



My Brand and I – Facebook Brand Pages and Self-Completion

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ABSTRACT

Companies engage in various brand activities in Social Media, e.g. establishing Facebook brand Pages. Concurrently, many Facebook users actively link themselves to one or more brands. But why do people link themselves to brand Pages and how does this contribute to the brand's success? Self-completion theory may explain processes such as linking oneself to brand Pages as identity formation and self-verification. Using the method of Cognitive Mapping, we visualise the self as a constituent of the cognitive map of the brand and the brand as a constituent of the cognitive map of the self. A three-sample online survey ($N = 327$) regarding an exemplary brand from the hair cosmetics sector was conducted. Consistent with hypotheses, for those respondents linked to the brand on Facebook, the self was closer to the core of the brand's map, and the brand was closer to the core of the self's map. Accordingly, the majority of Facebook users linked to brand Pages are "true fans", who make the brand's Facebook activities be worthwhile.

Key words: brand Pages, Facebook, self-completion, Cognitive Mapping

1 Introduction

Facebook has become a vital part of social and cultural life for people all around the world (Krämer & Winter, 2008). In November 2007, Facebook stretched out to non-private persons by introducing so-called Pages. Pages are public profiles that enable public figures, businesses and other organisations to create an online presence and engage with individuals on Facebook (Facebook, 2012). The business world is just starting to recognise the opportunities Social Media offers. One reason might be that the benefits of brand Pages are not yet comprehended. Also, marketers are concerned about negative reactions of the online community, which are uncontrollable in this interactive environment, as well as to be exploited by users who are merely capitalising gratifications and incentives. The reasons why people link themselves to brands on Facebook are still uncertain. Likewise in doubt is whether companies benefit from their brands' Facebook fans, and how.

In this paper we want to explore the notion of Facebook being an important realm for identity formation (e.g., Krämer & Haferkamp, 2011). Social Networking Sites encourage their users to create a personal profile and build up a social network. Individuals, moreover, use these online environments for self-directed information seeking and apply various self-reflection techniques and identity formation (Gilpin, 2011). Since identity formation takes place in processes of social negotiation and is constructed through interaction over time, consumers might build up, foster and strengthen self-brand-relevance through relations with the brand on Facebook. Consequently, the self can be assumed to become a constituent of the individual representation of the brand, likewise, the brand a constituent of the representation of the self.

In order to test these two related hypotheses, we conducted a mixed-methods study.

If linking oneself to a brand on Facebook was indeed an expression of brand identification and self-relevance, Facebook brand Pages could be the perfect marketing tool, fostering consumers' behavior like e.g. brand advocacy and word-of-mouth activity. This would give companies a strong reason for investing in their Social Media presence.

2 Theory

In this chapter, the reasons for linking oneself to Facebook brand Pages are explored from the perspective of psychological theories of the self. Secondly, a method is introduced that allows visualising cognitive representations of socially shared concepts like, e.g., brands.

2.1 Self-Completion and Identity Construction on Facebook

Different psychological disciplines have taken on diverse perspectives on the nature of self and identity. Generally, the self-concept comprises the entirety of self-related knowledge, and is primarily formed in processes of self-exploration (Döring, 2003; Mummendey, 2002). Typically, individuals define themselves using several self-aspects and identities at a time. Central to conceptualising identity are social comparison theories based on the notion of Festinger (1954), which postulate that individuals strive to achieve a positive self-concept (e.g., Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), as well as theories on self-verification, that focus on consistency and the pursuit of congruent feedback (Swann, 2012).

Based on these pillars, social identity theory proposes that people define themselves by means of group memberships and social categories (Tajfel, 1974; Turner et al., 1987). Defining oneself by means of group membership allows people to achieve a positive self-image through perceived positive evaluation of one's group, as well as to use the group for verifying claimed identities. Through social recognition, the individual develops an understanding of him- or herself (Wicklund & Gollwitzer, 1981; this idea goes back to William James, Georg Herbert Mead and other forerunners of social psychology). By performing impression management, people also internalise relevant self-aspects, and thus, form their self (Mummendey, 2002). As peers accept some and propose other self-aspects, impression management becomes dialogic identity formation (Döring, 2003).

Symbolic self-completion theory is a corresponding concept, drawing on Lewin's ideas according to which people are reluctant to tolerate insufficiencies on important self-defining dimensions (Gollwitzer, Sheeran, Michalski, & Seifert, 2009; Wicklund & Gollwitzer, 1981). When committed to identity goals, people undertake a variety of activities to claim goal attainment. In order to stabilise these self-definitions, people use various symbols to support identity claims (Wicklund & Gollwitzer, 1981). These symbols need to have a consensual meaning to become socially recognised, thus relevant for self-completion

Especially brands qualify for self-completion purposes as their symbolic properties hold personal significance as well as consensually shared meaning (Chernev, Hamilton, & Gal, 2011; Dittmar, 2008a; Dittmar, 2008b; Escalas & Bettman, 2003; Sørensen & Thomsen, 2006; Sung & Choi, 2010). A strong consumer brand's unique selling proposition consists of mostly emotional qualities. Through individual relevance of the assumed associations of others, brands can signify belonging or distinctness, as well as be used to express and support certain self-aspects since they support functions of differentiation and identification (Dräger & Strack, 2008).

