) suggests that the congruity and incongruity of information should be considered as a continuum, with the extreme incongruity (mismatch) and extreme congruity (match) being the two ends.

According to congruity theory, congruent information will be better remembered compared to incongruent or irrelevant information; for example, advertising effectiveness should be enhanced when there is a spokesperson-band congruence (Misra & Beatty, 1990). In an advertisement context, when there is no conflict between the information provided in an advertisement and the predefined knowledge in consumers' mind, consumers usually meet no difficulties processing information about the product or the brand. Misra and Beatty (1990) found that when brand and celebrity spokesperson were congruent, the recall of brand information, both immediate recall and delayed recall included, were higher, compared to the situations in which brand and celebrity spokesperson were incongruent. They also found that the affect transferred from the celebrity to the brand was higher when the celebrity is congruent with the brand. In other words, when the

celebrity is incongruent with the endorsed brand, and when transferred affect does not happen, it is possibly not worth selecting such a celebrity spokesperson since the information processing and marketing communication is not successful (Misra & Beatty, 1990).

However, extant literature does not provide us with a consistent finding regarding the effect of congruity/incongruity in advertisements. When the information provided is considered as moderately incongruent with consumers' predefined schema, they tend to take time to resolve the incongruence, as a result the recall of information regarding the advertising brand will be significantly increased as they have spent time in order to process the incongruent information. For example, some other researchers found that the schema incongruity of a brand enhance consumers' attention of the brand, the recall of the brand, and their brand attitude, compared to schema congruity situations (Torn & Dahlén, 2008). Jagre and colleagues (2001) also hold that schema incongruity positively affects consumer attitude and recall of a brand. In addition, several possible moderators have also been discussed in the advertisement schema incongruity literature, for example, elaboration, involvement and brand familiarity (e.g. Maoz & Tybout, 2002; Lee & Thorson, 2008; Dahlén & Lange, 2004; Dahlén, Rosengren, Törn & Öhman, 2008).

Dimofte, Forehand, and Deshpandé (2003) summarized two types of incongruities in advertisements, and they believe that it is important to distinguish between two different types of information incongruities: incongruities related to advertised product attributes and incongruities associated with advertisement schemas. They suggest that consumers tend to hold a strong emotion towards and argue against information that is opposite to their own attitudes, especially when the incongruence is about the product attributes. Nevertheless, since the second type of incongruence is less about consumer's attitude, compared to the first type, tends to be milder, and is likely to "produce suspicion and counterargument" (Dimofte, Forehand & Deshpandé 2003, p.9).

Brand recall

Having an objective of achieving positive marketplace outcomes, marketers are taking efforts in in order to enhance brand salience and increase brand equity. It is suggested that brand equity arises from consumers' knowledge and recall of the brand-related information (Keller, 1993).

Likewise, Aaker (2012) also suggests that the most important activity in regard to building brand equity is to enhance the brand in consumers' memories. In addition, when consumers have a higher recall of a specific brand, there will be a salient effect inhibiting their recall of competing brands in the same product category (Alba & Chattopadhyay, 1986).

According to Keller (1993), brand recall "relates to consumers' ability to retrieve the brand when given the product category, the needs fulfilled by the category or some other type of probe as a cue" (Keller 1993, p. 3). Brand recall is important because when consumers look for a product, they tend to recall a brand or several alternative brands before decision making (Percy & Rossiter, 1992). Therefore, when they are not present at the market place, they tend to select one that is favorable in their memory. In addition to consumers' memory, recall can also be triggered by cues. Keller (1993) suggests that brands exist in consumers' minds as a series of associations, consisting of nodes and links: the nodes indicating the number of associations, while links indicating the strength of the associations. In the context of advertising, additional cues related with the celebrity or spokesperson are added to the existing associations of the brand, and increase recall of the endorsed brand. Hence, the more associations a brand has, the greater the likelihood that a consumer tends to recall the brand.

As discussed above, results of previous research were inconsistent regarding if congruity or incongruity will enhance consumers' recall. Consumers' recall of advertised brand information could be enhanced by brand-spokesperson congruity, while it could also be enhanced by incongruity. Especially, when congruent information (brand-spokesperson congruity) leads to positive outcomes, if the information does not provide enough cognitive stimulation for consumers to store the information in memory, it is likely that in incongruity situations, more associations are provided to consumers to link to the brand, and increase recall.

Brand attitude

Brand attitude, generally indicating consumers' evaluations of a product or a brand, has been examined in consumer research (Berger & Mitchell, 1989). Brand attitude is considered as a good predictor of consumer behaviors. When consumers hold positive brand attitudes, they tend to have higher brand evaluations and increased purchase intentions. In addition, brand attitude

directly influences brand image, and indirectly influence brand equity (Faircloth, Capella & Alford, 2001; Keller, 1993). Therefore, consumers' brand attitude is not only relevant to researchers, but also managers.

In extant literature, researchers discussed the relationship between brand personality and consumers' brand attitude, and they found that creating a favorable brand personality is essential for a brand to build a positive attitude and in turn a higher level of brand preference (e.g. Plummer, 1985). Especially, Grohmann (2009) found that from a gendered personality perspective, brand-self-concept congruity has a positive effect on consumers' attitudinal and behavioral responses (for example, brand attitude). Furthermore, as brand personality is a multi-dimensional construct, researchers found that different dimensions of brand personality have different effects on brand attitude. In Eisend and Stokburger-Sauer's (2013) meta-analytic review, they summarized that for the consequences of brand personality, brand success variables, different variables depend on different dimensions of brand personality. For example, among the five dimensions of Aaker's brand personality framework, sincerity and competence are found to be most strongly associated with consumers' brand attitude. In this regard, researchers also suggested that managers of new brands could build a sincere or competent brand personality, which would contribute to consumers' more favorable brand attitudes, and in the long run contribute to building up a stronger relationship between their brand and consumers.

Past research has also examined the influence of spokesperson gender on consumers' attitude. Debevec and Iyer (1986) found that when a feminine product, such as dishwashing liquid, is advertised by a male spokesperson, both male and female consumers tend to hold more positive attitudes, compared to when the product has a female spokesperson. For a gender-neutral product, such as toothpaste, consumers do not necessarily change their attitude no matter whether it is advertised by a female or a male spokesperson. Based on their results, this research explores how spokesperson gender influences consumers' attitudinal responses to a brand, and examines that if male and female consumers could respond differently when there is a gender incongruity existing between the spokesperson and the brand. With regard to consumers' response to a brand, this research includes in three constructs: brand attitude, purchase intention, and willingness to pay.

In addition, researchers believe that brand attitude is positively related to brand recall (Jagre, Watson & Watson, 2001; Misra & Beatty, 1990). For example, Misra and Beatty (1990) found that only when spokespeople are appropriate and match up with the advertised brand, consumers' higher level of recall would increase the possibility that consumers transfer their affect toward spokesperson to the advertised brand, and therefore have a more positive brand attitude.

Research Hypotheses

This research examines the effect of information incongruity on brand gendered personality, under the schema congruity framework of Mandler (1982). As the literature suggested that the greatest effectiveness lies between the perfect match and extreme mismatch of a brand and its spokesperson, this study explores if the perceived brand gender is enhanced when a brand is endorsed by a non-typical gender spokesperson. Second, this study explores the relationship between consumers' perceived gender-incongruity (based on an advertisement), and brand gender perceptions.

We expect consumers' perceptions of congruity/incongruity between brand spokesperson and the brand will influence consumers' perception of the brand gender, consumers' recall, and consumers' brand attitude.

In this research, to operationalize spokesperson gender, two spokesperson conditions were created. In the masculine spokesperson condition, a male spokesperson was used while in the feminine spokesperson condition, a female spokesperson was used. These spokespeople were depicted in an advertisement also featuring a branded product and a brief product description.

To operationalize brand gender, two brand gender conditions were created: one masculine brand gender condition and one feminine brand gender condition. Brand masculinity and brand femininity were created through brand name, type font, and color manipulations. For example, previous research found that the use of front/back vowel, or fricatives/stops could influence consumers' perceptions of a brand name gender (Guevremont & Grohmann, 2015); while

different type fonts and logo colors could also influence consumers' perceptions of a brand name gender (Grohmann, 2016). Likewise, because previous researchers found that the shape of a product package could influence consumers' perception of a product gender, only generic package and shape was used in this research.

The perceived congruity/incongruity between spokesperson and brand was measured by a two-item scale "spokesperson-brand match", and indicated participants' perceived match between the brand spokesperson and the brand.

Brand gender perceptions were operationalized in three ways: brand masculinity, brand femininity and brand gender salience. Brand gender salience was calculated as the absolute difference between brand masculinity and brand femininity scores that indicated how masculine/feminine the brand was perceived. When the brand gender salience score is high (in comparison with 0), the brand is perceived as more masculine/feminine, while when it is closer to zero, the brand is perceived as more androgynous/undifferentiated.

This research empirically tests the following hypotheses:

H1: When a spokesperson gender is congruent with brand gender, consumers will experience greater spokesperson-brand congruity.

H2a: Lower levels of congruity between perceived brand gender and spokesperson gender will reinforce the perception of MBP/ FBP/ brand gender salience.

H2b: Higher levels of congruity between perceived brand gender and spokesperson gender will reinforce the perception of MBP/ FBP/ brand gender salience.

H3: There will be a difference between female and male consumers in terms of the perceptions of spokesperson-brand congruity/MBP/FBP/brand gender salience: female consumers will perceive a higher level of spokesperson-brand congruity, which will result in a higher level of MBP/FBP/brand gender salience perception, compared with male consumers.

H4a: MBP will positively influence consumers' recall of a brand.

H4b: FBP will positively influence consumers' recall of a brand.

H4c: Higher levels of brand gender salience (low in masculinity and high in femininity/ low in femininity and high in masculinity) will result in higher level of recall.

H5a: MBP/FBP/brand gender salience will positively influence brand attitude.
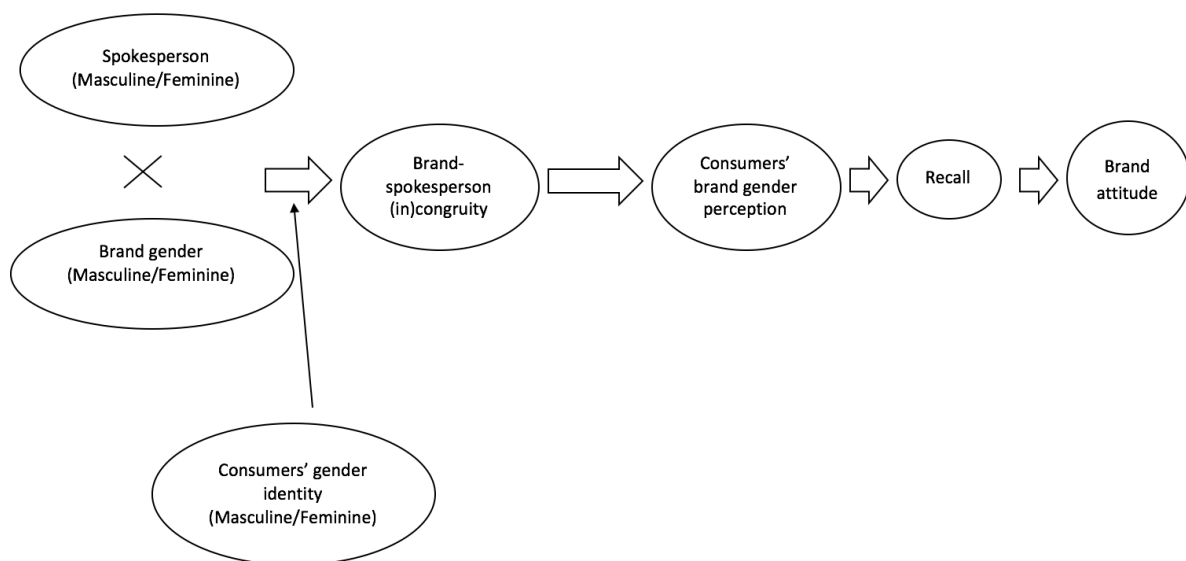
H5b: MBP/FBP/brand gender salience will positively influence purchase intention.

