Analyzing consumer-based brand equity on Facebook: the impact of brand gender

In recent years, Facebook and other social media have become key players in branding activities. However, empirical research is still needed about the way in which consumer-based brand equity is created on social media. The purpose of this paper is to study the relationship between masculine and feminine brand personality and brand equity, on Facebook, and to analyze the mediating role of consumer-brand engagement and brand love on this relationship. Data were collected using an online survey with 614 valid responses. The hypotheses were tested using structural equation modeling. Results support 7 of the 11 hypotheses with significant relationship between analyzed constructs. This study confirms the advantages of a clear gender positioning and extends prior research by suggesting that brands with a strong brand gender identity will encourage brand love. Results also highlight that brand love has a mediating role on the relationship between brand gender and overall brand equity.

1. Purpose

In recent years, social media have changed the communication landscape and online consumer behavior (Kaplan & Haenlein, 2010; Gironda & Korgaonkar, 2014). Thus, Facebook and other social media have become key players in branding *(Hutter et al, 2013)*. While social media has been subject to an increasing number of studies, little is known about the way in which consumer-based brand equity (CBBE) is created on social media (Rios & Riquelme, 2010), and in particular on the way consumer-brand engagement on Facebook influences CBBE. This study aims to fulfil this research gap.

Keller (1993) suggested that brand personality is one of the drivers of CBBE. Other researchers have demonstrated that brand personality traits influence brand-related consumer responses such as brand loyalty (Kim *et al*, 2001), brand strength (van Rekom *et al*, 2006), or brand appeal (Freling, *et al*, 2011). However, research on the link between brand personality and brand equity is scarce (Lieven *et al*, 2014). This research aims to examine the relationship between brand personality and brand equity, focusing on two distinct and universal personality dimensions of brand personality - brand masculinity and brand femininity - which constitute the two dimensions of brand gender (Grohmann, 2009). Furthermore, we want to analyse if the relationship between brand gender and CBBE is mediated through consumer-brand engagement on Facebook and through brand love.

2. Theoretical background

Brand gender: Grohmann (2009, p.106) defined the gender dimensions of brand personality as the "set of human personality traits associated with masculinity and femininity applicable and relevant to brands". They are particularly important to brands with symbolic value for consumers (Grohmann, 2009). Previous research suggested that strongly gendered brands positively influence brand trust, brand affect, brand preference, brand loyalty, purchase intentions and the likelihood of WOM communication (Grohmann, 2009). Therefore, we assume that a clear brand gender positioning (i.e. high levels of brand masculinity or brand femininity) positively influences consumer engagement with the brand on Facebook, and also love towards this brand. Moreover, brands with high levels of masculinity and femininity tend to be associated with a higher brand equity (Lieven *et al*, 2014). Thus, we assume that the greater the extend consumers perceive the brand as feminine or masculine, the higher its CBBE.

Brand love: Carroll and Ahuvia (2006; p.81) defined brand love as "the degree of passionate emotional attachment a satisfied consumer has for a particular trade name". Brand love is able to fortify the existent bonds between consumers and brands, to nurture the relationship and strengthen the beliefs in the brand, but it might also increase positive WOM and brand loyalty (Loureiro *et al*, 2012; Bergkvist and Bech-Larsen, 2010; Carroll and Ahuvia, 2006). Since brand loyalty is one of the outcomes of brand love and one of the components of brand equity we sustain that brand love will also influence CBBE.
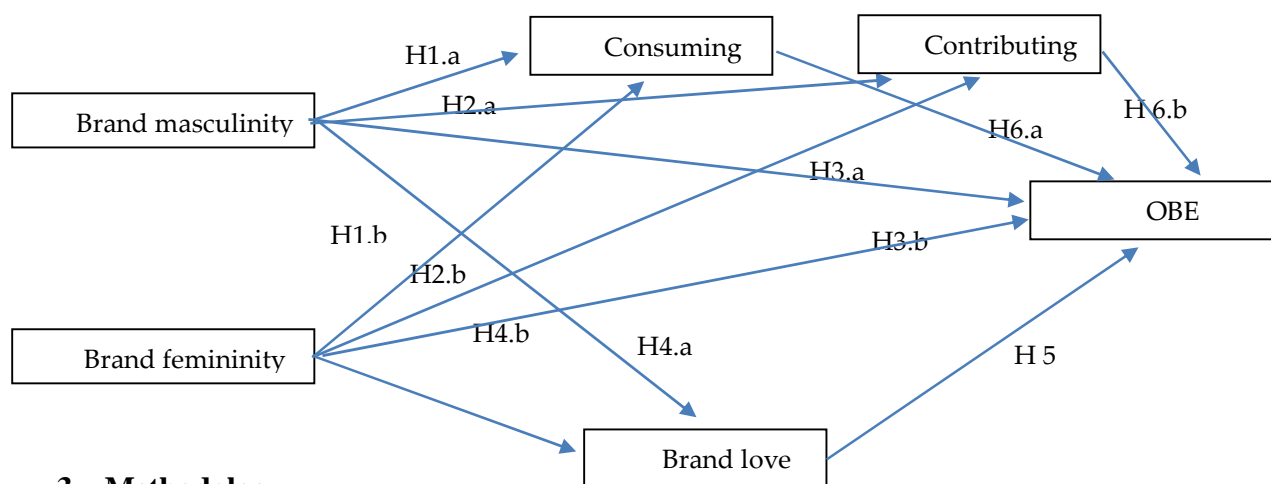
Consumer-brand engagement: Consumer engagement with a brand is particularly relevant in social networking sites (SNS), since it can lead to the building of significant relationships (Tsai & Men, 2013). Moreover, consumer engagement on SNS can be critical in building stronger emotional bonds and can contribute to the creation of higher levels of trust and commitment between consumers and the brand (Brodie *et al*, 2011; Sashi, 2012; van Doorn *et al*, 2010). There a two critical types of consumer engagement with brand pages, namely consuming and contributing (Heinonen, 2011; Muntinga *et al.*, 2011; Shao, 2009). Consuming brand-related content can involve watching brand-related videos, viewing brand-

