The impact of brand gender on consumer-brand engagement and consumer-based brand equity on facebook

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1. Purpose

Social media, especially social networking sites (SNS), have emerged as dominant communication channels and have introduced new means of interaction and engagement between consumers and brands (Hudson, Huang and Madden 2016). Thus, Facebook and other SNS have become critical channels in brand's efforts to drive awareness and stimulate consumer-brand engagement (Hutter et al, 2013; Rohm, Kaltcheva and Milne 2013). This new form of engagement in social media opens many important opportunities for brands to create value (Azar et al 2016; Kabadayi and Price 2014). While consumer-brand engagement in social media includes a wide range of activities, consuming and contributing behaviors are generally used as measures of consumer engagement in social media (Gummerus et al 2012; Muntinga, Moorman and Smit 2011).

Although previous research has shown that by interacting with a brand on social media, consumers express themselves in order to affirm a personal identity (Martins and Patrício 2013; Heinonen 2011), little is known on the relationship between the human personality traits consumers associate with a brand (Aaker 1997) and consumer-brand engagement on Facebook. Therefore, in this research, we investigate how two distinct and universal dimensions of brand personality - brand masculinity and brand femininity - which constitute the two dimensions of brand gender (Grohmann 2009) influence consumer-brand engagement on Facebook. Another critical aim is to investigate the relationship between brand masculinity and brand femininity perceptions and consumer-based brand equity, on Facebook. The focus on brand gender is particularly relevant, since recent research has shown that brand masculinity and brand femininity are two critical dimensions of brand personality that influence relevant consumer-brand related responses (Lieven et al 2014; Lieven et and Hildebrand 2016; Ulrich 2013). However, the relationship between brand gender personality traits and consumer responses towards the brand on Facebook has not been empirically tested yet.

Moreover, we want to understand how the two types of consumer-brand engagement on Facebook (consuming and contributing) influence consumer-based brand equity. This is particularly relevant since little marketing research has been done to reveal the underlying

processes of consumer-based brand equity in social media (Kabadayi and Price, 2014; Rios and Riquelme 2010; Schivinski and Dabrowski 2015). This research intends to address this gap.

Ultimately, we aim to study the role of brand love as a mediating factor in the relationship between brand gender and consumer-based brand equity on Facebook. Although brand love has been the topic of several recent studies (e.g. Albert and Merunka 2013; Carroll and Ahuvia 2006; Lagner et al 2016; Loureiro et al 2013), thus far, no study has specifically addressed the influence of brand love on consumer-based brand equity on Facebook, or how consumer brand engagement on Facebook contributes to the development of brand love.

Following we present the research model and hypotheses.

H1.a: Brand masculinity (BM) has a positive influence on consuming behavior on Facebook
H1.b: Brand femininity (BF) has a positive influence on consuming behavior on Facebook
H2.a: BM has a positive influence on contributing behavior on Facebook
H2.b: BF has a positive influence on contributing behavior on Facebook
H3.a: BM has a positive influence on brand love
H3.b: BF has a positive influence on brand love
H4.a: Consuming brand-related content has a positive influence on brand love
H4.b: Contributing to brand-related content has a positive influence on brand love
H6.a: BM has a positive influence on CBBE
H6.b: BF has a positive influence on CBBE
H7.a: Consuming brand-related content has a positive influence on CBBE
H7.b: Contributing to brand-related content has a positive influence on CBBE

