Bridging the gap between brand gender and brand loyalty on social media: exploring the mediating effects

Leonor Vacas de Carvalho, Salim L. Azar & Joana Cesar Machado

To cite this article: Leonor Vacas de Carvalho, Salim L. Azar & Joana Cesar Machado (2020) Bridging the gap between brand gender and brand loyalty on social media: exploring the mediating effects, Journal of Marketing Management, 36:11-12, 1125-1152, DOI: 10.1080/0267257X.2020.1740293

To link to this article: https://doi.org/10.1080/0267257X.2020.1740293

Published online: 23 Mar 2020.
Bridging the gap between brand gender and brand loyalty on social media: exploring the mediating effects

Leonor Vacas de Carvalho\textsuperscript{a}, Salim L. Azar\textsuperscript{b} and Joana Cesar Machado\textsuperscript{c}

\textsuperscript{a}Business Department, Universidade de Évora, Evora, Portugal; \textsuperscript{b}Faculty of Business and Management, Université Saint-Joseph de Beyrouth, Beirut, Lebanon; \textsuperscript{c}Católica Porto Business School, Universidade Católica Portuguesa, Porto, Portugal

\textbf{ABSTRACT}

Brand gender has been suggested to influence consumer’s responses to the brand. The aim of this research was to deepen the understanding of the relationship between brand gender and brand loyalty by developing a research model to test the relationships among brand gender, active consumer engagement with the brand on social media, perceived quality, brand love and brand loyalty. The hypotheses were tested using structural equation modelling. The results support the importance of active consumer brand-engagement, perceived quality and brand love in underpinning the underlying process between brand gender and brand loyalty. Hence, this research complements prior work on brand gender and confirms the important benefits of a clear brand gender positioning by showing that a strong gender identity will enhance loyalty towards the brand.

\textbf{Introduction}

Previous research has suggested that brand gender, a fundamental dimension of brand personality, can lead to relevant consumer–brand-related responses (Azar et al., 2018; Grohmann, 2009; Lieven et al., 2014), specifically influencing consumer–brand responses on Facebook (Machado et al., 2019). Brand gender refers to the personality traits associated with masculinity and femininity, which are both applicable and relevant to brands and comprise two independent and universal dimensions: masculine brand personality traits and feminine brand personality traits (Azar, 2015; Grohmann, 2009).

Although past studies have shown that consumer–brand gender congruence tends to influence brand loyalty (Grohmann, 2009), evidence on the underlying sources of this relationship is still scarce. Furthermore, the link between brand gender personality traits and brand loyalty on social media has not yet been empirically tested. Hence, the main aim of this study is to deepen the understanding on the underlying process of the relationship between brand gender (i.e. masculine brand personality traits and feminine brand personality traits) and brand loyalty, using the specific context of Facebook.
Customer loyalty is a strategic objective for companies and the heart of marketing efforts, due to its positive impact on profitability and sustainability over time (Evanschitzky et al., 2011; Flavián et al., 2006; Nisar & Whitehead, 2016; Su & Tong, 2016). Previous studies have shown that the relative costs of customer retention are substantially less than those of acquisition (Flint et al., 2011; Fornell & Wernerfelt, 1987; Oliver, 1999), and firms spend dramatically to build and manage customer loyalty (Watson et al., 2015). For example, annual customer loyalty programme outlays have grown 27% since 2010 to exceed 48 USD billion across 2.7 billion programme enrollees in the United States alone (Berry, 2013). Building brand loyalty remains an ongoing challenge, namely because of the development of Social Networking Services (SNSs) (Watson et al., 2015). Brand-hosted social media, such as brand pages on Facebook, offer brands new ways to connect with customers (Helme-Guizon & Magnoni, 2019) but also new challenges (Claffey & Brady, 2019). Previous research has pointed out the power of social communities in building and enhancing loyalty towards brands (Laroche et al., 2012). Furthermore, emergent perspectives in marketing highlight new opportunities for leveraging social media as a means to build customer–firm relationships through consumer engagement (Claffey & Brady, 2019). However, there is a need for more empirical research about the effect of engagement through brand-hosted social media on customers’ brand loyalty (Helme-Guizon & Magnoni, 2019; Hudson et al., 2016).

In recent years, companies have invested an increasing amount of time and money into social media, particularly Facebook, in order to create stronger relationships with consumers and influence relevant behavioural outcomes (Statista, 2018; Yoshida et al., 2018). However, the question still remains on how social media brand strategies can help to build and strengthen consumer’s critical responses, particularly loyalty towards the brand. Previous studies have suggested that consumer–brand engagement on social media can increase the likelihood of future brand purchases and lead to the building of significant relationships (Brodie et al., 2011; Schau et al., 2009; Van Doorn et al., 2010). Consuming and contributing are generally regarded as two essential types of consumer–brand engagement (Heinonen, 2011; Muntinga et al., 2011). Consuming is a passive form of engagement, while contributing represents active user-to-content and user-to-user interactions with brands (Muntinga et al., 2011). Hence, in this research, we decided to focus on contributing and analyse how the two dimensions of brand gender, namely masculine and feminine brand personality traits, explain consumer contributions to brand-related content on Facebook, thereby complementing the findings of prior research (Machado et al., 2019). Additionally, we aim to understand how consumers’ contributing to brand-related content on Facebook could enhance brand loyalty.

Moreover, there is limited research on what factors mediate the impact of brand gender on brand loyalty. Prior research has recognised that perceived quality is an important antecedent of brand loyalty (Erdoğmuş & Büdeyri-Turan, 2012; H. J. Lee et al., 2010; Subrahmanyam, 2017) and that brand personality is positively related to perceived quality (Clemenz et al., 2012; Ha & Janda, 2014; Ramaseshan & Tsao, 2007). There is also evidence that clear brand gender positioning has a relevant impact on brand love (Machado et al., 2019) and explains brand affect, brand preference and brand loyalty (Grohmann, 2009). Thus, we aim to study the roles of perceived quality and brand love,
relevant antecedents of loyalty towards the brand, as mediating factors in the relationship between brand gender and brand loyalty on Facebook.

Hence, this research addresses the following questions:

Q1. Do brand gender perceptions (i.e. masculine and feminine brand personality traits) influence consumer loyalty towards the brand?
Q2. Is the relationship between the two dimensions of brand gender and brand loyalty mediated by active consumer engagement with the brand on Facebook?
Q3. Do consumer perceptions about brand quality mediate the relationship between brand gender and brand loyalty?
Q4. Does love towards the brand have a relevant mediating effect on the relationship between brand gender and brand loyalty?

The remainder of the paper is structured as follows: we next review the relevant literature and propose hypotheses; subsequently, the research methodology is presented. Finally, the findings are discussed and future research directions are outlined.

Theoretical background and hypotheses

Several authors have suggested that consumers may think of brands as living, humanlike entities (Azar, 2015; Guthrie, 1993; Hanby, 1999; Puzakova et al., 2009), attributing to brands demographic traits, such as age (Darpy & Levesque, 2001) and origin (Thakor & Kohli, 1996); personality traits, such as competence (J. Aaker, 1997) and charisma (Smothers, 1993); and behavioural traits, such as consumer–brand relationships (Fournier, 1998) and two-way communication between brands and consumers (Veloutsou, 2007). Azar (2015) distinguishes three types of sexual attributions to brands within the brand-as-a-person metaphor: (1) brand sex as a demographic characteristic, (2) brand gender as a personality characteristic and (3) brand sexual orientation as a behavioural characteristic.