H5c: MBP/FBP/brand gender salience will positively influence willingness to pay.

H6: Recall mediates the relationship between consumers' brand gender perception and their brand attitude.

Based on the above proposed hypotheses, the following conceptual model is tested.

Figure 1

Methodology

In order to examine the hypotheses, an experimental study was designed. In addition, four pretests were conducted in order to select the product category, brand name, and spokesperson image to be used in the experiment. Based on the pretest results, we created fictitious advertisements for the main study to rule out confounds based on prior brand experience. All measurement scales used were from previous research and rated on seven-point scales.

Pretest One

The objective of pretest one was to identify a product category that is gender neutral, and is equally used by male and female consumers.

Procedure

Thirty-two Canadian participants over 18 years old, were recruited through a research panel, and completed an online questionnaire. After they read and agreed to the information and consent form, participants were instructed to rate the following product categories: car, beer, athletic shoes, exercise equipment, pocketknives, toothpaste, microwave oven, soup, soft drinks, deodorant, soap, facial tissue, frozen vegetables, fragrance, low fat food, and mineral water. The pretested product categories were based on previous research on product gender perceptions (e.g., Iyer & Debevec, 1989; Milner et al., 1990; Milner & Fodness, 1996).

Participants were asked about how they perceived the product categories, listed in random order. It is suggested in the extant literature that product category masculinity and product category femininity should be considered as two dimensions rather than being on two sides of a polar scale, hence femininity and masculinity were rated respectively ("not feminine at all/very feminine"; "not masculine at all/very masculine"). Afterwards, participants rated usage ("I never/regularly use this product."), functionality ("This product is not at all/very functional."), and prestige ("This product is not at all prestigious/ very prestigious.") (Grohmann, 2009). All of the variables were rated on seven-point bipolar adjective scales. After that, participants were asked to consider twenty statements which measure participants' MTI and FTI ("To what extent do you believe the statements are descriptive of yourself?") (Barak & Stern, 1986). Finally,

information including age, gender, ethnicity, educational level and employment status, was collected.

Results

Three responses were removed because the completion time was extremely short or long (3 extreme outliers: 110 seconds, 5254 seconds, and 58487 seconds). After data cleaning, twenty-nine (13 males, 16 females) complete questionnaires were included in the data analysis. One participant was 18-29 years old, thirteen were 30-49 years old, eleven were 50-64 years old, and four were 65 years and over.

Firstly, using one-sample t-test in SPSS, we aimed to select product categories with moderate to high usage ratings. It is important to examine the usage score of a product category because we expected to select a product category that is regularly/frequently used in consumers' daily life, and equally used by both male and female consumers.

We identified product categories that are regularly used by comparing rating scores with the scale mid-point (4), and excluded product categories if their usage score was significantly lower than scale mid-point. The pretested product categories were classified into three groups: (1) Highly used product categories: car (M_{usage}=6.14, SD= 1.529, p= .000, < .05), athletic shoes (M_{usage}=5.10, SD= 1.780, p= .002, < .05), toothpaste (M_{usage}=6.52, SD= 1.243, p= .000, < .05), microwave oven (M_{usage}=5.45, SD= 1.901, p= .000, < .05), soup (M_{usage}=5.59, SD= 1.240, p= .000, < .05), deodorant (M_{usage}=5.86, SD= 1.885, p= .000, < .05), soap (M_{usage}=6.17, SD= 1.338, p= .000, < .05), facial tissue (M_{usage}=5.55, SD= 1.920, p= .000, < .05), frozen vegetables (M_{usage}=4.86, SD= 1.552, p= .006, < .05); (2) infrequently used product categories: pocket knives (M_{usage}=3.00, SD= 1.946, p= .010 < .05, MD= -1.000); (3) moderately used product categories (mean scores are not significant different from 4): beer (M_{usage}=3.66, SD= 2.303, p= .427, > .05) exercise equipment (M_{usage}=3.92, SD= 1.957, p= .195, > .05) soft drink (M_{usage}=4.34, SD= 2.005, p= .362, > .05) fragrance (M_{usage}=4.28, SD= 2.136, p= .493, > .05) low fat food (M_{usage}=3.59, SD= 1.823, p= .232, > .05) mineral water (M_{usage}=3.86, SD= 2.065, p= .722, > .05). An independent-sample t-test was also conducted to compare usage scores between male participants and female participants. Except for mineral water (p= .011 < .05), male and female

participants did not show significant difference in usage for all other product categories.

We excluded product categories with usage score significantly lower than four, and product categories that are not equally used by male and female. Therefore, pocket knives and mineral water were removed from the following analyses.

Secondly, in examining the functional and prestige ratings, we classified the pretested product categories comparing functional and prestige ratings to scale mid-point (4), respectively. Any ratings that were not significantly different from scale mid-point (4) were considered as a medium category. Therefore, the sixteen product categories were first categorized into five categories: (1) High functional/high prestige: car; (2) High functional/ medium prestige: athletic shoes, exercise equipment, toothpaste, deodorant, facial tissue; (3) High functional/low prestige: pocket knives, microwave ovens, soup, soap, frozen vegetables; (4) Medium functional/high prestige: soft drink, fragrance; (5) Medium function/medium prestige: beer, low fat food, mineral water. There were no product categories in the low functional/high prestige or low functional/low prestige group. Therefore, we re-categorize all the medium (not significant rating scores) as low (relative) ratings. This led to a classification of the product categories into the following groups: (1) High functional/high prestige: car; (2) High functional/low prestige: athletic shoes, exercise equipment, toothpaste, deodorant, facial tissue, pocket knives, microwave ovens, soup, soap, frozen vegetables; (3) Low functional/high prestige: soft drink, fragrance; (4) Low functional/low prestige: beer, low fat food, mineral water.

Thirdly, we calculate the masculinity score minus femininity score for each product category, and then compared rated masculinity minus rated femininity score with zero. Result of t-tests indicate that for toothpaste (p= .879, > .05), microwave ovens (p= .054, > .05), soup (p= .119, > .05), soft drinks (p=1.000, > .05), deodorant (p= .545, > .05), and frozen vegetables (p= .169, > .05) product masculinity scores are not significantly different from product femininity scores. We also conducted independent-sample t-tests, grouping male and female participants separately. Male and female participants did not show any significant difference in both product category masculinity and product category femininity perceptions.

Therefore, toothpaste ($M_{masculinity}$= 3.86, $M_{femininity}$= 3.90), microwave ovens ($M_{masculinity}$= 3.55, $M_{femininity}$=3.93), soup ($M_{masculinity}$= 3.62, $M_{femininity}$=4.07), soft drinks ($M_{masculinity}$= 3.52, $M_{femininity}$=3.52), deodorant ($M_{masculinity}$= 4.38, $M_{femininity}$=4.55), and frozen vegetables ($M_{masculinity}$= 3.52, $M_{femininity}$=3.86) were identified as gender-neutral products.

Fourthly, we calculated sex-role identity scores by summing up the 10 items for FTI (Cronbach's α= .84) and MTI (Cronbach's α= .92), respectively. According to the FTI and MTI scores for each participant, we categorized them into feminine (masculine) group when their FTI score is higher than MTI score (FTI score lower than MTI score). Five participants were categorized as masculine, and twenty-four as feminine. As the group sizes were extremely uneven, and there was not a sufficient number of participants in the masculine group, it was not appropriate to conduct statistical tests to compare these two groups. Only identified sex was therefore considered as a valid factor in data analysis.

In conclusion, the result of pretest one suggest that the gender neutral product categories described in Table 1 were appropriate for the experiment.

Table 1

Product category	Functional/prestige	Usage
Toothpaste ($M_{masculinity}$= 3.86, $M_{femininity}$= 3.90)	High functional/low prestige	Significantly more used (M_{usage}=6.52)
Microwave ovens ($M_{masculinity}$= 3.55, $M_{femininity}$=3.93)	High functional/low prestige	Significantly more used (M_{usage}=5.45)
Soup ($M_{masculinity}$= 3.62, $M_{femininity}$=4.07)	High functional/low prestige	Significantly more used (M_{usage}=5.59)
Deodorant ($M_{masculinity}$= 4.38, $M_{femininity}$=4.55)	High functional/low prestige	Significantly more used (M_{usage}=5.86)
Frozen vegetables ($M_{masculinity}$= 3.52, $M_{femininity}$=3.86)	High functional/low prestige	Significantly more used (M_{usage}=4.86)
Soft drinks ($M_{masculinity}$= 3.52, $M_{femininity}$=3.52)	Low functional/high prestige	Medium category (M_{usage}=4.34)

Pretest Two

Pretest two was devised to identify brand name stimuli to be used in the main study. Considering the possible preference and familiarity with certain brands, fictitious brand names were used. Twenty brand names were pretested for brand name familiarity, brand name attitude, brand name gender, brand name appropriateness to be matched with six gender neutral product categories. Pretested fictitious brand names included Mig, Mog, Riv, Rov, Frish, Frosh, Zid, Zod, Young, Connect, Dynafit, Biovit, Axis, Senseo, Edely, Bloyt, Mudol, Halix, Blan, Aerius. All the pretested brand names were selected from previous studies (Choi & Rifon, 2012; Grohmann, 2016; Hess & Melnyk, 2016; Lieven et al., 2015; Schnurr, 2018; Wu, Klink & Guo, 2013).

Procedure

Recruited through email by a research panel company, thirty Canadian participants over 18 years old completed an online questionnaire. Firstly, they rated their familiarity with the twenty brand names, which were presented to them in random order ("To what extent are you familiar with the following brand names? Not at all familiar/Very familiar"). Secondly, they rated their attitude toward the twenty brand names ("Negative/Positive", "Unfavorable/Favorable", and "Bad/Good"). In addition, participants' perception of brand name gender was also measured by a masculine/feminine bipolar adjective scale. Thirdly, participants indicated their perceptions of brand name gender, on a two-dimensional scale, including six items measuring feminine brand personality ("Expresses tender feelings", "Fragile, "Graceful", "Sensitive", "Sweet", and "Tender"), and six items measuring masculine brand personality ("Adventurous", "Aggressive", "Brave", "Daring", "Dominant," and "Sturdy") (Grohmann, 2009). Fourthly, participants matched six selected product categories (from pretest one) with the twenty brand names, respectively, and rated appropriateness of each brand name for each product category ("Please consider the product category: Toothpaste/Microwave ovens/Soup/Deodorant/Frozen vegetables/Soft drinks. How appropriate is each of the following brand names for this product category?"). All the product categories and brand names were presented in random order. In addition, demographic information, including participants' age, gender, and English proficiency level, was collected. As the distribution of participants' sex-role identity was extremely uneven,

BSRI questions (Barak & Stern, 1986) were excluded for pretest two. The duration of pretest two was approximately ten minutes.