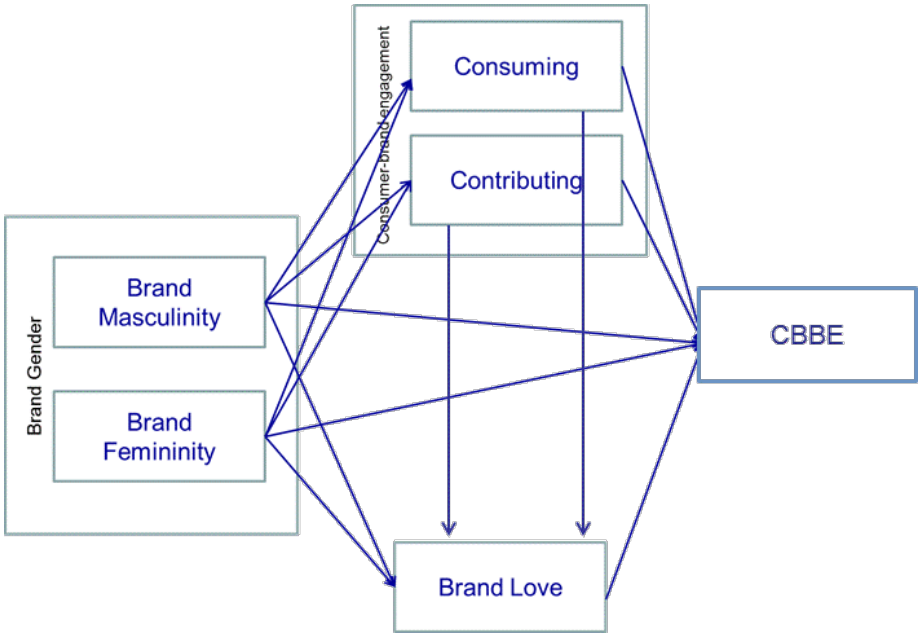

Figure 1. Research model

2. Methodology

Data were collected using an online questionnaire with 614 valid responses. 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 identify the product/service categories they belong to. Next we invited respondents to identify their favourite Facebook brand page. For the rest of the questionnaire, respondents were asked to answer the questions keeping in mind this brand.

The constructs under study were all measured using scales from prior studies, with some minor changes to fit the SNS context. All items were measured using 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), and brand love using the 5 item scale adapted by Loureiro et al (2012). The scale developed by Tsai and Men (2013) was used to evaluate the two types of consumer engagement with the brand on Facebook. Finally, to measure consumer-based brand equity we used the 4 item unidimensional measure, the overall brand equity (OBE) scale by 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 using SPSS 20 to evaluate all items used in this study associated with brand masculinity (BM), brand femininity (BF), brand love (BL), consumer-based brand equity (CBBE), contributing (CONT) and consuming (CONS) to brand-related content on Facebook. To aid our interpretation of these six components, we did an oblique rotation on all of the measured items, checked the data for the cross-loading items and those with communalities of less than .5. We then performed confirmatory factor analyses with AMOS 20 using maximum likelihood estimation method.

The initial model's psychometric values are: $\chi 2/ddl=3.277$, TLI=.917, CFI=.926, GFI=.883; AGFI=.860, RSMEA=.061 and PCLOSE=.001; these indices do not ensure a proper fit of the measurement model. To obtain better fit indices, we eliminated three items with weak factor loading (i.e. standardized parameter estimates less than .4). This procedure yielded reliable scales for analysis on a reduced set of measures; the χ^2 is significant and $\chi^2/ddf=2.659$, TLI=.950, CFI=.957, GFI=.917, AGFI=.897, RMSEA=.052 and PCLOSE=.230. This represents a suitable goodness-of-fit, as all the values are within the acceptable range (Hair et al 2009). The model explained 30.5% of the variance of CBBE and 40.5% of the variance of BL. As for consumer engagement with brands on Facebook, gender (i.e. masculine and feminine dimensions) explains 6 % of the variance of consuming and 4.2% of the variance of contributing.

We also tested the convergent and discriminant validity for the dimensions 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.

3. Findings

Structural Equation Modeling (SEM) using maximum likelihood estimation and

bootstrapping method was conducted 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 and Hayes, 2008). Standardized direct and indirect effects are presented in tables 1 and 2.

As illustrated in Table 1, BF had no significant impact on consuming behavior on Facebook (path coefficient CONS =.052, p=.127). Only BM had a significant positive impact on this dimension (path coefficient CONS= .284; p<1%). Therefore, hypothesis 1 is partially supported.

Regarding contributing behavior on Facebook, both dimensions of brand gender had a significant positive impact: for BM, the path coefficient =.228 (p<1%); for BF, the path coefficient=.070 (p=3.9%). Therefore, hypothesis 2 was fully supported.

Additionally, as expected BF and BM had a significant positive impact on brand love (path coefficient for BF=.200, p<1%; path coefficient for BM =.408, p<1%). Therefore, the impact of brand gender on brand love was supported and hypothesis 3 fully supported. An in-depth analysis showed that only BM had a positive indirect impact on brand love through both dimensions of consumer-brand engagement.

As for the link between consumer-brand engagement and brand love, results supported our hypothesis 4 as both dimensions of consumer-brand engagement, consuming (path coefficient=.294; p<1%) and contributing (path coefficient=.166; p<1%) had a positive and significant impact on brand love.