related pictures or reading comments (Muntinga *et al*, 2011). Lurkers that just "consume" brand-related content, assuming a more "voyeuristic" engagement, are also critical for brands (Utz & Beukeboom, 2011), and, according to Shang *et al* (2006), lurking contributes to an explanation of brand loyalty that goes beyond involvement. Contributing to brand-related content represents user-to-content and user-to-user interactions with brands (Muntinga *et al*, 2011), and may involve liking or commenting on brand-related content. Liking and commenting are equivalent to WOM, because when a user clicks the "like" button or comments on a post, the message is automatically posted to his/her personal Facebook news feed and is likely to instantaneously appear in his/her friends' newsfeed as well (Swani *et al* (2013). These two behaviors allow Facebook users to signal their affinity for a brand and share that with their personal network on Facebook (Wallace *et al*, 2012). Moreover, liking and commenting can increase the likelihood of future brand purchases, brand commitment and loyalty (Bagozzi & Dholakia, 2006; Schultz & Peltier, 2013). Liking can be less-exposing to the general public than commenting, as it does not explicitly state users' feelings, opinions, thoughts, etc. (Lipsman *et al*., 2012).

Consumer-based brand equity: Keller (1993, p. 2) defined CBBE as "the differential effect of brand knowledge on consumer response to the marketing of the brand". Brand equity can, therefore, predict if consumers will have a tendency to choose in a determined category a branded product instead of an unbranded one (Keller, 1993; Yoo *et al*., 2000). This allows the branded product to have an important competitive advantage over the non-branded product, since it creates significant competitive barriers (Yoo *et al*., 2000). According to Keller (2001), brand equity can be created though six building blocks of which consumer-brand resonance is the most valuable (Keller, 2001). One of the components of brand resonance is consumer active engagement. Therefore we propose that consumer-brand engagement on Facebook will positively influence overall brand equity (OBE).

Following we present the research model (see Figure 1) and hypothesis.

Figure 1. Research model

3. Methodology

Data was collected through the administration of an online questionnaire using SurveyMonkey, in March 2015. After deletion of respondents who did not like brand pages on Facebook and those who did not report their favorite Facebook brand page, we had a convenience sample of 614 respondents. Respondents were first asked to answer general questions related to their use of Internet and Facebook. We then asked them to report the