Results

After excluding an extreme outlier, 29 (14 males, and 15 females) completed questionnaires were included in the data analysis. The mean age of participants was 45.6 years old. Most of the participants indicated that their English proficiency was fluent/native: 1 (3.4%) was basic, 7 (24.1%) were advanced, and 21(72.4%) were fluent in English/native speaker.

Familiarity

As all the pretested band names were fictitious, it was important that participants reported a relatively low familiarity to them, and no familiarity difference between male and female participants was expected.

A one-sample t-test was conducted against scale mid-point four (4). Results showed that other than brand name "Aerius" ($M_{familiarity}$ = 3.41, SD= 2.307, p= .182; > .05), brand name familiarity scores were significantly lower than four, meaning that participants were not familiar with almost all of the pretested brand names. An independent-sample t-test was conducted to check male and female participants' familiarity score, respectively. Results showed that male and female reported different level of familiarity for brand names Young (M_{Male}= 3.00, M_{Female}= 1.47, p= .032< .05), and Connect (M_{Male}= 3.07, M_{Female}= 1.67, p= .046< .05). For the other eighteen brands, there is no significant difference existed for familiarity of brands between male and female participants.

Therefore, we exclude brand names Aerius, Young, and Connect from consideration.

Brand name attitude

Brand name attitude was measured using a three-item scale. Factor analysis indicated that all the three items ("Negative/Positive", "Unfavorable/Favorable", and "Bad/Good", Cronbach's α= .967) of the brand attitude scale loaded on one factor, which accounts for 93.9% of the total variance, therefore, we averaged the three items for further analyses. In comparing the means

with scale mid-point four, we exclude brand names which were rated significantly lower than four. One-sample t-test result showed that no brand name attitude rating was significantly lower than four. Notably, brand name attitude ratings for Dynafit (M= 4.49, SD= 1.24, p=.041< .05) and Axis (M= 4.61, SD= 1.35, p=.022< .05) were rated significantly higher than four. In addition, no significant difference were found between the ratings provided by male and female groups of participants.

Brand names match with different product categories

We examined the product category-brand name match rating scores, and excluded match scores significantly lower than scale mid-point (4). Retained product category-brand name matches are summarized in Table 2.

Table 2

Product category-Brand name match	*Statistical results*
Toothpaste – Frish (M_{MBP}= 3.60, M_{FBP}= 3.54)	Mean= 3.24 SD= 2.116, p= .064> .05
- Frosh (M_{MBP} = 3.72, M_{FBP} = 3.53)	Mean= 3.45 SD= 2.046, p= .158> .05
- Senseo (M_{MBP} = 3.49, M_{FBP} = 3.67)	Mean= 3.62 SD= 2.025, p= .322> .05
Microwave – Riv (M_{MBP} = 3.55, M_{FBP} = 3.28)	Mean= 3.21 SD= 2.094, p= .051> .05
- Dynafit (M_{MBP} = 4.02, M_{FBP} = 3.48)	Mean= 3.38 SD= 2.205, p= .110> .05
- *Connect** (M_{MBP} = 4.07, M_{FBP} = 3.74)	Mean= 3.69 SD= 1.948, p= .398> .05
Deodorant – Dynafit (M_{MBP} = 4.02, M_{FBP} = 3.48)	Mean= 3.24 SD= 2.047, p= .056> .05
- Biovit (M_{MBP} = 3.71, M_{FBP} = 3.31)	Mean= 3.48 SD= 2.165, p= .209> .05
- Axis (M_{MBP} = 3.95, M_{FBP} =3.19)	Mean= 3.62 SD= 2.243, p= .370> .05
- Senseo (M_{MBP} = 3.49, M_{FBP} = 3.67)	Mean= 3.48 SD= 2.046, p= .184> .05
- *Connect** (M_{MBP} = 4.07, M_{FBP} = 3.74)	Mean= 3.41 SD= 1.823, p= .094> .05
Soft drinks – Frosh (M_{MBP} = 3.72, M_{FBP} = 3.53)	Mean= 3.48 SD= 1.975, p= .169> .05
- *Young** (M_{MBP} = 3.94, M_{FBP} = 3.86)	Mean= 3.28 SD= 2.016, p= .063> .05

* excluded from consideration because of familiarity scores

In general, there is no significant difference in product category-brand name match ratings between male and female participants, and ten possible product category-brand name matches were retained.

Brand name gender perception

For each brand name, MBP and FBP items were averaged, and then we calculated the difference of MBP and FBP (by subtracting the FBP average from the MBP average). The brand gender scale (Grohmann, 2009) was high in reliability (MBP: Cronbach's α= .98; FBP: Cronbach's α= .98), and two principal components were extracted through factor analysis. The two extracted factors accounted for 44.755% and 44.687% of the total variance, respectively (in sum 89.442% of the total variance). No difference was found between male participants and female participants' perceptions of a brand name gender.

The difference between MBP and FBP (MBP-FBP) of the brand names Mig (M_{Mig}= .25, SD= .65, p= .050= .05), Zid (M_{Zid}= .63, SD=1.36, p= .018< .05), Zod (M_{Zod}= .62, SD=1.32, p= .017< .05), Axis (M_{Axis}= .76, SD= 1.63, p= .018< .05), and Halix (p= .020< .05) were significantly different from 0, meaning that these five brand names were perceived as significantly more masculine than feminine. In conjunction with the product category-brand name match results (Appropriateness scores that are not significantly lower than four: Toothpaste match with brand names Frish, Frosh, and Senseo; Microwave match with brand names Riv and Dynafit; Deodorant match with brand names Dynafit, Biovit, Axis, and Senseo; Soft drinks match with brand name Frosh), these findings resulted in the retention of the product category deodorant and the fitting, masculine brand name Axis. There was only one brand name being identified as more feminine than masculine (i.e., Senseo) although the result did not reach conventional significance levels (t (28) = -.853, p= .401).

Table 3 Summary of brand name gender perception

Brand Name	Brand name gender two-dimensional scale (M-F)	Brand name gender one-dimensional scale

Mig	Masculine	Neutral
Mog	Neutral	Neutral
Riv	**Neutral**	**Neutral**
Rov	Neutral	Neutral
Frish	**Neutral**	**Neutral**
Frosh	**Neutral**	**Neutral**
Zid	Masculine	Neutral
Zod	Masculine	Neutral
Young*	Neutral	Neutral
Connect*	Neutral	Neutral
Dynafit	**Neutral**	**Neutral**
Biovit	**Neutral**	**Neutral**
Axis	**Masculine**	**Neutral**
Edely	Neutral	Neutral
Senseo	**Neutral**	**Neutral**
Bloyt	Neutral	Neutral
Mudol	Neutral	Neutral
Halix	Masculine	Neutral
Blan	Neutral	Neutral
Aerius*	Neutral	Neutral

1. * excluded from consideration because of familiarity scores

2. Boldface- retained after product-brand name match

Pretest Three

As summarized in table 3, most of the pretested brand names were perceived as gender neutral. Considering that participants were exposed to the twenty fictitious brand names within a short time and only one brand attribute (brand name) were provided, an additional test was implemented for the retained brand names in conjunction with product design and packaging to be shown in the experimental advertisements.

Wu, Klink, and Guo (2013) found that the brand name "Frish" was high in FBP score, and the brand name "Frosh" was associated with a high MBP score, when they explored the effects of front/back vowels on consumers' perceptions of brand gender perception. Hence, we further examined the brand name pair "Frish" and "Frosh" in the context of the product category toothpaste. As for the other two pairs of brand names retained, "Axis" and "Senseo" that had a high level of match with product category deodorant, compared to the other brand name pair retained ("Dynafit" and "Biovit"). Therefore, images of Frish (toothpaste), Frosh (toothpaste), Axis (deodorant), and Senseo (deodorant), in a generic product package settings, were created and tested for brand gender perceptions in this additional procedure. In order to stimulate more evident brand gender perceptions, type font and color stimuli were added to brand names when we created the product images. Specifically, for masculine brand design, color navy blue and type font "Monotype" were selected based on previous research results, while for feminine brand design, color light pink and type font "Impact" were implemented, because these colors and type fonts were validated by previous researchers (Lieven et al., 2015).

Procedure

Participants were presented with an image and instructions ("Please take a look at the following image of a deodorant/toothpaste of a new brand."). Afterwards, they answered questions about their impressions and perceptions of the presented brand name gender ("Based on your first impressions, to what extent do you believe the following words/phrases are descriptive of the brand Axis/Senseo/Frish/Frosh?"). Brand name gender was measured using a two-dimensional scale (Grohmann, 2009). In order to preclude repetition, the evaluation of the fictitious brand names "Axis" and "Frish" were paired, while "Senseo" was paired with "Frosh", so that participants did not evaluate any stimulus more than once. Each participant rated two brands presented in random order, and brand gender questions were also rotated. Demographic information, including age and gender, was collected at the end of the questionnaire.

Results

In total, 62 complete questionnaires (35 males, 27 females) were included in the data analysis. The mean age of participants was 38 years old. Factor analysis was conducted for the brand gender scale, and results indicated that the 12 items loaded on 2 factors, explaining 72.34 % of

the total variance. Correlation between the items was high, KMO score (KMO= .92 > .5, p= .00) indicated an adequacy of sample, and Bartlett's Test of Sphericity was significant (p= .00; < .05). Both MBP and FBP were high in reliability (MBP Cronbach's α= .93, FBP Cronbach's α= .95).

Firstly, a one-sample t-test was conducted using SPSS in order to compare all the MBP and FBP scores with scale mid-point four. Results showed that, for brand name "Frosh", MBP (M= 3.23, SD= 1.33) and FBP (M=2.89, SD= 1.57) were rated both significantly lower than four. Secondly, a paired-sample t-test was conducted to compare MBP score with FBP score, for each of the four brands, respectively. Results (MBP-FBP) indicated that brand name "Axis" was perceived as significantly more masculine than feminine (M= 1.17, SD= 1.68), brand name "Senseo" was perceived as significantly more feminine than masculine (M= -1.19, SD= 1.69), brand name "Frish" was perceived as significantly more feminine than masculine (M= -.67, SD= 1.65), while brand name "Frosh" was perceived as not significantly different in MBP and FBP scores (M= .34, SD= 1.28) (with Axis t(31)= 3.93, p= .00< .05; Senseo t(29)= -3.87, p= .00< .05; Frish t(31)= -2.28, p= .03< .05; Frosh t(29)= 1.45, p= .157> .05). No significant difference was found between male and female participants in brand name gender perceptions for all of the four pretested brand names.