Results also show that brand love has a significant direct impact on consumer based brand equity (path coefficient.453, p<1%). Therefore, hypothesis 5 was supported also.
Unlike previous research findings (Lieven et al 2015), the impact of brand gender on consumer-based brand equity was not supported. Neither BM (path coefficient=.010; p=.870), nor BF (path coefficient=-.058; p=.104) reached statistical significance level, leading us to reject hypothesis 6. Yet, the indirect impact between those two variables through the mediators was supported for both dimensions of brand gender: BM (path=.243; p=.003) and BF (path=142; p=.012). Further analysis shows that the indirect impact of brand gender on consumer-based brand equity is mediated by brand love and both dimensions of consumer-brand engagement.

As for the impact of consumer-brand engagement on consumer-based brand equity, findings show that only contributing had a positive direct impact on brand equity (path coefficient =.281, p<.1%) as consuming did not reach statistical significance level (path coefficient = .067 p=.252). Therefore, hypothesis 7 was partially supported.

4. Originality and value

This study advances prior work by showing that the influence of brand masculinity and brand femininity is mediated through brand love and through the two types of consumer-brand engagement on Facebook. This paper also contributes to the literature by shedding light on the relationship between masculine and feminine brand personality traits and the two critical types of consumer-engagement with brands on Facebook. Our findings show that brands with high levels of femininity or masculinity will encourage consumer brand-engagement, particularly the most visible and exposing type of engagement (i.e. contributing). Hence, by instilling a brand with a masculine or feminine brand personality, brand managers can

effectively foster consumer-brand engagement on Facebook.

Moreover, our findings provide relevant insights on how the different types of consumer-brand engagement on Facebook influence consumer-based brand equity. Results demonstrate that only the most visible type of engagement has a significant and positive impact on consumer-based brand equity. Though, even the more "voyeuristic" engagement is key for brands, since consuming brand-related content on Facebook also mediates the effect of brand masculinity and brand femininity on brand equity. These findings highlight that "lurking" is valuable form of social media behavior, and that lurkers are a valuable target for brand communications.

Ultimately, this research extends prior studies by suggesting that by creating a strong brand gender identity, brands will encourage brand love. Results also highlight that brand love has a mediating role on the relationship between brand gender and consumer-based brand equity. Moreover, results show that love towards the favorite brand on Facebook has a positive and strong influence on consumer-based brand equity.

5. Limitations

The sample size and profile could be considered a limitation, as the sample is composed essentially by young respondents. Moreover, we did not include specific brands in our study since we wanted to analyse 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.

Keywords: Facebook, consumer-brand engagement, brand gender, brand love, consumer-based brand equity

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Appendixes

Table 1: Standardized direct effects

				Standardized Regression Weights	P	
H1a	CONS	<---	BM	.284	.000	Accepted
H1b	CONS	<---	BF	.052	.127	Rejected
H2a	CONT	<---	BM	.228	.000	Accepted
H2b	CONT	<---	BF	.070	.039	Accepted
H3a	BL	<---	BM	.408	.000	Accepted
H3b	BL	<---	BF	.200	.000	Accepted
H4a	BL	<---	CONS	.294	.000	Accepted
H4b	BL	<---	CONT	.166	.000	Accepted
H5	CBBE	<---	BL	.453	.000	Accepted
H6a	CBBE	<---	BM	.010	.870	Rejected
H6b	CBBE	<---	BF	-.058	.104	Rejected
H7a	CBBE	<---	CONS	.067	.252	Rejected
H7b	CBBE	<---	CONT	.281	.000	Accepted

Table 2: Bootstrap analysis and statistical significance of indirect effects

			Standardized Indirect Effects	p (Two tailed)
CBBE	← **CONS**	←	**.055**	**.020**
BM				
CBBE	← **CONT**	←	**.066**	**.004**
BM				
CBBE	← **BL**		**.146**	**.009**
	← **BM**			
CBBE	← **CONS**	←	**.014**	**.034**
BF				
CBBE	← **CONT**	←	**.031**	**.044**
BF				
CBBE	← **BL**	←	**.104**	**.011**
BF				
BL	← **CONS**	←	**.067**	**.011**
BM				
BL	← **CONT**	←	**.029**	**.002**
BM				
BL	← CONS	←	.019	.071
BF				
BL	← CONT	←	.015	.056
BF				