Most authors in gender studies have noted the confusion between sex and gender (e.g. Borna & White, 2003; Carr, 2005; Deaux, 1985). Indeed, while sex is a dichotomous distinction based on biological differences (i.e. classifying human beings as males or females), gender is defined by social, psychological and cultural factors reflecting the degree of masculinity or femininity of an individual (Bem, 1985; Moi, 2005; Oakley, 1972; Pryzgoda & Chrisler, 2000; Spence & Helmreich, 1978). Therefore, brand gender should be clearly distinguished from brand sex. While brand sex is a demographic trait referring to ‘the human sex associated with a brand’, viewing a brand as a man or a woman (Azar, 2015, p. 49), brand gender is a set of personality traits (Azar, 2015), which can be defined as ‘the set of human personality traits associated with masculinity and femininity applicable and relevant to brands’ (Grohmann, 2009, p. 106). In this research, we are particularly interested in consumers’ brand gender perceptions.

Studies conducted on brand gender prior to 2009 considered brand gender as a unidimensional construct: some researchers measured either the masculine dimension or the feminine dimension and concluded that the brand was either masculine or feminine (e.g. Fry, 1971; Vitz & Johnston, 1965); others opposed these two constructs by using semantic scales (e.g. Alreck et al., 1982; Jung & Lee, 2006; Worth et al., 1992). This is the only scale explicitly developed in marketing to capture brand gender with two
separate dimensions (i.e. brand masculinity and brand femininity), showing that masculinity and femininity are two independent dimensions (Azar, 2013). Since the seminal work of Grohmann in 2009, brand gender has been conceptualised as a bi-dimensional construct with two distinct and independent dimensions (i.e. brand masculinity and brand femininity), in line with the new vision of gender as advanced by Sandra Bem in 1974. This approach allowed the emergence of four brand genders: masculine (i.e. high in masculinity and low in femininity), feminine (i.e. high in femininity and low in masculinity), undifferentiated (i.e. low in masculinity and femininity) and androgynous (i.e. high in masculinity and femininity) (Azar, 2015; Grohmann, 2009; Lieven et al., 2014).

Research has shown that consumers often create, enhance or accomplish their gender identities through the brands they choose and use (Avery, 2012; Lorber, 1994) and that brand gender positively influences consumers’ affective, attitudinal and behavioural responses to brands (Lieven et al., 2014; Lieven & Hildebrand, 2016; Machado et al., 2019), including brand loyalty (Grohmann, 2009; Lieven et al., 2015).

Although brand loyalty is a key outcome variable in the marketing literature, its definition and conceptualisation vary significantly (Eelen et al., 2017; Leckie et al., 2016; Nisar & Whitehead, 2016; Watson et al., 2015). Despite there being no consensus on the definition of loyalty, researchers generally agree that loyalty is the highest level of commitment and has two dimensions: attitudinal loyalty and behavioural loyalty (Chaudhuri & Holbrook, 2001; Dick & Basu, 1994; C. K. M. Lee et al., 2018; Nisar & Whitehead, 2016; Oliver, 1999; Watson et al., 2015). Thus, loyalty can be defined as both a more favourable attitude towards a brand and repeat patronage (Nisar & Whitehead, 2016). Attitudinal loyalty refers to the feelings, preference and commitment that consumers have towards the brand, while behavioural loyalty includes repurchasing activities, repatronage intentions and word-of-mouth communication (Chaudhuri & Holbrook, 2001; C. K. M. Lee et al., 2018; Nisar & Whitehead, 2016). However, repeat purchasing behaviour does not always equal loyalty. Therefore, true loyalty implies commitment towards the brand and not just repurchasing due to inertia (Bloemer & Kasper, 1995; Dick & Basu, 1994; Pitta et al., 2006).

Some studies have focused on attitudinal loyalty (e.g. Hennig-Thurau et al., 2001; Kressmann et al., 2006), while others have focused on behavioural loyalty by measuring the intent to rebuy or re-patronise consistently the brand’s offerings over time (e.g. Leckie et al., 2016; Oliver, 1999; Romaniuk & Nenycz-Thiel, 2013; Yoshida et al., 2018). In this study, we adopt the approach proposed by Yoo and Donthu (2001), which measures the overall attitudinal loyalty that consumers have towards the brand, instead of measuring actual purchase behaviour. Hence, we conceptualise brand loyalty as attitudinal loyalty.

According to previous research, brand personality favourably influences fundamental brand responses, leading to the formation of strong brand associations (Freling & Forbes, 2005) and perceived brand quality (Clemenz et al., 2012), as well as brand attitude (Chaudhuri & Holbrook, 2001) and brand loyalty (Brakus et al., 2009; Ramaseshan & Stein, 2014; P. Roy et al., 2016). Furthermore, research on the gendered dimensions of brand personality has suggested that brands with high levels of masculinity or femininity tend to be associated with brand preference and with higher attitudinal and behavioural brand loyalty (Grohmann, 2009; Lieven et al., 2015), regardless of the gender perceptions associated with the product category. Moreover, brand gender contributes to these
favourable responses towards the brand above and beyond other personality dimensions (Lieven et al., 2014).

More recently, Machado et al. (2019) tested brand gender effects in the specific context of Facebook and showed that the two dimensions of brand gender exert a significant influence on consumer responses. The authors showed that brand gender has a relevant impact on consumer-based brand equity on Facebook. Furthermore, Yoo and Donthu (2001) have shown that brand loyalty is a critical dimension of consumer-based brand equity. Thus, considering the results of prior research, we assume that the greater the extent to which consumers perceive the brand as feminine or masculine, the higher the brand loyalty, specifically on Facebook. Therefore, we postulate the following hypotheses:

H1a: Masculine brand personality traits (MBP) have a positive influence on brand loyalty (BLOY).

H1b: Feminine brand personality traits (FBP) have a positive influence on brand loyalty (BLOY).

Previous research has suggested that strongly gendered brands positively influence the likelihood of consumers recommending the brand to friends and of talking to others about their experience with the brand (Grohmann, 2009). Therefore, clear brand gender positioning (i.e. high levels of brand masculinity or brand femininity) should also positively influence consumer–brand interactions on Facebook, usually referred to as consumer–brand engagement (Gummerus et al., 2012; Schamari & Schaeffers, 2015; Van Doorn et al., 2010).

Consuming and contributing are generally regarded as two essential types of consumer engagement with brand pages (Heinonen, 2011; Muntinga et al., 2011; Shao, 2009). Previous studies have shown that the most active consumer–brand engagement, contributing, leads to critical outcomes, including consumer-based brand equity (Machado et al., 2019). Hence, in this research we focus on active consumer–brand engagement to understand how much the positioning of the brand as highly masculine or feminine explains consumers’ contributions to brand-related content.

According to previous research, consumer engagement with a brand on social media can increase the likelihood of future brand purchases, leading to the building of significant relationships, and can contribute to the creation of higher commitment towards the brand (Algesheimer et al., 2005; Bagozzi & Dholakia, 2006; Brodie et al., 2011; Hollebeek, 2011; Schau et al., 2009; Tsai & Men, 2013; Van Doorn et al., 2010). McAlexander et al. (2002) and Brodie et al. (2013) also found that consumers who are engaged with the online brand community show higher brand loyalty. More recently, research on the impact of consumer engagement on SNSs on behavioural brand loyalty has shown that engagement is an important antecedent of aggregated purchase behaviour (Yoshida et al., 2018). Helme-Guizon and Magnoni (2019) also conclude that consumer–brand engagement has a positive impact on brand loyalty intentions. Considering the findings of prior research, we assume that contributing to brand-related content on Facebook mediates the relationship between brand gender and loyalty. Hence, we postulate:
H2a: Consumers’ contributions to brand-related content on Facebook (CONT) mediate the influence of masculine brand personality traits (MBP) on brand loyalty (BLOY).