Therefore, brand names "Axis" and "Senseo", paired with the product category deodorant, were selected to be used in the main study.

Pretest Four

The objective of pretest four was to decide on the spokesperson images in the main study. In total twelve images, including six images of women and six images of men, were selected from the Internet. The images used in this study were modified using photo-editing software, so that all the images shared a similar, neutral background. In all of the images, selected models are similar in gestures and facial expressions.

Procedure

In total, 67 participants were invited by a panel company through email, and completed an online questionnaire. Similar to the first three pretests, participants could access the online questionnaire once they agreed to the information and consent form.

This pretest consisted of four parts. Firstly, participants rated their impressions for the twelve images of spokespeople, based on their attractiveness and feminine/masculine characteristics ("I think this spokesperson is…very unattractive/attractive", "…very feminine/masculine"). Secondly, the participants considered the twelve images again, and rated the extent that they believed each of the spokespeople was appropriate for the product category deodorant. ("For the deodorant product category, this spokesperson is…very inappropriate/appropriate", "…very inconsistent/consistent", "…very unlikely/likely", "…very irrelevant/relevant", "…does not match at all/matches very well", "…does not go together/goes together very well") (Lee & Thorson, 2008). Thirdly, after being randomly assigned to one of the two brands (Axis/Senseo), participants were presented with an image of the deodorant product from brand Axis or brand Senseo. Using the product images with brand names developed in the previous pretest, the brand names Axis and Senseo were manipulated using different type fonts and logo colors. The difference between the Axis deodorant image and the Senseo deodorant image consisted only in the display of the brand name. Participants only rated one of these images. They were asked to consider to what extent each of the twelve spokespeople matched with the deodorant brand ("To what extent do you believe each of the following spokespersons matches with the new deodorant brand Axis/Senseo?"). Finally, participants answered demographic questions, including age, gender, education level and household income. Images of the twelve pretested spokesperson are included in the Appendix.

Results

Data cleaning procedure was based on completion time outliers identified by SPSS (extremely short or extremely long), and after excluding the outliers, no completion time was lower than one standard deviation below mean. After data cleaning, 61 complete questionnaires were used in the data analysis (31 males, 50.8%). The mean age was 41.3 years old (SD= 13.635). Demographic information indicated that most of the participants held a bachelor degree and above: 36.1 % (22) bachelor's degree, 18% (11) high school graduate, diploma, or the equivalent, 14.8% (9) some

college, 13.1% (8) trade/technical/vocational training, 9.8% (6) master's or doctorate degree, 8.2% (5) some high school. Regarding participants' household income, participants were almost evenly distributed in the income ranges: 26.2% (16) of them selected 75,000$ and above, 23% (14) of them selected 50,000$ -74,999$, 23% (14) of them selected less than 25,000$, 14.8% (9) of them selected 35,000$ -49,999$, and 13.1% (8) of them selected 25,000$ -34,999$.

A series of mean comparisons were conducted, aiming at selecting one feminine spokesperson and one masculine spokesperson which were appropriate for the brand Axis and brand Senseo, respectively. Firstly, we examined the spokespeople-product category match scores. Ideally, the spokespeople to be used in the main study should have scores not significantly lower than scale mid-point (4). Factor analysis showed that all the items loaded on one factor. The reliability score was high (α= .97), and KMO score was high (KMO= .94). The correlations between the six items were also high enough (r> .80). Thus, the match between spokesperson and the product category deodorant was calculated by averaging the six items. A one-sample t-test was conducted against scale mid-point (4). Results showed that all of the twelve spokespeople's scores were significantly higher than scale mid-point.

Secondly, the ratings of congruence between each of the spokespeople and two tested brands were examined. In total, 30 participants were randomly assigned to Axis group. T-test results showed that, all the male spokespeople, M1, M2, M3, M4, M5, and M6, along with one of the female spokespeople, F5, were rated significantly higher than scale mid-point (M1: M= 5.33, SD= 1.18; M2: M= 5.2, SD= 1.38; M3: M= 5.07, SD= 1.51; M4: M= 4.93, SD= 1.48; M5: M= 5.03, SD= 1.63; M6: M= 4.97, SD= 1.54; F5: M= 4.77, SD= 1.94), while the remaining (F1, F2, F3, F4, and F6) were rated not significantly different from scale mid-point on the congruence scale. In total, 31 participants were randomly assigned to the Senseo group. T-test results indicated that all the female spokespeople F1, F2, F3, F4, F5, and F6 were rated significantly higher than scale mid-point (F1: M= 5.19, SD= 1.54; F2: M= 5.23, SD= 1.65; F3: M= 4.97, SD= 1.722; F4: M= 5.42, SD= 1.36; F5: M= 5.45, SD= 1.50; F6: M= 5.48, SD= 1.71), while all the male spokespeople were rated not significantly different from scale mid-point on the congruence scale.

Thirdly, all of the spokespeople images received scores significantly higher than scale mid-point in terms of attractiveness (ps < .006), meaning that no image was perceived as not attractive for an advertisement.

Fourthly, in order to make sure that the spokespeople in the survey were not perceived differently across different demographic groups, one-way ANOVAs were conducted to compare the rating scores of all the scales used in this survey. As a result, for spokespeople-product category match, spokesperson F2 was perceived significantly differently among participants with different educational backgrounds and among participants with different household income. Furthermore, for the match between spokespeople and brand name Axis, spokespeople F3 and F4 were rated differently among participants with different level of household income. However, the match between spokespeople and brand name Senseo was not rated differently among any of the demographic groups, age, gender, educational background, and household income included.

To narrow down the spokespeople selection, we further conducted a series of repeated measure ANOVAs. We aimed at selecting a female and a male spokesperson image with similar levels of attractiveness. In addition, we expected the selected female spokesperson to show a higher fit with brand name Senseo compared to the selected male spokesperson, while the selected male spokesperson should show a higher fit with brand name Axis, compared to the selected female spokesperson. The participants assigned to the Axis group and the Senseo group did not show a significant difference in terms of perceptions of spokespeople's attractiveness. For the brand name Axis, spokespeople M1, M2, and M3 had a significantly higher level of fit than 6, 3, and 1 (out of 11) other spokespeople, respectively. For the brand name Senseo, almost all of the female spokespeople were significantly higher in fit compared to the male spokespeople: spokesperson F3 was rated significantly higher in fit than 5 (out of 11) other spokespeople, while spokesperson F1, F2, F4, F5, and F6 were rated significantly higher in fit than 6 (out of 11) other spokespeople. In a similar method, we also examined the pairwise comparison results for attractiveness and spokesperson characteristics scores.

In conclusion, the results pointed toward selection of images F1 and M1 as stimuli for the main study. Specifically, compared with the other pretested spokespeople images, both F1 and M1

have an equal level of attractiveness (both of them are more attractive than 4 other spokespeople) (F1: $M_{Attractiveness}$= 5.39, SD= 1.35, p= .00; M1: $M_{Attractiveness}$= 5.21, SD= 1.25, p= .00). Spokesperson F1 was perceived as more feminine than spokesperson M1, and M1 more masculine than F1 (MD_{F1-M1}= -3.279, p= .000; M1: M_{fem_masc}= 5.82, SD= 1.26; F1: M_{fem_masc}= 2.54, SD= 1.78). Spokesperson F1 was rated a higher level of match for brand Senseo compared with spokesperson M1 (F1: M= 5.19, SD= 1.54; M1: M= 3.77, SD= 2.05), while spokesperson M1 was rated a higher level of match for brand Axis compared with spokesperson F1 (F1: M= 4.50, SD= 1.98; M1: M= 5.33, SD= 1.18).

Main study

The main study was a 2 (brand gender: Axis, Senseo) × 3 (spokesperson: masculine spokesperson, feminine spokesperson, no spokesperson) between-participants design. Based on the pretests, six fictitious advertisements were created, corresponding to two congruity conditions, two incongruity conditions, and two control conditions (See Appendix for stimuli and questionnaire). Participants throughout the region of Canada were recruited through email by a panel company, and they were randomly assigned to one of the six conditions.

The tested conceptual model is presented in Figure 2.

Figure 2
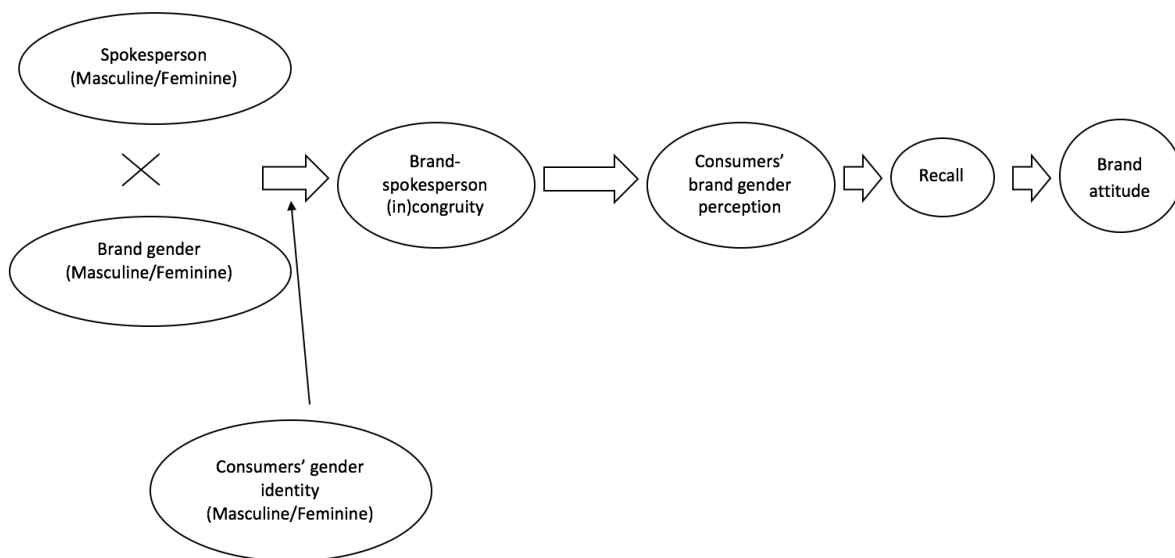
Procedure

Before they entered the survey, participants rated their familiarity with the brand name on a 7-point Likert scale ("Are you familiar with the following brands? Axis/Senseo: 1 = Not familiar at all, 7 = Very familiar"). Only participants who correctly rated their familiarity with these two fictitious brands lower than scale mid-point (4) were able to complete the questionnaire.

In all of the six conditions, participants were first given time to take a look at an advertisement ("Please look at the following advertisement for a new deodorant launched by the brand Axis/Senseo. We will ask you a few questions about the brand."), which was created for the fictitious brand Axis or Senseo. A ten-second timer was set to the advertisement question, in order to control the minimum time that the participants spent processing the advertisement. Participants then answered questions about spokesperson attractiveness (in control groups participants did not have this question), they rated their familiarity with the brand (Axis/Senseo), and to what extent they thought the spokesperson was an appropriate match with the brand. Furthermore, they were asked a series of questions regarding their perceptions of brand gender, and questions measuring their own sex-role identity. In addition, participants' recall of the advertisement, attitude toward the brand, and their willingness to pay were also measured. This was followed by three control variables, which measured participants' product involvement, their product usage, and the perceived credibility of the advertisement. Finally, similar to the pretests, demographic information including age, gender, highest degree received, and household income, was gathered.