number of Facebook brand pages they liked and describe the product/service categories they belong to. Next, we invited respondents to identify their favorite Facebook brand page. For the rest of the questionnaire, respondents were asked to answer the questions keeping in mind that favorite brand. All scale items were in the form of a statement followed by a seven-point Likert-type response scale ranging from "strongly disagree" to "strongly agree". We measured brand gender using a 12-item scale developed by Grohmann (2009). To measure brand love we used the scale adapted by Loureiro *et al*. (2012). The scale by Tsai & Men (2013) was used to evaluate consumer engagement with the brand on Facebook. Finally, to measure overall brand equity we employed the scale used by Yoo & Donthu (2001). Exploratory and confirmatory analyses were conducted to assess the reliability and validity of the variables used in this study. The initial model's psychometric values are: $\chi 2/ddl=3.277$, TLI=.917, CFI=.926, GFI=.892, GFI=.883; AGFI=.860, RSMEA=.061 and PCLOSE=.000; these indices do not ensure a proper fit of the measurement model. To obtain better fit indices, we eliminated four items with weak factor loading (i.e. standardized parameter estimates less than .5). This procedure yielded reliable scales for analysis on a reduced set of measures (see Table 1); the χ^2 is significant and $\chi^2/ddf=2.642$, TLI=.952, CFI=.958, GFI=.923, AGFI=.904, RMSEA=.052 and PCLOSE=.272. This represents a suitable goodness-of-fit, as all the values are within the acceptable range (Hair *et al*, 2009). The model explained 26% of the variance of OBE and 27.6% of the variance of BL. As for consumer engagement with brands on Facebook, brand gender (i.e. masculine and feminine dimensions) explains 7.4% of the variance of consuming and 5.2% of the variance of contributing. The path diagram is illustrated in Figure 1. We also tested the convergent and discriminant validity for the dimensions used in this study. Table 1 (see Appendixes) illustrates the operationalization of constructs used in this study. For all measurement models, Cronbach's alpha and composite reliability (CR) values are greater than .82. All standardized regression weights are significant. In support of the discriminant validity, the square roots of the average variance extracted (AVE) are superior to any correlations between latent variables; these findings follow Fornell and Larcker's (1981) guidelines.

	Mean	St. D.	Stand. Reg. Weights	Rel. analysis	Joreskog rho	AVE
Brand Femininity (BF, 5 items)	3.55	1.59		.892	.892	.632
Sensitive	3.64	1.89	.796			
Fragile	2.62	1.73	.551			
Graceful	4.18	1.91	.679			
Sweet	3.71	2.00	.932			
Tender	3.61	1.97	.945			
Brand Masculinity (BM, 5 items)	4.90	1.39		.850	.853	.538
Adventurous	4.92	1.79	.714			
Brave	4.92	1.71	.816			
Daring	5.09	1.64	.780			
Dominant	4.95	1.77	.684			
Sturdy	4.62	1.88	.662			
Consuming (CONS, 3 items)	5.09	1.55		.822	.824	.610
Viewing pictures on companies' Facebook pages	5.29	1.70	.795			
Reading companies' posts, user comments, or product reviews	5.03	1.83	.786			
Watching videos on companies' Facebook pages	4.95	1.88	.762			
Contributing (CONT, 3 items)	3.14	1.72		.820	.821	.604
Engaging in conversations on companies' Facebook pages (e.g. commenting, asking, and answering questions)	2.87	1.90	.760			
Sharing companies' Facebook posts on my own Facebook page (e.g. videos, audios, pictures, texts)	3.52	2.07	.803			
Uploading product-related videos, audios, pictures, or images	3.04	2.03	.768			

Brand Love (BL, 4 items)	5.17	1.50		.911	.917	.736
This is a wonderful brand	5.43	1.55	.850			
This brand makes me feel good	5.40	1.55	.889			
This brand makes me feel happy	5.15	1.74	.927			
This brand is a delight	4.68	1.90	.757			
Overall Brand Equity (OBE, 4 items)	4.50	1.84		.934	.932	.774
It makes sense to buy the products or use the services of brand X instead of any other brand, even if they are the same	4.56	1.98	.845			
Even if another brand has the same features as brand X, I would prefer to buy the products or use the services of brand X	4.59	2.03	.939			
If there is another brand as good as X, I prefer to buy the products or use the services of brand X	4.50	2.04	.867			
If another brand is not different from X in any way, it seems smarter to purchase the products or use the services of brand X	4.34	2.01	.865			

Table 1: Construct Measurements

4. Findings

Structural Equation Modeling (SEM) using maximum likelihood estimation and bootstrapping method was conducted by using AMOS 20 to test for the validity of the model and the mediations hypotheses. The bootstrap estimates presented in this study are based on 200 bootstrap samples. Bootstrapping allows testing for the indirect effects (Preacher & Hayes, 2008). Standardized direct and indirect effects are presented in tables 2 and 3 (see Appendixes).