H2b: Consumers’ contributions to brand-related content on Facebook (CONT) mediate the influence of feminine brand personality traits (FBP) on brand loyalty (BLOY).

Previous research has also shown that social media brand communication has become an important source for consumers to obtain information about product or service quality (Chevalier & Mayzlin, 2006; Riegner, 2007) and that it influences individual perceptions of brand quality (Bruhn et al., 2012; Schivinski & Dabrowski, 2015). Hollebeek et al. (2014) and Leckie et al. (2016) also found that active consumer involvement with the brand on social media positively influences active cognitive processing about the brand and that more-engaged consumers are more likely to develop strong positive beliefs about the brand. Therefore, we assume that active consumer engagement with the brand on social media will positively influence their overall subjective judgement about the superiority of the brand’s products or perceived quality (D. A. Aaker & Jacobson, 1994; Zeithaml, 1988).

Hence, we formulate the following hypothesis:

H3: Consumers’ contributions to brand-related content on Facebook (CONT) have a positive influence on perceived brand quality (PQ).

Prior studies have suggested that brand love leads to positive word-of-mouth communication (Bairrada et al., 2018; Batra et al., 2012; Carroll & Ahuvia, 2006) and predicts active brand engagement (Bergkvist & Bech-Larsen, 2010). Yet other authors, such as Hudson et al. (2016), state that consumers who engage with their favourite brands using social media form deeper relationships with those brands. Moreover, previous research has shown that engagement with the brand on SNSs contributes to the development of stronger emotional bonds with the brand (Brodie et al., 2011, 2013), and should enhance consumer affective responses (Dholakia et al., 2004). Likewise, Langner et al. (2016) argue that the feelings evoked by favourable interactions with the brand over time lead to the development and maintenance of brand love, and S. K. Roy et al. (2013) suggest that non-controlled brand communications (or word-of-mouth communications) influence brand love. Vernuccio et al. (2015) and Machado et al. (2019) also show that consumer–brand engagement favourably influences brand love, highlighting that consumers will tend to develop more-intense emotional bonds with brands that are able to foster consumer interaction and participation on brand fan pages. Hence, we assume that consumers’ contributions to brand-related content on Facebook will also favourably influence brand love. Thus, we hypothesise that:

H4: Consumers’ contributions to brand-related content on Facebook (CONT) have a positive influence on brand love (BL).

Perceived quality is defined as a consumer’s judgement about the superiority or excellence of a product (D. A. Aaker & Jacobson, 1994; Zeithaml, 1988), which is based on subjective perceptions. Perceived quality is an attitude that results from the comparison of consumer expectations with the actual performance (Parasuraman
et al., 1985). Many studies have pointed out the importance of creating good-quality perceptions and experiences among consumers, as the cost of retaining existing customers can be lower than the cost of acquiring new customers (Kemp, 2005; Kyyon Yoo & Ah Park, 2007; Raj & Roy, 2015). Zeithaml (1988) states that perceived quality is considered a prerequisite to consumer behavioural intentions. Past research has indicated a positive relationship between perceived quality and brand loyalty or brand preference (Erdoğmuş & Büdeyri-Turan, 2012; H. J. Lee et al., 2010; Subrahmanyan, 2017), suggesting that perceived quality is an important antecedent of brand loyalty.

Previous studies have shown that brand personality is positively related to perceived quality and that a strong brand personality can be considered a good predictor of perceived product quality (Clemenz et al., 2012; Ha & Janda, 2014; Nikhashemi et al., 2017; Ramaseshan & Tsao, 2007). Moreover, research on brand gender has suggested that brands with high levels of masculinity or femininity tend to be associated with higher consumer-based brand equity (Grohmann, 2009; Lieven et al., 2014, 2015; Machado et al., 2019). Consumer-based brand equity can be treated as a hierarchical structure, assuming associative and directional relationships across the four dimensions of the construct: brand awareness, brand associations, perceived quality and brand loyalty (Buil et al., 2013; Pappu et al., 2005). Furthermore, research has shown that consumer-based brand equity dimensions follow a cognitive–affective–conative sequence and has suggested that perceived quality positively influences brand loyalty (Schivinski et al., 2019). In this sense, we expect perceived quality to mediate the relationship between brand gender perceptions and consumer loyalty towards the brand. Hence, we assume that:

**H5a:** Perceived brand quality (PQ) mediates the influence of masculine brand personality traits (MBP) on brand loyalty (BLOY).

**H5b:** Perceived brand quality (PQ) mediates the influence of feminine brand personality traits (FBP) on brand loyalty (BLOY).

Carroll and Ahuvia (2006, p. 81) define brand love as ‘the degree of passionate emotional attachment a satisfied consumer has for a particular trade name’. Previous research on the antecedents of brand love has shown that love towards the brand is based not only on its emotional characteristics but also on the cognitive attributes of the brand (Langner et al., 2009), as evaluative judgements of the brand’s performance can lead to the development of strong emotional attachments to the brand (Thomson et al., 2005). Huber et al. (2015) also found that perceptions of the brand’s utilitarian benefits and beliefs about the brand’s ability to perform its desired function are central drivers of brand love. Thus, we assume that consumers’ overall judgement about the quality of the brand’s products will positively influence their love for the brand. Therefore, we postulate the following hypothesis:

**H6:** Perceived brand quality (PQ) has a positive influence on brand love (BL).

Brand love is regarded as a critical intermediate outcome of brand strategies on social media (Machado et al., 2019; Vernuccio et al., 2015). Brand love has been associated with
a number of organisational benefits (Rossiter, 2012). Among the advantageous brand love outcomes, brand loyalty and positive word of mouth are the two most frequently cited (Biçakcioglu et al., 2018; Palusuk et al., 2019). Prior research has suggested that brand love is able to fortify the existing bonds between consumers and brands, to nurture the relationship and to strengthen the beliefs in the brand; it might also enhance desirable post-consumption behaviours, specifically brand loyalty and purchase intention (Bairrada et al., 2018; Bergkvist & Bech-Larsen, 2010; Biçakcioglu et al., 2018; Carroll & Ahuvia, 2006; Loureiro et al., 2012; P. Roy et al., 2016).

Moreover, in an online context, as in our study, Machado et al. (2019) found that love towards a favourite brand on Facebook has a positive and strong influence on consumer-based brand equity on Facebook. As brand loyalty is one of the dimensions of consumer-based brand equity, we expect that brand love will also favourably affect brand loyalty.

Previous research has suggested that brand personality significantly influences affective responses to brands (Sung & Kim, 2010) and stimulates emotional attachment to brands (Fournier, 1998; Orth et al., 2010). Recent research has also shown that perceptions of brand personality significantly influence brand love (P. Roy et al., 2016). Furthermore, research on the gendered dimensions of brand personality has shown that clear brand gender positioning has a relevant impact on brand love (Machado et al., 2019) and explains brand affect, brand preference and brand loyalty (Grohmann, 2009). Thus, it is a relevant endeavour to explore the role of brand love in the relationship between brand gender and brand loyalty. Considering the findings of previous studies, we propose the following hypotheses:

H7a: Brand love (BL) mediates the influence of masculine brand personality traits (MBP) on brand loyalty (BLOY).

H7b: Brand love (BL) mediates the influence of feminine brand personality traits (FBP) on brand loyalty (BLOY).