Sample

We first examined responses to the familiarity question (the second question in the survey: "To what extent are you familiar with the brand [Axis/Senseo]?"), and excluded those who rated this question higher than scale mid-point (4). We believed that a high familiarity rating for fictitious brands indicated that they were not paying attention. We also examined the overall completion time, and the duration to submit the advertisement page, in order to delete extreme outliers by using the explore-outliers function in SPSS. Eleven responses were removed due to the extremely long/short in overall completion. After removal, we confirmed that for the remaining cases, the completion time was not shorter than one standard deviation below mean.

In total 451 (201 male participants, 44.6%) completes were remained in the data pool, among which 228 were assigned to the Axis condition, 223 were assigned to Senseo condition; 157 were assigned to the male spokesperson condition, and 131 were assigned to female spokesperson condition, and 163 were assigned to control group (i.e., no spokesperson in the advertisement).

The mean age of the participants was 39.4 years old (SD= 12.70). Participants varied in terms of education level and household income. Among them, 170 (37.7%) participants own a bachelor degree, 94 (20.8%) a trade/ technical/vocational training diploma or the equivalent, 72 (16%) completed some college, 56 (12.4%) were high school graduates, and 45 (10%) had a master's or doctorate degree, 14 (3.1%) attended some high school. Most (205, 45.5%) of the participants' household income reached $75000 and above, 103 (22.8%) of them have a household income of $50000-$74999, 61 (13.5%) of them have a household income of $35000-$49999, 42 (9.3%) of them have a household income of $25000-$34999, and 40 (8.9%) of them have a household income of less than $25000.

Measurement

Measurement scales used for the main study are listed in Table 4.

Table 4

Measurement	Items	Source
Brand-Spokesperson Match	*Please rate the match between the brand and the spokesperson:* 1 = Very inappropriate/ 7 = Very appropriate 1 = Does not match/ 7 = Matches very well	Misra & Beatty (1990)
Brand Gender	*On a scale of 7, 1 means not descriptive at all and 7 means extremely descriptive, to what extent do you believe the following words or phrases are descriptive of the brand Axis/Senseo?* MBP: FBP: Adventurous Express tender feelings Aggressive Fragile Brave Graceful Daring Sensitive	Grohmann (2009)

	Dominant Sturdy	Sweet Tender	
Purchase Intention	*How likely are you to buy this new product?* 1 = Not at all likely to buy this product 7 = Very likely to buy this product *What is the price that you are willing to pay for this new product?* (in CAD)		
Recall	*Please think about the advertisement you saw earlier in this study, and write everything you remember about it.*		
Brand Attitude	*I think the brand Axis/Senseo is:* 1 = Bad/ 7 = Good 1 = Unpleasant/ 7 = Pleasant 1 = Unappealing/ 7 = Appealing 1 = Poor quality / 7 = High quality 1 = I dislike this brand/ 7 = I like this brand	Debevec & Iyer (1986) Mitchell & Olson (2000) Berger & Mitchell (1989)	

Factor analyses were performed for all the multi-dimensional variables, specifically, brand gender (MBP and FBP), brand attitude, BSRI sex-role identity, and product involvement. According to the results, we confirmed that all the variables could be calculated as intended (see factor loadings in table 5). For the variable "product involvement", principal component factor analysis with varimax rotation indicated that the used 10-item scale (Phelps & Thorson, 1991) for product involvement measured two dimensions of involvement. However, as one factor could already explain 70.87% of the total variance and the variable product involvement was not included in the theoretical model, we calculate this variable by averaging the ten items.

Table 5

Variable	Factor extracted	Loadings (% of variance cumulative)
Brand gender (MBP: Cronbach's α= .94 FBP: Cronbach's α= .94)	1 2	36.00% 71.34%

Brand attitude (Cronbach's α= .95)	1	83.22%
BSRI sex-role identity (MTI: Cronbach's α= .91 FTI: Cronbach's α= .94)	1 2	40.28 60.91
Product involvement (Cronbach's α= .95)	1 (2)	70.87% (83.06%)

Recall: The open-ended question measuring participants' recall of the presented advertisement was content-analyzed, and quantity of information pieces provided in the response was counted. 92 (20.4%) did not list any valid information, 99 (22%) listed one piece of information, 82 (18.2%) listed two, 94 (20.8%) listed three, 46 (10.2%) listed four, 27 (6%) listed five, 8 (1.8%) listed six, 2 (0.4%) listed seven, 1 (0.2%) listed eight.

Sex-role identity: We recoded the BSRI measurement results by average the 10 items measuring femininity and 10 items measuring masculinity, respectively (Reliability alpha reported in table 5). By comparing each participant's masculinity score with femininity score, we found that among 451 participants, 42 of them were androgynous, 88 of them were masculine, and 321 were feminine. Considering the extreme imbalanced results of BSRI sex-role identity test, only biological sex was taken into consideration in part of the following data analysis process.

Brand gender salience: We calculated the absolute value of MBP and FBP difference. Specifically, a bigger value indicates a bigger difference between rated MBP and rated FBP, meaning that the rated brand owns a distinct brand gender; while a smaller value (closer or equal to zero) indicates that the brand is more androgynous/undifferentiated in terms of brand gender.

Manipulation check

A repeated measure analysis of variance was conducted, with brand gender perceptions (MBP and FBP) as within-participants factors, and brand (Axis, Senseo) as between-participants factor, in order to test the MBP and FBP difference for Axis and Senseo in the control conditions, respectively.

Test results revealed a significant main effect of within-participants factor, and a significant interaction effect of the within-participants factor and the between-participants factor. Specifically, the result of simple effect pairwise comparison confirmed that for the brand Senseo, MBP was significantly lower than FBP (Mean Difference$_{(MBP-FBP)}$= -.52, SD$_{(MBP-FBP)}$= .12, p= .00), meaning that the brand Senseo was perceived as a feminine brand when it was not endorsed by any spokesperson; for brand Axis, there is no significant difference between MBP and FBP (Mean Difference$_{(MBP-FBP)}$= .14, SD$_{(MBP-FBP)}$= .12, p= .25). We also found a significant difference between the two tested brands, in terms of FBP perception (Mean Difference$_{(Axis-Senseo)}$= -.54, SD$_{(Axis-Senseo)}$= .21, p= .01), which means that the brand Senseo was perceived as significantly more feminine than the brand Axis. However, no significant difference was found for MBP perceptions between the two brand groups (Mean Difference$_{(Axis-Senseo)}$= .13, SD$_{(Axis-Senseo)}$= .23, p= .57).

Therefore, due to the unexpected results for the Axis brand control group (i.e., without spokesperson, the deodorant brand Axis was not rated as significantly more masculine than feminine), the following analysis was based on the experimental conditions including a spokesperson.

Control variables
One-sample t-tests were conducted on all the control variables against scale mid-point (4). Results showed that spokesperson attractiveness (M=4.78, SD= 1.49, p= .00), product usage frequency (M= 5.99 SD= 1.74, p= .00), advertisement credibility (M= 4.98, SD= 1.54, p= .00), and product involvement (M= 5.03, SD=1.44, p= .00) were all rated significantly higher than scale mid-point (4). In addition, participants' familiarity with brand (M=1.74, SD= 1.29, p= .00) was rated significantly lower than scale mid-point four, indicating that participants had a comparatively low level of familiarity with the tested brand names Axis and Senseo.

Analysis of variance with condition as factor confirmed that at the .05 level, no significant difference among the four conditions was detected in terms of product involvement (F(3,284)=

1.80, p= .15 > .05), spokesperson attractiveness (F(3,284)= 1.82, p= .14 > .05), and advertisement credibility (F(3,284)= 0.34, p= .99 > .05).

The variables familiarity and usage frequency did not pass the homogeneity of variance test, hence a following Welch test was conducted for these two variables. Results indicate that among the four conditions, there existed significant differences regarding usage (Welch Statistics (3,147.31)= 3.11, p= .03 < .05) and familiarity (Welch Statistics (3,148.24)= 3.51, p= .02 < .05). For the variable familiarity, a Games-Howell post hoc test found that participants in the Axis × male spokesperson condition (M= 1.99, SD= 1.34) were significantly more familiar (Mean Difference$_{(Axis*male\ spokesperson-\ Senseo*male\ spokesperson)}$ = .56, p= .02) with brand Axis, compared with participants' familiarity level with the brand Senseo in the Senseo × male spokesperson condition (M= 1.43, SD= 1.01). The confidence interval for mean reported the upper bound of Axis × male spokesperson condition as 2.29, which could be considered as quite low. As for usage frequency of deodorant, participants in Axis × male spokesperson condition (M= 6.38, SD= 1.37; CI: 6.07-6.69) rated a significantly higher level of frequency, compared with participant in Senseo × female spokesperson condition (M=5.41, SD= 2.17; CI: 4.83-5.99) (Mean Difference$_{(Axis*male\ spokesperson-\ Senseo*male\ spokesperson)}$= .97, p= .02). Considering that the product involvement score for Senseo × female spokesperson condition was not significantly different from Axis × male spokesperson condition, and that in Senseo × female spokesperson condition, the lower bound of confidence interval mean was reported 4.83, we would not consider the difference between the two groups as a concern.

In addition, these control variables were also examined with participants' gender as factor. We found a significant difference on familiarity with brand (M$_{Female}$= 1.59, SD$_{Female}$= 1.09; M$_{Male}$= 1.97, SD$_{Male}$= 1.51; t(199.05)= 3.09, p= .00) and usage frequency (M$_{Female}$= 6.18, SD$_{Female}$= 1.59; M$_{Male}$= 5.64, SD$_{Male}$= 1.88; t(231.16)= -2.79, p= .01) between male and female participants. However, both male and female participants rated their familiarity with the brand lower than 2 (meaning that both male and female participants indicated a comparatively low familiarity to the tested brands), usage and product involvement were both rated higher than scale mid-point (4), these revealed differences would not be considered as a concern for the following data analysis.

Results

Hypotheses 1 - 3

A three-way MANOVA was conducted with spokesperson (male/female), brand (Axis/Senseo), and participant gender (male/female) as factors, spokesperson-brand match, MBP, FBP, and brand gender salience as dependent variables.

Main effect

Significant main effects of spokesperson, brand, and participant gender on MBP, FBP, and brand gender salience were detected, but we did not discover main effect of any of the three factors on spokesperson-brand match.

Firstly, spokesperson gender had a significant univariate effect on FBP ($F(1,286)= 10.13$, $p= .00$, partial $\eta^2= .04$), while we did not find significant univariate effect of spokesperson gender on MBP ($F(1,286)= 2.77$, $p= .10> .05$). Overall, regardless of brand gender, when a female spokesperson ($M_{FBP}=4.04$, SD$= 1.30$) appeared in advertisement, FBP was perceived significantly higher compared to when a male spokesperson ($M_{FBP}= 3.51$, SD$= 1.50$) appeared. A female spokesperson significantly increased consumers' perceptions of brand femininity, regardless of brand gender (as manipulated by the brand design). A male spokesperson had a relatively lower influence on consumers' perceptions of brand masculinity.