				Standardized Regression Weights	p	
H1a	CONS	<---	BM	.264	.000	Accepted
H1b	CONS	<---	BF	.065	.148	Rejected
H2a	CONT	<---	BM	.209	.000	Accepted
H2b	CONT	<---	BF	.093	.039	Accepted
H3a	OBE	<---	BM	.015	.740	Rejected
H3b	OBE	<---	BF	-.054	.176	Rejected
H4a	BL	<---	BM	.451	.000	Accepted
H4b	BL	<---	BF	.267	.000	Accepted
H5	OBE	<---	BL	.389	.000	Accepted
H6a	OBE	<---	CONS	.0051	.371	Rejected
H6b	OBE	<---	CONT	.256	.000	Accepted

Table 2: Standardized direct effects

As illustrated in Table 2, BF has a significant positive impact on BL (path coefficient =.267, p<.001). Regarding consumer-brand engagement on Facebook, BF had a positive and significant impact on the contributing dimension only (path coefficient =.093, p=.039). Results also show that brand feminine dimension has no significant direct impact on OBE (path coefficient=-.054, p=.740). Yet, the indirect impact between those two variables through the mediators was supported (path=.131; p=.008). Further analysis shows that BL fully mediates the effect of BF on OBE (table 3). As for BM, findings show that it has a significant positive direct impact on BL (path coefficient = .451, p<.001), and on the two types of consumer-brand engagement on Facebook: consuming (path coefficient =.264, p<.001) and contributing (path coefficient = .209, p<.001). The impact of BM on OBE was not significant (path coefficient = .015, p=.740). Yet, as for BF, the total effect of BM on OBE was positive and significant (path coefficient =.258, p(two tailed)=.012). Therefore we can assume that the impact of BM on OBE is fully mediated by the other moderators. Further investigation shows that this full mediation occurs through BL (table 3). Regarding the impact of consumer-brand engagement on OBE, only the contributing dimension had a significant and positive impact (path coefficient =.256, p<.001). BL had a positive and significant impact on OBE (path coefficient =.389; p<.001).

			Standardized Indirect Effects	p (Two tailed)
OBE	← CONS	← BM	.008	.338
OBE	← CONT	← BM	.020	.063
OBE	**← BL**	**← BM**	**.172**	**.006**
OBE	← CONS	← BF	.001	.431
OBE	← CONT	← BF	.015	.099
OBE	**← BL**	**← BF**	**.103**	**.004**

Table 3: Bootstrap analysis and statistical significance of indirect effects

5. Discussion

Results confirm the advantages of a clear gender positioning (Grohman, 2009; Lieven *et al*, 2014), however in this study the effects of brand gender positioning are analyzed in the particular context of social media, and more specifically of Facebook. Previous research has underlined that brand gender should increase brand appeal (Freling *et al*, 2011) and positively influence affective and behavioral responses towards the brand (Grohmann, 2009), but no study has considered the influence of brand gender on brand love. This research extends prior studies by suggesting that by creating a strong brand identity in terms of brand gender, either feminine or masculine, brands will facilitate consumers' identification with the brand and encourage brand love. Results also highlight that brand love has a mediating role on the relationship between brand gender and overall brand equity. Moreover, results show that love towards the favorite brand on Facebook has a positive and strong influence on overall brand equity, complementing the findings of previous research (e.g. Loureiro *et al*, 2012; Bergkvist & Bech-Larsen, 2010; Carroll & Ahuvia, 2006).

While previous studies discussed the motivations for consumer-brand interactions on social media (e.g. Rohm *et al*, 2013), or effects of engagement for brand performance in terms of satisfaction (e.g. Gummerus *et al*, 2012; Jahn & Kunz, 2012), our study focuses on the factors that enable engagement with consumers. This paper contributes to the literature by shedding light on the relationship between masculine and feminine brand personality traits and two specific types of consumer-engagement with brands on Facebook, namely consuming and contributing. Brands with levels of femininity or masculinity will encourage consumer brand-engagement, particularly the most visible and exposing type of engagement (i.e. contributing). Ultimately, this study shows that only this most visible type of engagement, has a significant and positive impact on overall brand equity. Hence, it is critical for brands to stimulate "lurkers" to become active users of the brand fan page on Facebook.

6. Limitations

While this study has interesting implications, we are aware of its limitations. An important limitation was the sampling procedure. In this study we used a non-probabilistic snowball sampling technique and therefore the sample is not representative of the population (Bryman, 2008). In this research we did not try to study one brand or product category in particular. The aim of this study was to study analyze the influence of brand gender on consumer brand-related responses, on Facebook, in general. Future research could thus include specific brands, namely feminine, masculine, undifferentiated and androgynous brands in order to provide a more realistic appraisal of the influence of brand gender on consumer-brand engagement, brand love and brand equity ratings.

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