**Methodology**

**Sample and procedure**

Prior to data collection, we pre-tested the questionnaire with 15 Facebook users and refined it based on their comments. Data was collected in Portugal through the administration of an online questionnaire to Facebook users. We used a non-random convenience sampling technique (McDaniel & Gates, 2006). The data analysis relies on 677 completed questionnaires. Sample demographics and characteristics are presented in Tables 1 and 2.

Our sample was heterogeneous in terms of the time the respondents spent on Facebook each day. However, most of our respondents were connected consumers, as they spent more than an hour per day online (83.9%). The majority of our respondents were female consumers (59.52%), and most of our sample (almost 56%) was composed of young consumers. The profile of our respondents was suitable for this study, as it was in line with Facebook users’ demographics (Statista, 2018) and recent research findings showing that consumers who like brand pages on Facebook are significantly younger than regular
consumers of the brand (Lipsman et al., 2012). Moreover, our sample reflects the millennial generation or ‘digital natives’, who are, together with Generation Z, the major active users of social media (Pew Research Center, 2017; Statista, 2019). Our respondents were divided into two main groups: full-time workers (51.1%) and students (43.3%). Students’ representation is important in this kind of research, as highlighted in previous research conducted on Facebook (e.g. Azar et al., 2016; De Bruyn & Lilien, 2008; Hunt et al., 2012; Machado et al., 2019; Patterson, 2011; Wallace et al., 2012, to name just a few examples).

In the first stage, the participants indicated their general use of the Internet and Facebook. In the second stage, the participants were given a short message, asking them to connect to their personal Facebook page in order to report the number of Facebook brand pages they liked and identify the product/service categories they belonged to (Table 3). As a consequence, all our participants were screened for (i) having a Facebook account and (ii) having already liked at least one brand page on Facebook before pursuing with the questionnaire. It has been reported in the branding literature that the broad construct of consumer–brand relationships (Fetscherin et al., 2014; Veloutsou, 2015) and the specific construct of consumer–brand engagement on SNSs (Brodie et al., 2013; Hollebeek et al., 2014; Machado et al., 2019) exist in many product categories and are not product category specific; therefore, we did not consider a specific product category in this study. For the purpose of this study, it was important to ask the respondents to rate the brands that they seemed to have built relationships with or at least followed frequently on SNSs as individuals. Hence, we asked them to identify and report their favourite Facebook brand page. The last stage consisted of answering the remaining questions, keeping in mind that favourite brand, in line with previous studies conducted on online brand experiences (e.g. Azar et al., 2016; Machado et al., 2019; Morgan-Thomas & Veloutsou, 2013; Veloutsou, 2015).

Table 1. Sample demographics.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Value</th>
<th>Frequency</th>
<th>%</th>
<th>Variable name</th>
<th>Value</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>16–22</td>
<td>227</td>
<td>33.53</td>
<td>Level of education</td>
<td>High school</td>
<td>115</td>
<td>16.98</td>
</tr>
<tr>
<td></td>
<td>23–28</td>
<td>152</td>
<td>22.45</td>
<td></td>
<td>Bachelor’s degree</td>
<td>282</td>
<td>41.65</td>
</tr>
<tr>
<td></td>
<td>29–35</td>
<td>128</td>
<td>18.90</td>
<td></td>
<td>Master’s degree</td>
<td>264</td>
<td>38.99</td>
</tr>
<tr>
<td></td>
<td>36–45</td>
<td>110</td>
<td>16.24</td>
<td></td>
<td>Other</td>
<td>16</td>
<td>2.36</td>
</tr>
<tr>
<td></td>
<td>46–71</td>
<td>60</td>
<td>8.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Male</td>
<td>274</td>
<td>40.47</td>
<td>Job status</td>
<td>Full-time</td>
<td>346</td>
<td>51.11</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>403</td>
<td>59.52</td>
<td></td>
<td>Student</td>
<td>294</td>
<td>43.43</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Not working</td>
<td>37</td>
<td>5.46</td>
</tr>
</tbody>
</table>

Table 2. Sample characteristics.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Value</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time spent on the Internet each day</td>
<td>Less than 30 minutes</td>
<td>15</td>
<td>2.22</td>
</tr>
<tr>
<td></td>
<td>Between 30 minutes and 1 hour</td>
<td>94</td>
<td>13.88</td>
</tr>
<tr>
<td></td>
<td>Between 1 and 2 hours</td>
<td>168</td>
<td>24.82</td>
</tr>
<tr>
<td></td>
<td>More than 2 hours</td>
<td>400</td>
<td>59.08</td>
</tr>
<tr>
<td>Time spent on Facebook each day</td>
<td>Less than 30 minutes</td>
<td>154</td>
<td>22.75</td>
</tr>
<tr>
<td></td>
<td>Between 30 minutes and 1 hour</td>
<td>225</td>
<td>33.23</td>
</tr>
<tr>
<td></td>
<td>Between 1 and 2 hours</td>
<td>162</td>
<td>23.93</td>
</tr>
<tr>
<td></td>
<td>More than 2 hours</td>
<td>136</td>
<td>20.09</td>
</tr>
<tr>
<td>Number of online brand pages liked</td>
<td>Fewer than 10 brand pages</td>
<td>258</td>
<td>38.11</td>
</tr>
<tr>
<td></td>
<td>Between 11 and 20 brand pages</td>
<td>151</td>
<td>22.30</td>
</tr>
<tr>
<td></td>
<td>Between 21 and 30 brand pages</td>
<td>81</td>
<td>11.96</td>
</tr>
<tr>
<td></td>
<td>More than 30 brand pages</td>
<td>187</td>
<td>27.62</td>
</tr>
</tbody>
</table>
Measures and measurement checks

All the constructs were measured using scales from prior studies. The scales were translated into Portuguese using a translation and back-translation procedure. Conceptual equivalence was assessed through back-translation to ensure that the items in Portuguese communicated similar information to those in English (Brislin, 1970; Sekaran, 1983).

All items were measured using a seven-point Likert-type response scale. We measured brand gender using a 12-item scale developed by Grohmann (2009): the subscales masculine brand personality traits (MBP, six items: adventurous, aggressive, brave, daring, dominant and sturdy) and feminine brand personality traits (FBP, six items: expresses tender feelings, fragile, graceful, sensitive, sweet and tender) were used to measure respectively the levels of masculinity and femininity of each brand. Brand love was measured using five of the ten items of Carroll and Ahuvia’s (2006) scale, as adapted by Loureiro et al. (2012). As per Loureiro et al. (2012), we excluded the attachment component and the ‘neutral items’, as we wanted to capture the love feelings towards the brand. Consumers’ contributions on Facebook were captured through three items developed by Tsai and Men (2013). We eliminated one item of this scale (‘Liking/Joining a company’s Facebook page’) because we targeted respondents who had already liked a Facebook brand page. Perceived quality was assessed through two items from Yoo and Donthu (2001). Finally, to measure brand loyalty, in line with previous studies (e.g. Leckie et al., 2016; Su & Tong, 2016), we used the three-item measure from Yoo and Donthu (2001).

Exploratory and confirmatory analyses were conducted to assess the reliability and validity of the variables. Our dataset was first screened for missing data. We also checked the multicollinearity, linearity and normality assumptions for each variable. We then performed exploratory factor analysis to evaluate all of the items and constructs used in
this study. To aid in our interpretation of these six components, we performed an oblique rotation on all of the measured items and checked the data for cross-loading items and those with communalities of less than .5. This resulted in removing two items from Grohmann’s scale with weak factor loadings: the two items deleted were ‘aggressive’ from the MBP scale and ‘fragile’ from the FBP scale. These two items were also problematic in previous studies on brand gender where Grohmann’s scale was applied (Azar et al., 2016, 2018; Lieven & Hildebrand, 2016; Machado et al., 2019). We then performed confirmatory factor analyses.