Figure 3: Spokesperson Main Effect
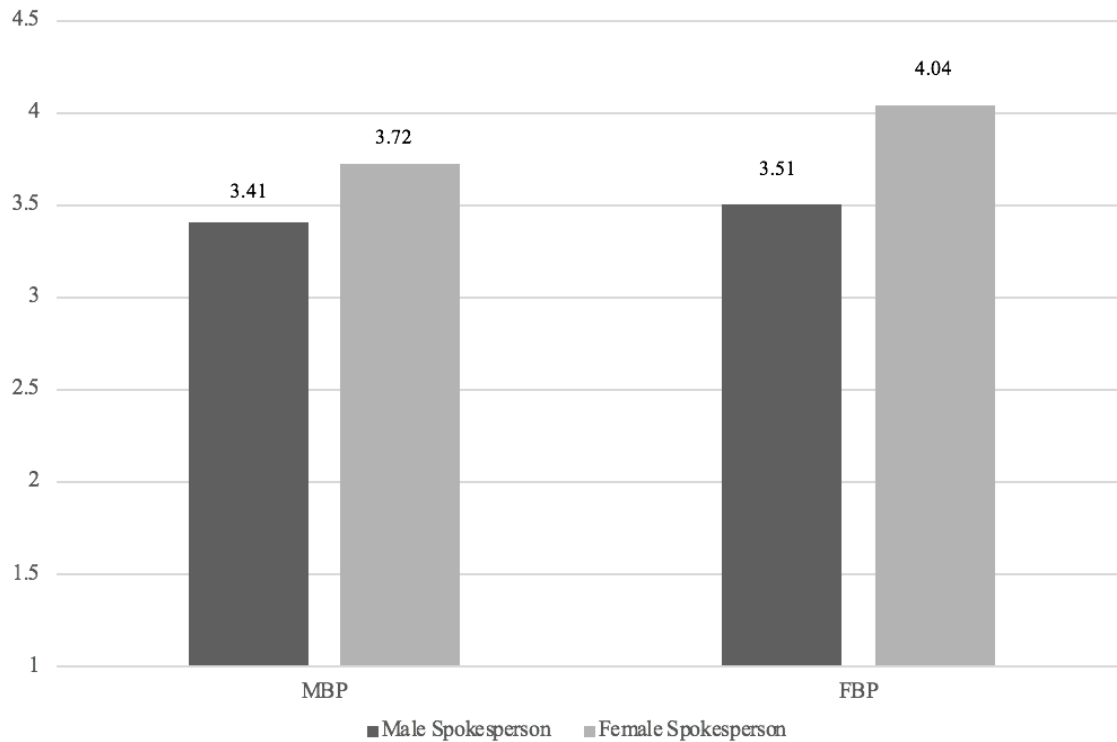
Secondly, we detected a significant univariate effect of brand on participants' perception of brand gender salience ($F_{(1,286)}= 3.99$, $p= .047$), and a marginally significant univariate effect of brand on MBP ($F_{(1,286)}= 3.59$, $p= .06$). Specifically, the main effect of brand indicated that the brand gender salience mean score of the masculine brand Axis ($M_{Axis}= .62$, $SD_{Axis}= .83$) was significantly higher than the feminine brand Senseo ($M_{Senseo}= .83$, $SD_{Senseo}= .90$), at the .05 significance level. Moreover, the marginally significant univariate effect of brand on MBP indicated a trend of MBP perception increase for the masculine brand Axis ($M_{Axis}= 3.75$, $SD_{Axis}= 1.39$), compared to the feminine brand Senseo ($M_{Senseo}= 3.42$, $SD_{Senseo}= 1.47$).
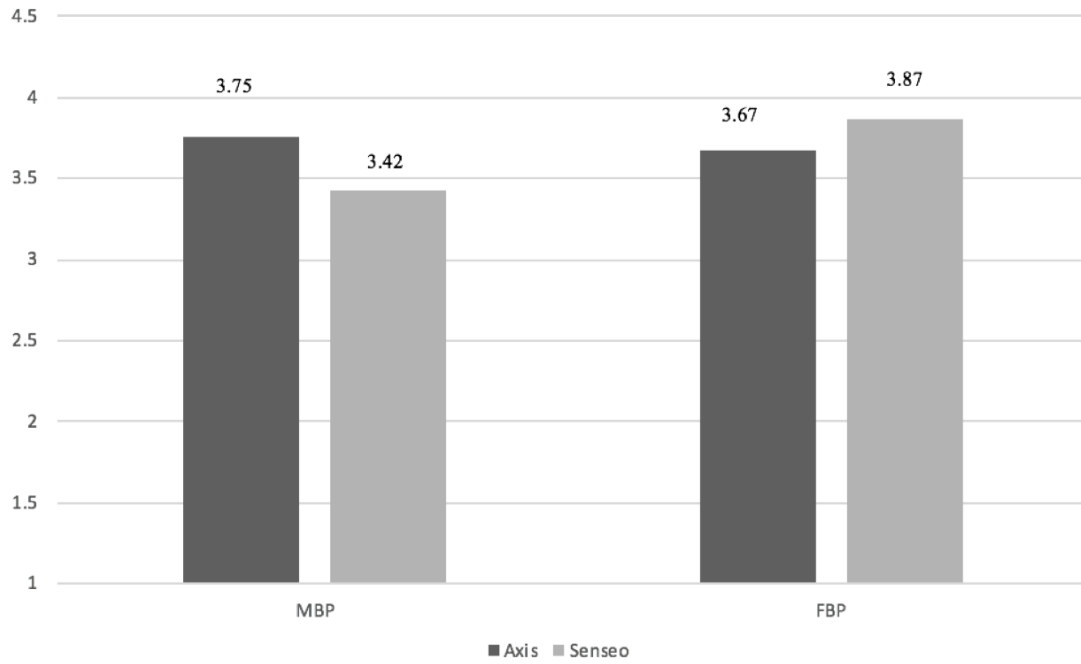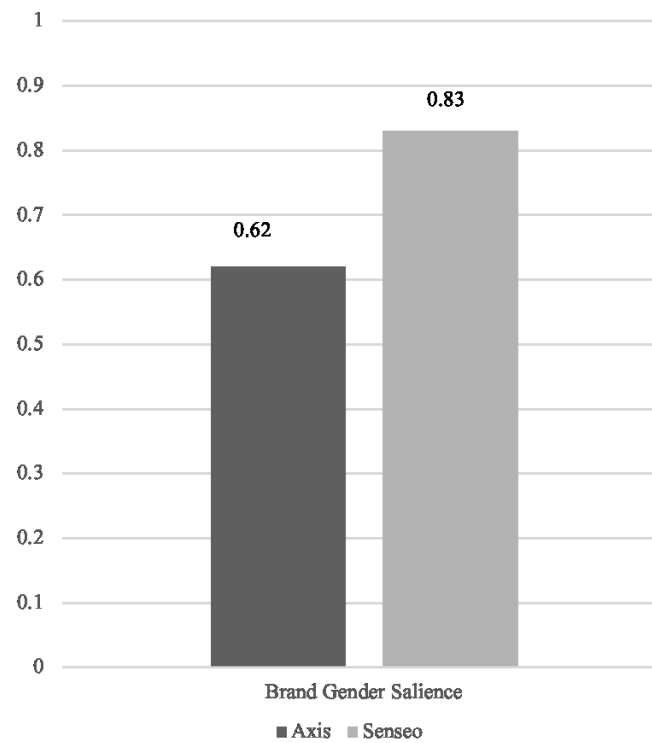
Figure 4: Brand Main Effect on MBP

Figure 5: Brand Main Effect on Brand Gender Salience

Thirdly, participant gender had a significant effect on both MBP (F(1,286)= 12.12, p= .02) and FBP (F(1,286)= 11.50, p= .00). We found that male participants (M_{Male}= 3.79, SD_{Male}= 1.34) perceived MBP significantly higher compared to female participants (M_{Female}= 3.37, SD_{Female}= 1.48). Interestingly, male participants (M_{Male}= 4.06, SD_{Male}= 1.34) also have a higher level of perceived FBP, compared to female participants (M_{Female}= 3.49., SD_{Female}= 1.45).

Figure 6: Consumer Gender Main Effect
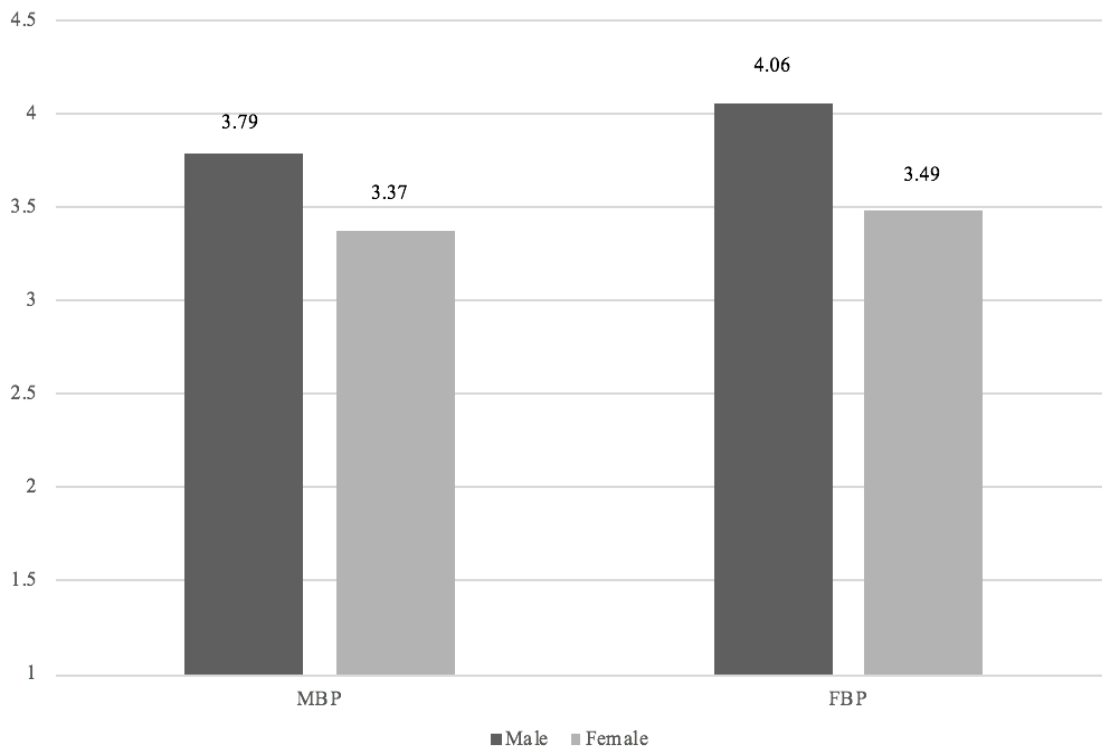
Interaction effect

Significant interaction effects of spokesperson and participant gender on spokesperson-brand match (F(1,286)= 10.34, p= .02), and brand gender salience (F(1,286)= 2.90, p= .05) were found.

To examine the simple effect of the detected two-way interaction, two follow-up pair-wise comparisons were conducted. Results indicated that male spokesperson was rated significantly differently by male and female participants in terms of spokesperson-brand match, with Mean Difference(Male-Female)= -.66, p= .00, while female spokesperson-brand match was not rated differently by male and female participants, with Mean Difference(Male-Female)= .12, p= .64. Male

participants indicated a significantly higher level of spokesperson-brand match when female spokesperson appeared in the advertisement, compared to when male spokesperson appeared, with Mean Difference$_{(Male\ spokesperson-Female\ spokesperson)}$= -.64, p=.01. However, female participants did not rate female spokesperson and male spokesperson differently in terms of spokesperson-brand match, with Mean Difference$_{(Male\ spokesperson-Female\ spokesperson)}$= .14, p=.53. As for brand gender salience, when male spokesperson endorsed the brand, male consumers' perception of brand gender salience was significant lower compared with female consumers, mean difference$_{(male-female)}$= -.34, p= .02. However, when female spokesperson endorsed the brand, no significant difference between male consumers and female consumers were found, in terms of their brand gender salience perception, mean difference$_{(male-female)}$= .08, p= .63.

Since we did not find any significant effect of any independent variable on spokesperson-brand match, H1 was not supported.

In order to test hypotheses H2a and H2b, three separate regression analyses were conducted with consumers' perception of spokesperson-brand match as predictor, and brand gender perceptions as dependent variables (results summarized in table), respectively. We found that spokesperson-brand match positively influences consumers' perceptions of MBP (B= .40, p< .001) and FBP (B= .24, p< .001), while no significant relationship between spokesperson-brand match and brand gender salience was discovered (B= .00, p= .96). This result indicated that, even though the participants did not perceive the spokesperson-brand gender differences from a congruent/incongruent perspective, the comparably more congruent between the brand gender and spokesperson gender they rated, the higher level of brand masculinity and brand femininity they perceived. Therefore, H2a and H2b were partly supported.

Table 6

IV	DV	Coefficient	Sig.
Spokesperson-brand match	MBP	.40	.00
Spokesperson-brand match	FBP	.24	.00
Spokesperson-brand match	Brand Gender Salience	.00	.96

An independent-sample t-test was conducted to test H3. No significant differences between male and female participants were discovered in terms of their rated spokesperson-brand match (F= 3.44, p= .065), therefore H3 was not supported. Male participants indicated a higher level of perceived MBP and FBP, which is opposite to the hypothesized effect.

Hypotheses 4 - 5

In order to examine hypotheses four and five, a series of linear regressions were conducted (statistical results summarized in tables 7 & 8). To address the problem of multicollinearity, for the reason that the variable brand gender salience was calculated based on participants' rated MBP and FBP scores, we conducted two groups of linear regressions, first with MBP and FBP scores as predictors, and then with only brand gender salience as predictor.

In regressions to predict DVs based on MBP/FBP perception, no significant linear relationship was discovered for both MBP (β= -.10, p= .90> .05) and FBP (β= -.13, p= .12> .05) on recall. However, there was a significant positive linear relationship between participants' perceived MBP and brand attitude (β= .34, p< .001), purchase intention (β= .33, p< .001), and willingness to pay (β= .19, p= .02< .05). We did not find significant relationship between participants' perceived FBP and brand attitude (β= -.01, p= .89> .05), purchase intention (β= .14, p= .06> .05), or willingness to pay (β= .05, p= .57> .05).

Therefore, H4a and H4b were not supported: the perceptions of MBP and FBP were not significantly related to consumers' recall. In addition, MBP positively influences brand attitude, purchase intention and willingness to pay, while FBP perception does not significantly influence on brand attitude and willingness to pay, though a trend of positive relationship between FBP perception and intention (p= .06< .10) was discovered.

Table 7

DV	IV	Coefficients	Sig.	Tolerance	VIF
Recall	MBP	-.01	.90	.527	1.897
	FBP	-.14	.12	.527	1.897

Brand Attitude	MBP*	.35*	.00*	.527	1.897
	FBP	-.01	.89	.527	1.897
Purchase Intention	MBP*	.41*	.00*	.527	1.897
	FBP	.18	.06	.527	1.897
Willingness to Pay	MBP*	.76*	.02*	.527	1.897
	FBP	.18	.57	.527	1.897

*p-value< .05

In regressions to predict DVs based on brand gender salience, results indicated a significant positive relationship between brand gender salience and recall (β= .14, p= .02< .05). No significant effect of brand gender salience was found on purchase intention (β= -.02, p= .78> .05) and willingness to pay (β= .01, p= .81> .05). A trend if positive relationship between brand gender salience and brand attitude (β= .11, p= .06> .05) was found. Hence, H4c was supported, in that brand gender salience positively influenced consumers' recall. H5a, H5b and H5c were only partially supported.

Table 8

DV	IV	Coefficients	Sig.	Tolerance	VIF
Recall	Brand Gender Salience*	.25*	.02*	1.000	1.000
Brand Attitude	Brand Gender Salience	.19	.06	1.000	1.000
Purchase Intention	Brand Gender Salience	-.03	.78	1.000	1.000
Willingness to Pay	Brand Gender Salience	.09	.81	1.000	1.000

*p-value< .05

Hypothesis 6

In the linear regression reported above, we found that MBP/FBP perception did not significantly influence recall. As for the variable brand gender salience, results showed that there was no significant influence of brand gender salience on brand attitude. Based on Baron and Kenny's mediation testing procedure (1986), the prerequisites to conduct a mediation test were not met, and we conclude that recall is not a mediator of the relationship between brand gender perceptions and brand attitude. H6 was not supported.

General Discussion and Implications

This research aimed at exploring the effect of spokesperson gender on consumers' perceptions of a masculine/feminine brand. Specifically, we examined if consumers' brand gender perceptions could be influenced by the match/mismatch of spokesperson gender and brand gender (i.e. feminine spokesperson & feminine brand, masculine spokesperson & masculine brand, feminine spokesperson & masculine brand, or masculine spokesperson & feminine brand). In addition, we proposed and examined a conceptual model, in order to understand how consumers process advertisement information regarding their perceptions of a brand gender.

In total, four pretests and one main study were conducted, and the findings were as follows: Firstly, we did not find statistically significant evidence in support of the hypothesis that the congruity between spokesperson and brand gender leads to greater spokesperson-brand congruity perceptions. There was no significant difference reported in terms of rated spokesperson-brand match across four conditions. On the one hand, we speculate that, compared to situations in real life, the participants were exposed to the stimuli only once and for a relatively short time, so that the participants did not have thought of the advertisement in terms of a congruity/incongruity level between the spokesperson and the brand. In other words, they did not process the spokesperson-brand match information from a gender congruity/incongruity perspective. On the other hand, it is possible that at the schema level, the gender congruity/incongruity between the spokesperson and the brand was overridden by other incoming information. Researchers posit that schema is used to describe a cognitive structure that exist in one's mind (Padesky, 1994). According to schema theory, when consumers evaluate an advertisement, they process existing schema and incoming information at the same time (Misra & Beatty, 1990). In our study, the participants' existing schema relates to an existing product category (i.e., deodorant), and incoming information consists of the spokesperson and the brand. In advertisements, spokespeople images are usually presented prominently, compared to other marketing mix factors. With spokesperson being at the first place when consumers see an advertisement and process the information, it is possible that spokesperson attractiveness overrides all other incoming information, and that consumers fail to process information from a

congruity/incongruity level. Therefore, an empirically based modification of the conceptual model would involve removal of the variable spokesperson-brand (in)congruity.

Secondly, we have interesting findings regarding gender differences in brand gender perceptions. We found a significant main effect of gender: compared to female participants, male participants perceived a higher level of MBP and FBP. One possible cause for this result might be the extremely imbalanced pattern of participants' sex-role identity in this study; among the 451 participants in this research, almost 71% (321) were feminine, 88 were masculine, and 42 were androgynous. The literature suggests that consumers' perceptions of MBP and FBP are positively associated with their sex-role identity. For example, Grohmann (2009) found that congruence between consumers' sex-role identity and brand could lead to more positive consumer responses, such as brand trust, brand affect, brand attitude, brand preference, or purchase intention. It is likely that sex-role identity plays an important role when it comes to consumers' responses to a brand. However, it should also be acknowledged that consumer behaviors are closely related to their biological sex, and literature suggested that compared to female consumers, male consumers are more inclined to seek for gender congruence (e.g., Alreck, 1994; Fugate & Phillips, 2010; Neale, Robbie & Martin, 2016; Ulrich, 2013). Lieven and colleagues (2015) also found that consumers tend to show higher preference to the brands which are congruent with their sex, and that consumers show higher preference to the brands when its brand gender is congruent with product category gender. Moreover, the discovered gender difference in MBP and FBP perception implies that, consumers' sex-role identities are not necessarily the same as their biological sex.

Thirdly, our research results indicate that MBP and FBP perceptions could derive differently when consumers process advertisement information. We found that FBP perceptions could possibly be more strongly associated with the spokesperson; however, MBP perceptions could be more associated with the brand name (and design). In other words, when a brand gender is not androgynous, the spokesperson does not necessarily influence consumers' perception of the brand's MBP, while it is relevant to influence consumers' perception of its FBP; the brand design does not necessarily influence consumers' perception of its FBP, while it could be of importance to shape consumers' perception of MBP. From this perspective, this research is the

first to discover and discuss, when a brand's gendered personality is not androgynous, how brand design and brand spokesperson influence consumers' perception of brand masculinity and brand femininity.

Fourthly, this research contributes to the literature by adding consumers' recall to brand personality literature. We found that recall is positively related to brand gender salience perceptions, while no significant relationship between recall and MBP/FBP perception was discovered. Put it in another way, our results imply that owing a distinct brand gender (more masculine/more feminine, in comparison with androgynous) increases consumers' recall of a brand. Our study fills in the gap of literature by acknowledging the relationship between brand gender salience and consumers' brand recall. Lieven and colleagues (2014) found that owning a distinct brand gender could predict a higher level of consumer-based brand equity. Since brand equity is much associated with consumers' brand awareness, consisting of brand recall and brand recognition, it is possible that consumers' recall of the brand plays a role. From another perspective, recall relates to the structure and content of consumers' memories, and is relevant to marketers because consumers' recall of a brand influences the effectiveness of brand strategies (Keller, 1993), results of this research could be relevant to mangers as well.

Finally, to the best of our knowledge, this research is among the few that include both antecedents and consequences of brand gender in the same model, and is also among the first to explore both people-related source and non-people-related source of brand gendered personality at the same time. Results were not consistent with prior research in that, among the two dimensions of brand gender, consumers' brand attitude, willingness to pay, and purchase intention have a stronger association with brand masculinity, rather than brand femininity.

Based on the findings of the current research, a modified conceptual model that could be tested is proposed in the following figure.