The model’s psychometric values ensured the proper fit of the measurement model, as all the values were within the acceptable range (Hair et al., 2009): $\chi^2$ was significant, and $\chi^2/df = 2.453$, TLI = .963, CFI = .970, GFI = .935, AGFI = .915, SRMR = .0456, RMSEA = .046 (.042–.051) and PCLOSE = .889.

The model explained 65.7% of the variance in brand loyalty, 40.6% of the variance in brand love and 37.1% of the variance in perceived quality. As for consumers’ contributions to brand pages on Facebook, brand gender explained 11.7% of the variance in this construct. This low explanatory power of contributing to Facebook brand pages was somewhat expected, as the literature highlights five motivations to interact with brands on Facebook (i.e. social influence, search for information, entertainment, trust and reward; for a review, see Azar et al., 2016). The path diagram is illustrated in Figure 1.

We also tested the convergent and discriminant validity of the dimensions used in this study. Tables 4 and 5 illustrate the correlation matrices and the operationalisation of the constructs used. For all measurement models, Cronbach’s alpha and CR values are at adequate level. All standardised regression weights are significant. In support of the discriminant validity, the square roots of the AVE are superior to any correlations between latent variables; these findings follow Fornell and Larcker (1981) guidelines.

**Common method bias check**

As all of our data was generated from the same respondents, common method bias could have been a threat to the validity of our findings (Podsakoff et al., 2003). Therefore, we assessed the strength of this threat using exploratory and confirmatory methods. The first approach was to use Harman’s (1976) single-factor test. To do so, we forced all of the items used in this study to load on one single factor. This test resulted in

---

**Figure 1.** The tested model.
33.66% of the variance explained. As this factor did not account for the majority of the covariance between the measures, we assumed that common method bias was not a pervasive issue in this study (Chang et al., 2010). To confirm this interpretation, we compared the chi-square difference between a single-factor model where all of the manifest variables were explained through one common method factor ($\chi^2 = 5183.79$, df = 265) with the multifactorial measurement model used in this study ($\chi^2 = 556.75$, df = 227). The single-factor model’s fit was significantly worse; therefore, the correlations between all of the observed variables in this model could not be explained by one common method factor.

Table 4. Summary statistics.

<table>
<thead>
<tr>
<th>Label</th>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>FBP</th>
<th>MBP</th>
<th>CONT</th>
<th>PQ</th>
<th>BL</th>
<th>BLOY</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBP</td>
<td>Brand femininity</td>
<td>3.871</td>
<td>1.675</td>
<td>.061</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBP</td>
<td>Brand masculinity</td>
<td>4.855</td>
<td>1.362</td>
<td>.095</td>
<td>.333</td>
<td>.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONT</td>
<td>Contributing</td>
<td>3.110</td>
<td>1.704</td>
<td></td>
<td></td>
<td>.349</td>
<td>.380</td>
<td>.582</td>
<td>.756</td>
</tr>
<tr>
<td>PQ</td>
<td>Perceived quality</td>
<td>5.305</td>
<td>1.480</td>
<td>.122</td>
<td>.436</td>
<td>.349</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>Brand love</td>
<td>4.992</td>
<td>1.468</td>
<td>.278</td>
<td>.558</td>
<td>.380</td>
<td>.582</td>
<td>.621</td>
<td>1</td>
</tr>
<tr>
<td>BLOY</td>
<td>Brand loyalty</td>
<td>4.538</td>
<td>1.743</td>
<td>.120</td>
<td>.477</td>
<td>.477</td>
<td>.756</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: ** correlation is significant at the .01 level (two-tailed). ns: correlation is not significant at the .05 level (two-tailed)

Table 5. Construct measurements.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>Estimate</th>
<th>Composite reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand femininity (FBP, adapted from Grohmann, 2009)</td>
<td>3.871</td>
<td>1.675</td>
<td>.918</td>
<td>.694</td>
<td></td>
</tr>
<tr>
<td>Sensitive</td>
<td>3.722</td>
<td>1.866</td>
<td>.783</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graceful</td>
<td>4.187</td>
<td>1.879</td>
<td>.700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expresses tender feelings</td>
<td>4.045</td>
<td>1.853</td>
<td>.737</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweet</td>
<td>3.750</td>
<td>1.956</td>
<td>.952</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tender</td>
<td>3.649</td>
<td>1.930</td>
<td>.959</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand masculinity (MBP, adapted from Grohmann, 2009)</td>
<td>4.855</td>
<td>1.362</td>
<td>.840</td>
<td>.516</td>
<td></td>
</tr>
<tr>
<td>Adventurous</td>
<td>4.920</td>
<td>1.737</td>
<td>.742</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brave</td>
<td>4.847</td>
<td>1.702</td>
<td>.839</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daring</td>
<td>5.075</td>
<td>1.611</td>
<td>.758</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dominant</td>
<td>4.858</td>
<td>1.748</td>
<td>.601</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sturdy</td>
<td>4.574</td>
<td>1.840</td>
<td>.623</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contributing (CONT, adapted from Tsai &amp; Men, 2013)</td>
<td>3.110</td>
<td>1.704</td>
<td>.866</td>
<td>.618</td>
<td></td>
</tr>
<tr>
<td>Engaging in conversations on companies’ Facebook pages (e.g. commenting and asking or answering questions)</td>
<td>2.813</td>
<td>1.882</td>
<td>.772</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharing companies’ Facebook posts on my own Facebook page (e.g. videos, audio, pictures and text)</td>
<td>3.391</td>
<td>2.035</td>
<td>.823</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommending the brand’s Facebook page to my contacts</td>
<td>3.243</td>
<td>2.113</td>
<td>.759</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uploading product-related videos, audio, pictures or text</td>
<td>2.994</td>
<td>2.006</td>
<td>.790</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived quality (PQ, adapted from Yoo &amp; Donthu, 2001)</td>
<td>5.305</td>
<td>1.480</td>
<td>.857</td>
<td>.750</td>
<td></td>
</tr>
<tr>
<td>The likely quality of X is extremely high</td>
<td>5.397</td>
<td>1.550</td>
<td>.891</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The likelihood that X would be functional is very high</td>
<td>5.212</td>
<td>1.616</td>
<td>.840</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand love (BL, adapted from Loureiro et al., 2012)</td>
<td>4.992</td>
<td>1.468</td>
<td>.912</td>
<td>.675</td>
<td></td>
</tr>
<tr>
<td>This is a wonderful brand</td>
<td>5.400</td>
<td>1.503</td>
<td>.827</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This brand makes me feel good</td>
<td>5.348</td>
<td>1.525</td>
<td>.851</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This brand makes me feel happy</td>
<td>4.698</td>
<td>1.847</td>
<td>.772</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This brand is a delight</td>
<td>5.066</td>
<td>1.690</td>
<td>.882</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am passionate about this brand</td>
<td>4.447</td>
<td>1.995</td>
<td>.771</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand loyalty (BLOY, adapted from Yoo &amp; Donthu, 2001)</td>
<td>4.538</td>
<td>1.743</td>
<td>.873</td>
<td>.698</td>
<td></td>
</tr>
<tr>
<td>I consider myself to be loyal to brand X</td>
<td>4.813</td>
<td>1.911</td>
<td>.869</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand X would be my first choice</td>
<td>4.929</td>
<td>1.877</td>
<td>.904</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will not buy other brands if brand X is available at the store</td>
<td>3.871</td>
<td>2.151</td>
<td>.722</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The second approach was to use the common latent factor (CLF) test as a confirmatory method to capture the common variance among all of the observed variables in the model. Therefore, we added a latent factor to our model and then connected this to all of the observed variables. The comparison between the standardised regression weights of the two models (with and without the CLF) showed small differences (less than .07 on average). Therefore, we concluded that there was no evidence of common method bias in this study (Conway & Lance, 2010; Podsakoff et al., 2003).