Figure 7
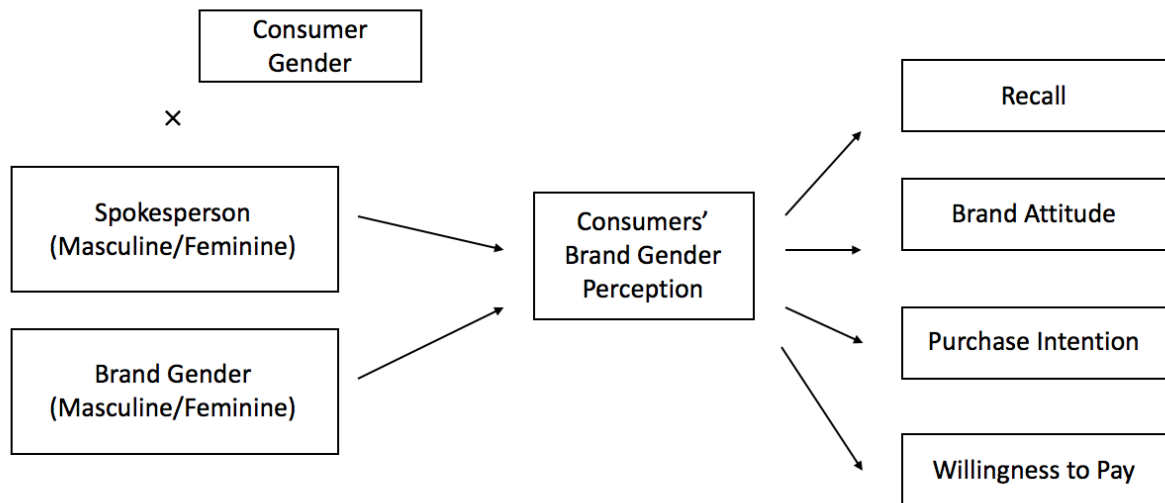
Managerial Implications

This research provides several relevant implications for practitioners.

Previous research suggests that when a brand owns a more gendered personality (feminine/masculine as opposed to androgynous), more positive attitudinal response and higher level of brand equity will be elicited (Grohmann, 2009; Lieven et al., 2014). By discovering the positive effect of brand gender perception on brand attitude, willingness to pay, and purchase intention, the current research provides results consistent with previous research. More importantly, by exploring the relationship between brand gender perception and consumers' recall, we found that in comparison with MBP and FBP, brand gender salience has a more positive effect on recall, which eventually has a positive effect on brand attitude. Therefore, the current results might remind marketers that, creating a more gendered brand personality should imperative for them, not only because of the positive brand attitude outcome but also because of the increased consumers' recall. The objective of creating a salient brand gender should not be neglected for new brands when managers make efforts to deploy different marketing-mix elements.

Moreover, this research indicates that spokesperson could contribute more to consumers' perception of a brand's femininity, while brand-related designs, such as brand name, logo color, or type font are more likely to contribute to consumers' perception of a brand's masculinity. Hence, when managers create a specific gendered personality of their brand, they should be aware of the difference between the two sources of gendered brand personality. They could employ a more feminine spokesperson to enhance consumers' brand femininity perceptions, while for masculine brands, a more masculine brand design should be prioritized, compared to spokesperson, in order to build up brand masculinity.

In addition, practitioners should pay attention to gender differences when it comes to brand gender perceptions. According to the current research, male consumers are inclined to attribute a higher level of MBP and FBP to a brand. Taking spokesperson into consideration, male consumers, compared to female consumers, could have a lower level of brand gender salience

perception when the brand is endorsed by male spokesperson, while female consumers could have a similar level of brand gender salience perception not matter the spokesperson is male or female. Therefore, when marketers target different consumer segments, they can take this gender difference into consideration, in order to receive more favorable consumer responses.

Limitations and Future Research Directions

This research explores the influence of spokesperson gender on consumers' perceptions of a brand's gendered perception and proposes a theoretical model which explains how consumers' brand gender perception could in turn influence recall, brand attitude, purchase intention, and their willingness to pay. Despite the importance of this research illustrated above, this research is not without its limitations.

Firstly, the major limitation concerns the participants in control group did not perceive the gendered personality of brand name Axis as expected. Specifically, after exposed to the advertisements of two brands without spokesperson, the participants rated brand name Senseo as more feminine, but they did not rate brand Axis as more masculine. This could be probably caused by the multiple and varied advertisement elements used in the main study. According to Edell and Staelin (1983), consumers go through different information processing paths in framed (when verbal information is also provided together with pictorial information) and unframed (no verbal information provided) advertisements. Similarly, Mitchell's (1986) dual component model also pointed out that when both visual and verbal components are included in an advertisement, consumers tend to evaluate the two components separately. Therefore, it is possible that consumers allocated some of the attention to the verbal information provided in the main study advertisements, so that less attention was used to form brand gender perceptions on the basis of spokespeople and brand design elements, compared to the results in pretest two, which only consisted of design elements without verbal information.

Secondly, another limitation is that throughout all the studies, participants' perceptions of MBP and FBP were significantly lower than scale mid-point four. This could be caused by the fictitious nature of the brand names used in this research. Researchers suggest that brand personalities are built up over time (Aaker, 1997). In this research, participants were only exposed to the relatively not familiar brands once and for a short time. It is therefore reasonable to assume that that they may not have formed strong associations involving brand gendered personality. Therefore, future research could replicate this research using real brand names, to see if more salient effects could be discovered.

Thirdly, another limitation relates to the external validity and generalizability of the results. As this is among the few investigations of the influence of spokesperson gender on consumers' perception of a brand gender, we examined only one gender-neutral product category (i.e., deodorant). Future research could generalize this research to feminine and masculine product categories. For example, recently it has become more and more popular for cosmetic brands to use male spokespeople (e.g., Esteé Lauder, Covergirl). Therefore, it could be interesting to see if the current results hold for different product categories. In addition, as the product category deodorant is a high functional and low prestige product, it would also be meaningful for future research to explore if the results of this study could be generalized to other product categories, such as low functional and high prestige (or high functional and high prestige/ low functional and low prestige) products. Similarly, a larger population could be reached in future research, in order to address the generalizability concerns. Video stimuli rather than images could also be included in order to improve external validity.

Finally, similar to Maehle and Supphellen (2011)'s method, future researchers could also use qualitative method to interview consumers and explore why some marketing-mix elements (e.g. type font) are more relevant for one dimension (e.g. MBP), compared to the other (e.g. FBP). Besides, following this research, long-term recall could be of interest in future research on the relationship between brand gender and recall.

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Appendix

Main study questionnaire

1. Please look at the following advertisement for a new deodorant launched by the brand [Brand name]. We will ask you a few questions about the brand.

 [Image of advertisement]

2. Based on my first impressions, I think this spokesperson is...

 Very unattractive/ Very attractive

3. To what extent are you familiar with the brand [Brand name]?

 Not familiar at all/ Very familiar

3. Please rate the appropriateness of the match between the spokesperson and the brand?

 Very inappropriate/ Very appropriate

 Does not match at all/ Matches very well

4. On a scale of 7, 1 means not descriptive at all and 7 means extremely descriptive, to what extent do you believe the following words or phrases are descriptive of the brand [Brand name]?

 (Not descriptive at all/ Extremely descriptive)

 Adventurous

 Aggressive

 Brave

 Daring

 Dominant

 Sturdy

 Express tender feelings

 Fragile

 Graceful

 Sensitive

 Sweet

 Tender

5. Please take a look at the advertisement again.

[Image of advertisement]

I think the brand [Brand name] is...

       Bad/ Good

       Unpleasant/ Pleasant

       Unappealing/ Appealing

       Poor quality / High quality

       I dislike this brand/ I like this brand

6. How likely are you to buy this new product?

       Not at all likely to buy this product/ Very likely to buy this product

7. What is the price that you are willing to pay for this new product?

I am willing to pay ... CAD for this product. **(Please enter number only in the box below)**

       [   ]

8. Please think about the advertisement you saw earlier in this study, and write everything you remember about it.

       [   ]

9. Please rate the following statements:

To what extent do you believe the following statements are descriptive of yourself?

       (Not descriptive at all/ Extremely descriptive)

       I act as a leader.

       I am aggressive.

       I am ambitious.

       I am assertive.

       I am competitive.

       I am dominant.

       I am forceful.

       I have leadership abilities.

       I am willing to take a stand.

       I have a strong personality.

       I am affectionate.

       I am compassionate.

I am eager to soothe hurt feelings.

I am gentle.

I am loyal.

I am sensitive to the needs of others.

I am sympathetic.

I am tender.

I am understanding.

I am warm.

10. Please rate the following statements base on your experience.

For me, deodorant is...

Unimportant/ Important

Of no concern/ Of concern

Irrelevant/ Relevant

Means nothing/ Very meaningful

Trivial/ Fundamental

Does not matter/ Matters to me

Not interesting/ Interesting

Insignificant/ Significant

Superfluous/ Vital

Boring/ Exciting

11. How often do you use deodorant?

I never use deodorant. / I use deodorant regularly.

12. How credible was the advertisement you evaluated in this study?

Not credible at all/ Very credible

13. Demographics

a. What is your age?

b. Are you male or female?

c. What is the highest degree or level of school you have completed?

☐ Some high school

☐ High school graduate, diploma or the equivalent

☐ Some college

☐ Trade/technical/vocational training

☐ Bachelor's degree

☐ Master's or doctorate degree

d. Which of these describes your total household income during the past 12 months?

☐ Less than $25000

☐ $25000 to $34999

☐ $35000 to $49999

☐ $50000 to $74999

☐ $75000 and above
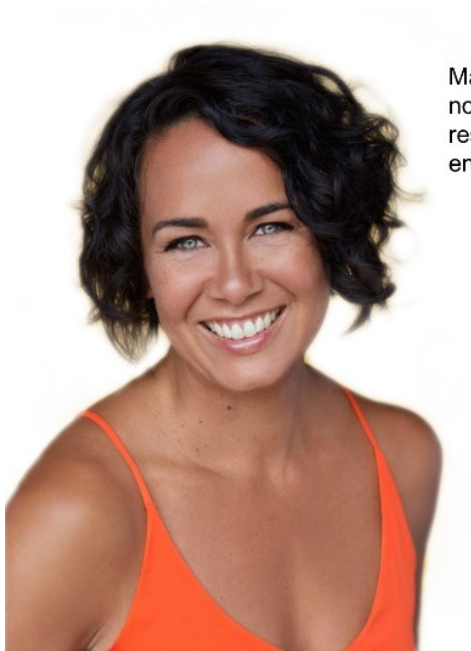
Main study Stimuli

"**Axis** deodorant-

Made of 100% natural mineral salts. Non-sticky, no-staining, dries instantly and leaves no white residue. Not tested on animals and safe for the environment."

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"**Axis** deodorant-

Made of 100% natural mineral salts. Non-sticky, no-staining, dries instantly and leaves no white residue. Not tested on animals and safe for the environment."

" *Senseo* deodorant-

Made of 100% natural mineral salts. Non-sticky, no-staining, dries instantly and leaves no white residue. Not tested on animals and safe for the environment."

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"*Senseo* deodorant-

Made of 100% natural mineral salts. Non-sticky, no-staining, dries instantly and leaves no white residue. Not tested on animals and safe for the environment."