Methodological details and model building

We used AMOS to perform structural equation modelling (SEM), employing maximum likelihood estimation. In order to test our hypotheses, we implemented an incremental model-building approach (Hair et al., 2009). This approach allowed us to replicate and build on previous research findings (i.e. Grohmann, 2009; Lieven et al., 2014; Lieven & Hildebrand, 2016; Machado et al., 2019) before testing a more complex model with three mediators. The first model tested the impact of the two independent dimensions of brand gender, namely masculine brand personality traits (MBP) and feminine brand personality traits (FBP), on brand loyalty (Model 1). Then we added other latent and observed variables to the initial model. As we had multiple mediators, we simultaneously tested the impacts of the mediating effects of perceived brand quality, brand love and consumers’ contributions on brand pages on Facebook on the relationship between brand gender and brand loyalty (Model 2). The advantage of testing them simultaneously was to learn if the effect of one mediator was independent of the effects of the other mediators (Kenny et al., 1998). We therefore tested whether the addition of mediating variables led to better fit indices, as well as an increase in the percentage of variance explained by our dependent variable, brand loyalty.

In order to decide if the model fit indices improved significantly between the two models, we analysed the chi-square value ($\chi^2$) and the degree of freedom (df) of each model. Model 2 was considered better than Model 1 when the $\Delta \chi^2$ between the two models was significant at the .01% error level. As reported in Table 6, our second model improved the overall model fit compared to the first model: Model 2 ($\Delta \chi^2 = 366.824 > \chi^2_{.001}(170) = 232.719$). Moreover, Model 2 explained 65.7% of the total variance in brand loyalty, whereas Model 1 explained only 23.3% of the total variance in brand loyalty. Cohen’s $f^2$ effect size is a good indicator in a hierarchical multiple regression study; it was equal to .669, showing that the effect size attributable to the addition of the three mediators to the original model was large.

Therefore, simultaneously adding the three mediators significantly improved the model fit and the total variance explained by brand loyalty (65.7%). In the findings section, we therefore analyse the outcomes of Model 2.

In order to test for mediating effects and assess the specific indirect effects, we used the bootstrapping method (5,000 iterations) with 95% bias-corrected confidence intervals.

Table 6. Sequential model comparison.

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
<th>$\chi^2_{.001}(\Delta df)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>189.932</td>
<td>57</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Model 2 vs. Model 1</td>
<td>556.753</td>
<td>227</td>
<td>366.824</td>
<td>170</td>
<td>232.719</td>
</tr>
</tbody>
</table>
(Preacher & Hayes, 2008). This approach is recommended by some researchers, as it is based on a non-parametric resampling approach (Hayes, 2009; MacKinnon et al., 2004; Preacher et al., 2007). An indirect effect was considered significant if its 95% bootstrap confidence intervals did not include zero. In order to have all indirect effects, we developed a user-generated estimand using Visual Basic programming in AMOS. In what follows, we report the non-standardised regression weights.

Results

A systematic test was conducted in order to test our first hypothesis. This approach allowed us to build on previous research findings, adding complexity with the three mediators studied in this research.

The direct impact of brand gender on brand loyalty

Model 1 built on previous research findings by testing the direct impact of brand gender on brand loyalty. At this level, both masculine brand personality traits (path coefficient = .616, p < .001) and feminine brand personality traits (path coefficient = .088, p < .05) had a significant direct impact on brand loyalty. After the addition of the three mediators, neither masculine brand personality traits (path coefficient = .082; p > .05) nor feminine brand personality traits (path coefficient = -.023; p > .05) reached a statistically significant level, leading us to reject H1a and H1b (see Table 7). However, the indirect impact of the two dimensions of brand gender on brand loyalty was supported through the mediators used in this study. All of our mediators indicated indirect-only mediation regarding the impact of brand gender on brand loyalty, as per Zhao et al. (2010).

Table 7. Incremental model building.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>CONT ← MBP</td>
<td>.371***</td>
<td>.052</td>
</tr>
<tr>
<td>CONT ← FBP</td>
<td>.376***</td>
<td>.049</td>
</tr>
<tr>
<td>PQ ← MBP</td>
<td>.208***</td>
<td>.043</td>
</tr>
<tr>
<td>PQ ← FBP</td>
<td>.135***</td>
<td>.022</td>
</tr>
<tr>
<td>PQ ← CONT</td>
<td>.101**</td>
<td>.032</td>
</tr>
<tr>
<td>BL ← MBP</td>
<td>.616***</td>
<td>.059</td>
</tr>
<tr>
<td>BL ← FBP</td>
<td>.334***</td>
<td>.039</td>
</tr>
<tr>
<td>BL ← CONT</td>
<td>.217**</td>
<td>.040</td>
</tr>
<tr>
<td>BL ← PQ</td>
<td>.670***</td>
<td>.053</td>
</tr>
<tr>
<td>BLOY ← MBP</td>
<td>.616***</td>
<td>.059</td>
</tr>
<tr>
<td>BLOY ← FBP</td>
<td>.088*</td>
<td>.035</td>
</tr>
<tr>
<td>% of variance explained</td>
<td>23.3%</td>
<td>26.5%</td>
</tr>
</tbody>
</table>

ns: not significant; *p < .05; **p < .01; ***p < .001
The impact of brand gender on contributing and brand loyalty

As illustrated in Table 7, feminine brand personality traits had no significant impact on contributing on Facebook (path coefficient = .059, p > .05). Only masculine brand personality traits had a significant positive impact on consumers’ contributions to brand-related content on Facebook (path coefficient = .371, p < .001). Therefore, the impact of brand gender on consumers’ contributions to brand-related content was partially supported, as only the impact of one dimension of brand gender, namely masculine brand personality traits, was supported. Moreover, the link between consumers’ contributions to brand-related content and brand loyalty was supported (path coefficient = .217, p < .005). These findings are in line with previous research findings (Machado et al., 2019). Further analysis shows that the indirect path of effects of masculine brand personality traits on brand loyalty through consumers’ contributions to brand-related content was significant with the 95% confidence interval excluding zero (see Table 8). Therefore, H2 was partially supported as the indirect impact of one dimension of brand gender, namely masculine brand personality traits on brand loyalty through consumers’ contributions to brand-related content, was supported.

The impact of contributing on perceived quality and brand love

As highlighted in Table 7, consumers’ contributions to brand-related content on Facebook had a significant and positive impact on perceived brand quality (path coefficient = .208 p < .001) and on brand love (path coefficient = .101 p < .01). Therefore, both H3 and H4 were supported.

The impact of brand gender on perceived quality and brand loyalty

Both feminine brand personality traits (path coefficient = .058, p < .005) and masculine brand personality traits (path coefficient = .376, p < .001) had a significant and positive impact on perceived brand quality. Masculine brand personality traits also had a significant and indirect impact on perceived brand quality through consumers’ contributions to brand-related content (estimate = .077, p = .011). Moreover, perceived brand

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Estimate</th>
<th>Lower bounds (BC)</th>
<th>Upper bounds (BC)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>PQ ← CONT ← MBP</td>
<td>.077</td>
<td>.047</td>
<td>.119</td>
<td>.011</td>
</tr>
<tr>
<td>BL ← CONT ← MBP</td>
<td>.037</td>
<td>.010</td>
<td>.067</td>
<td>.005</td>
</tr>
<tr>
<td>BL ← PQ ← FBP</td>
<td>.019</td>
<td>-.001</td>
<td>.048</td>
<td>.071</td>
</tr>
<tr>
<td>BL ← PQ ← MBP</td>
<td>.125</td>
<td>.082</td>
<td>.200</td>
<td>.007</td>
</tr>
<tr>
<td>BLOY ← CONT ← FBP</td>
<td>.013</td>
<td>-.001</td>
<td>.035</td>
<td>.062</td>
</tr>
<tr>
<td>BLOY ← CONT ← MBP</td>
<td>.081</td>
<td>.044</td>
<td>.132</td>
<td>.008</td>
</tr>
<tr>
<td>BLOY ← PQ ← FBP</td>
<td>.039</td>
<td>-.003</td>
<td>.085</td>
<td>.084</td>
</tr>
<tr>
<td>BLOY ← PQ ← MBP</td>
<td>.252</td>
<td>.172</td>
<td>.364</td>
<td>.006</td>
</tr>
<tr>
<td>BLOY ← BL ← FBP</td>
<td>.036</td>
<td>.013</td>
<td>.065</td>
<td>.009</td>
</tr>
<tr>
<td>BLOY ← BL ← MBP</td>
<td>.090</td>
<td>.037</td>
<td>.164</td>
<td>.014</td>
</tr>
<tr>
<td>BLOY ← BL ← CONT ← MBP</td>
<td>.010</td>
<td>.003</td>
<td>.030</td>
<td>.002</td>
</tr>
<tr>
<td>BLOY ← PQ ← CONT ← MBP</td>
<td>.052</td>
<td>.035</td>
<td>.079</td>
<td>.005</td>
</tr>
<tr>
<td>BLOY ← BL ← PQ ← FBP</td>
<td>.005</td>
<td>.000</td>
<td>.013</td>
<td>.084</td>
</tr>
<tr>
<td>BLOY ← BL ← PQ ← MBP</td>
<td>.034</td>
<td>.016</td>
<td>.062</td>
<td>.008</td>
</tr>
</tbody>
</table>

BC: bias corrected; bold represents significant indirect effects
quality had a significant and positive influence on brand loyalty (path coefficient = .670, \(p < .001\)). The mediating effect of perceived brand quality on brand loyalty was revealed to be significant for masculine brand personality traits only, as \((a \times b)\) and \((a \times b \times c)\) were significant with the 95% confidence interval excluding zero (Table 8). The indirect effect of masculine brand personality traits on brand loyalty went directly through perceived brand quality (estimate = .252, \(p = .006\)) and to a lesser extent indirectly through consumers’ contributions to brand-related content on Facebook and perceived brand quality (estimate = .052, \(p = .005\)) (Table 8). Therefore, H5 was partially supported, as only H5a was supported.

**The impact of perceived quality on brand love**

Perceived brand quality had a significant and positive impact on brand love (path coefficient = .334 \(p < .001\)), leading us to accept H6.

**The impact of brand gender on brand love and brand loyalty**

Both female brand personality traits (path coefficient = .135, \(p < .001\)) and masculine brand personality traits (path coefficient = .336, \(p < .001\)) had a significant and positive impact on brand love. Masculine brand personality traits had a significant indirect impact on brand love through perceived brand quality (estimate = .125, \(p = .007\)) and consumers’ contributions to brand-related content on Facebook (estimate = .037; \(p = .005\)). Brand love had a significant and positive impact on brand loyalty (path coefficient = .612, \(p < .001\)). The indirect effect of brand gender (MBP, \(p = .009\) and FBP, \(p = .014\)) on brand loyalty through brand love was significant. Therefore, H4 was fully supported, as both H4a and H4b were supported.

Further analysis showed that the indirect paths of effects of masculine brand personality traits on brand loyalty through consumers’ contributions to brand-related content on Facebook, perceived brand quality and brand love \((a \times b)\) and \((a \times b \times c)\) were significant with the 95% confidence interval excluding zero, whereas for feminine brand personality traits, only the indirect path of effects through brand love \((a \times b)\) was significant with the 95% confidence interval excluding zero. Therefore, the indirect impact of feminine brand personality traits on brand loyalty was fully mediated by brand love (Table 8). All these results indicate indirect-only mediation regarding the impact of brand gender on brand loyalty (Zhao et al., 2010).

**Discussion**

Since the seminal work of Grohmann (2009) on brand gender, a stream of research has emerged on how brand gender affects consumer responses to the brand, and a few systematic studies have been conducted on the impact of gender perceptions on brand loyalty (Grohmann, 2009; Lieven et al., 2015). However, evidence on the underlying sources of this critical relationship is still scarce. The first aim of this study was to fill this gap and to throw light on the essential mechanisms that account for the effects of masculine brand personality traits and feminine brand personality traits on loyalty towards the brand. Hence, drawing on the literature, we developed a unique model on the process by which brand
gender can affect brand loyalty. Then, we tested, supported and validated our model and hypotheses in the specific context of social media, specifically Facebook.

**Theoretical implications**

This research contributes to the brand gender literature in a variety of ways. Earlier studies (Grohmann, 2009; Lieven et al., 2015) have assumed that masculine brand personality traits and feminine brand personality traits have a direct effect on brand loyalty, such that more-masculine and more-feminine brands induce higher loyalty towards the brand. The present study advances the nascent knowledge on the outcomes of brand gender by providing deep insights into the underlying process regarding the development of brand loyalty on social media. Indeed, our findings show a full mediation impact of brand gender on brand loyalty through consumers’ contributions to brand-related content on Facebook, perceived brand quality and brand love: our model explains 65.7% of the total variance in brand loyalty, while the model without the mediators explains only 23.3% of the total variance in brand loyalty. Hence, this study adds to the brand gender literature by contributing to a better theoretical understanding of the impact of brand gender on key consumer–brand-related outcomes.

In addition, our analysis and findings suggest that brand gender is an essential construct within the brand management literature and highlight the critical advantages of building strong brand gender positioning (Grohmann, 2009; Lieven et al., 2014, 2015; Machado et al., 2019). In this respect, the results show that part of the indirect impact of brand gender on brand loyalty is mediated by active consumer engagement with the brand on social media. Thus, this study complements the body of literature on brand gender by analysing the process through which the effects of brand gender influence loyalty towards the brand in the particular context of social media, specifically Facebook. This is particularly relevant because Facebook brand pages have become essential channels for brands’ activities (Helme-Guizon & Magroni, 2019; Machado et al., 2019; Simon & Tossan, 2018).

Furthermore, our research demonstrates that, even though both dimensions of brand gender are essential in explaining consumer responses to the brand, the most relevant dimension is masculinity, as it influences not only cognitive and affective responses to the brand but also active engagement with the brand on social media. In fact, the findings show that masculine brand personality traits influence overall quality perceptions, contributions to brand-related content on Facebook and love towards the brand, whereas feminine brand personality traits only have an impact on perceived quality and brand love. Thus, the findings highlight that only strong positioning in terms of masculinity ensures high active engagement with the brand on social media. Moreover, masculine brands impact loyalty through action (contributions to brand-related content), cognitive (perceived quality) and emotional (brand love) factors, while feminine brands affect loyalty only through the emotional bond with the brand (brand love). These results are consistent with prior studies showing the asymmetrical importance of the two dimensions of brand gender (Avery, 2012; Azar et al., 2018; Jung & Lee, 2006; Machado et al., 2019; Neale et al., 2016), suggesting that masculine brands are more effective than feminine-gendered profiles. Indeed, females are more likely to accept masculine brands, while males tend to resist and reject feminine brands, as they are affected by the cultural stigma that using (or actively engaging) with
a brand associated with femininity might threaten their gender identity (Azar et al., 2018; Martin & Gnoth, 2009).

In addition to the above contributions, this research advances the literature on brand gender perceptions and brand loyalty (Grohmann, 2009; Lieven et al., 2015) by providing the first empirical support on the roles of perceived brand quality and brand love as underlying sources in this relationship. In this regard, the findings show that brand gender has a major indirect impact on brand loyalty through brand love, as brand gender explains 50.7% of its overall variance. Furthermore, this research provides a deeper understanding of the effects of brand personality traits on consumers’ affective responses (e.g. Machado et al., 2019; P. Roy et al., 2016) by showing that the two gendered dimensions of brand personality remain central in explaining the impact of brand personality on brand love. Ultimately, we extend prior studies by suggesting that when brands are able to develop strong identities in terms of gender and, in particular, to acquire unambiguous masculine personalities, this will enhance consumers’ overall quality judgement, thereby strengthening their love and fostering their loyalty towards the brand. Thus, this study complements the findings of previous research on brand love (e.g. Carroll & Ahuvia, 2006; Langner et al., 2016; Loureiro et al., 2012; P. Roy et al., 2016) and on perceived quality (e.g. Clemenz et al., 2012; Erdoğan & Büdeyri-Turan, 2012; Ha & Janda, 2014; Nikhashemi et al., 2017; Ramaseshan & Tsao, 2007; Subrahmaniam, 2017) and extends these findings to the context of social media.

Managerial implications

The findings of this study provide relevant implications for managers. First of all, they highlight that by developing strong gender-typed traits (masculine or feminine) for their brands, managers will enhance consumers’ cognitive (i.e. perceived quality), affective (i.e. brand love) and behavioural responses (i.e. consumers’ contributions to brand-related content on Facebook) to the brand and through these means increase loyalty. Thus, managers should clearly position their brands as masculine or feminine to increase loyalty.

To reinforce consumers’ perceptions of masculine or feminine brand personality traits, brand managers can work on the brand associations previously reported in the literature (Azar, 2015; Grohmann, 2009). In this regard, authors like Lieven et al. (2015), Moss et al. (2007), and Van Tilburg et al. (2015) have shown that the use of tailored brand identity signs, like fonts, designs and colours, significantly influence brand gender perceptions. Moreover, according to Grohmann (2009), the type of language in publications can be used to reinforce brand gender perceptions. Brand publications related to adventure and braveness can help to position a brand as masculine, while messages conveying feelings of tenderness and care, appealing to sensitivity, or highlighting the brand’s gracefulness improve the perception of femininity (Grohmann, 2009).

Our research shows the asymmetrical importance of the two dimensions of brand gender, which is consistent with previous studies (Avery, 2012; Azar et al., 2018; Jung & Lee, 2006; Machado et al., 2019). Thus, managers must be aware that masculine brands impact loyalty through action (consumers’ contributions to brand-related content), cognitive (perceived quality) and emotional (brand love) factors, while feminine brands affect
loyalty only through the emotional bond with the brand (brand love). They must thus develop different strategies for feminine and masculine brands to achieve loyalty.

Finally, the findings show that brand love is an important intermediate outcome that increases loyalty, stimulating consumers to easily accept and repurchase the brand’s products and to choose the brand over others (Carroll & Ahuvia, 2006; Helme-Guizon & Magnoni, 2019; Loureiro et al., 2012). Therefore, managers should use the brand identity signs and marketing mix strategy to achieve the intended gender positioning, consequently fostering strong brand love relationships with consumers.

**Limitations and further research directions**

Like any research, this study had limitations that could present opportunities for further research. A relevant limitation was linked with the sampling procedure. We used a non-random convenience sampling technique (McDaniel & Gates, 2006). The sample profile could also be considered a limitation, as the data were only collected in Portugal and the sample consisted mainly of young respondents. Although this population is relevant with respect to Facebook users, this research should be replicated among older consumers to increase the generalisability of the findings.

Furthermore, the research model should be tested on other SNS platforms (e.g. Instagram, LinkedIn, and Snapchat) to ensure the generalisability of the results from one platform to another. Moreover, testing this research model in other cultural contexts would permit unveiling the possible influence of cultural differences on the relationship between brand gender and brand loyalty. In this respect, it would be interesting to test the research model in highly feminine societies, as defined by Hofstede’s (1980, 2001) cultural index, such as Sweden (5) or Norway (8) (with a value of 31, Portugal scores below the world average (48) for this dimension),1 to understand if feminine brands assume higher relevance in these cultures.

In addition, in this research, we did not study one brand or product category in particular, as the aim was to analyse the influence of brand gender on consumer–brand-related responses on Facebook in general. Future research could include specific gendered brands or product categories – namely feminine, masculine, undifferentiated and androgynous brands/product categories – to provide a more realistic appraisal of the influence of brand gender on brand loyalty, consumers’ contributions to brand-related content on SNSs, perceived brand quality and brand love. Moreover, future studies could explore the consumer’s biological sex, the consumer’s gender and the product category’s gender (Allison et al., 1980; Alreck, 1994; Azar, 2013) as potential moderators of the relationships studied.

**Note**


**Disclosure statement**

No potential conflict of interest was reported by the authors.
Funding

This work was supported by the Fundação para a Ciência e a Tecnologia [UID/ECO/04007/2019].

Notes on contributors

Leonor Vacas de Carvalho is an Assistant Professor in the Business Department at Universidade de Évora, Portugal, where she teaches marketing management, brand management and marketing communications. She is a researcher at CEFAGE and a member of the scientific committee of the Academy of Marketing’s Brand, Corporate Identity and Reputation Special Interest Group. Her research interests include brand identity, brand image, social media branding and services branding. Her previous work has been published in the Journal of Business Research, the Journal of Brand Management and the Journal of Product and Brand Management, as well as presented at conferences.

Salim L. Azar is an Associate Professor of Marketing at Université Saint-Joseph de Beyrouth, Lebanon, where he teaches marketing management and marketing research. He is also a member of Théorie Economique, Modélisation et Application (THEMA), the research centre of the University of Cergy-Pontoise, France. His research focuses on brand gender, branding, SNSs and consumer behaviour. His previous work has been published in the Journal of Business Research, the European Journal of Marketing, the Journal of Brand Management and the Journal of Product and Brand Management.

Joana Cesar Machado is an Assistant Professor at Católica Porto Business School, Universidade Católica Portuguesa. Her research interests include brand identity, social media branding and consumer behaviour. She is a member of CEGE and chair of the scientific committee of the Academy of Marketing’s Brand, Corporate Identity and Reputation Special Interest Group. Her previous work has been published in several international journals and presented at conferences. She is co-author of the book O Livro da Marca (‘The Brand Book’), which is a book of reference on branding in Portugal.

ORCID

Salim L. Azar http://orcid.org/0000-0003-1872-3656

References


Sung, Y., & Kim, J. (2010). E