Online, the available clues for social categorisation differ from the information available offline. People are more able to influence the categories they are assigned to by others through the information they provide themselves (Salimkhan, Manago, & Greenfield, 2010). Drawing on Mead's symbolic interactionism, (inter)action on Facebook is also identity performance (Robinson, 2007). Whereas the interactive setting of Facebook makes marketing activities difficult and less predictable, individuals clearly benefit from it. Online self-ing is a more controllable creation- and construction process, than it is in offline settings. Since people can look for and actively choose the information relevant for their identity forming processes, they can easily accentuate consistent input. Facebook enables its users to (a) visualise the self (Döring, 2003), (b) organise experiences into a coherent self (Gilpin, 2011), (c) define and identify important self-aspects, and it offers multiple options for self-completion (Krämer & Haferkamp, 2011; Zhao, Grasmuck, & Martin, 2008). Moreover, Facebook provides (d) a highly interactive environment allowing for others to potentially acknowledge symbols of self-completion (Ellison, Lampe, Steinfield, &

Vitak, 2011; Robinson, 2007). These features make Facebook an ideal space for identity formation and reassuring one's self-concept.

On the pursuit of positive self-esteem, individuals constantly try to evaluate and verify claimed identities (Mummendey, 2002; Tajfel, 1974; Sung & Choi, 2010). Once a proclaimed indicator for an aspired goal is acknowledged by others, that indicator becomes a social fact and serves as self-defining symbol (Wicklund & Gollwitzer, 1981). When a brand is perceived to be similar to one's self, it is likely used for symbolic self-completion (Swaminathan, Page, & Gürhan-Canli, 2007). Equally, consensually recognised brand connotations are assumed for oneself (Sung & Choi, 2010; Zhao et al., 2008). By linking oneself to a brand Page on Facebook, users openly express a connection between themselves and that brand, thus, validate and support their self-concept as they align attributes associated with the brand with their self. Consequently, we obtain to provide empirical evidence that by linking oneself to a brand on Facebook, the brand representation becomes "self-loaded", whereas the self becomes "brand-loaded".

2.2 Visualising the Representation of a Brand by Applying Cognitive Mapping

Psychologically, a brand is comprised of consumers' shared everyday knowledge in, thus, strong brands become part of a culture's knowledge. The attributes ascribed to a brand consensually activate brand-knowledge and are understood as a semantic domain (Müller, Jonas, & Boos, 2002; Strack et al., 2008). A semantic network mostly comprises declarative knowledge. Consequently, knowledge regarding a brand can be exemplified as a collectively shared semantic structure, which is activated when the brand is mentioned or encountered in any way. This structure of declarative knowledge can be described on different levels of complexity. An individual's knowledge alone represents the brand's image with only low reliability. However, a multi-level-structure (including the individual level, reference group level and cultural level) modeling social construction and individual representation processes simultaneously, has been done since the 1960s based on Moscovici's theory of social representations (Müller et al., 2002; Strack et al., 2008). Accordingly, reliability in the assessment of brand representations can be achieved by aggregating multiple respondents' individual knowledge.

Cognitive Mapping technique reduces a semantic web to a network of nodes. Each node represents a brand-attribute in form of words and associations. These nodes are inter-linked based on their semantic similarity in the context of the specific brand. This brings about the advantage that each association's meaning is defined by the other nodes it is closely linked to. Cognitive Mapping of brands is an empirical assessment and visualisation technique and its result, the cognitive map, visualises the mental representation of the "psychological brand" within the semantic networks of the market participants.

In the first step, the sample's associations regarding the brand are surveyed, counted and carefully concentrated

(Dräger & Strack, 2008; Strack et al., 2008). A freelist task regarding one brand typically provides ten free lines, while it is left to the participant how many associations to list. As it is likely that participants list different words for semantically identical statements, the associations need to be qualitatively grouped by the researchers. Each grouped term is labelled by the most frequently enclosed association, thus sustaining the original wording and therefore called tailor-made. A strong brand causes similar associations within numerous different market participants. Nevertheless, some of the most frequently listed associations are not brand distinct (Dräger & Strack, 2008; Strack et al., 2008; Gajic, 2009). The resulting terms (plus sometimes a predefined marker term, e.g., the brand's trademark), form the basis for the procedure's second step: a triple comparison, administered to a new sample from the same consumer population. Combinatorial designs for reducing the amount of association triples needed make the task manageable (Weller & Romney, 1988 c.f. Strack et al., 2008). The participants are asked to judge semantic similarity within each triple by crossing of the term that is the least similar to the other two (Müller et al., 2002; Strack et al., 2008). The resulting individual similarity matrixes are analysed for consensus, integrated and reduced in their dimensionality. Visualising the two- or three-dimensional structure constitutes the cognitive map. The nodes of the cognitive map preserve the terms listed the most frequently, their structure is brand-specific, unpredictable, as well as informative (Strack et al., 2008).

Following the notion of brands being social representations, Müller et al. (2002) and Strack et al. (2008) applied the Cognitive Mapping method to strong brands (e.g., an automobile brand). Later, they (Gajic, 2009; Heine & Strack, 2011; Meier, 2010; Quante, 2009; Strack et al., 2008) began testing for individual differences by correlating the core distance of each term of the cognitive map with individual characteristics of the respondents, e.g., brand experience or purchase intention. This approach can also be used to test for specific characteristics within the structure of brand maps of those individuals linked to a specific brand on Facebook. Hypothesis 1 proposes that the self (included as a predefined term) is located in the periphery of the brand map for unrelated subjects, but in the core of the map for linked subjects. Likewise, their self-concept should include the brand. In this study, we made a first attempt in applying Cognitive Mapping to also visualise (the semantic representation of) the self. Hypothesis 2 states that the brand (included as a predefined term) is located in the periphery of the self map for unrelated subjects, but in the core of the self map for linked subjects.

3 Methods

The components of this study imply an exemplary brand. Also, introduced are the survey design, sample and a battery of measures surrounding the Cognitive Mapping procedure.

3.1 The Design, the Brand and the Sample

Three-Survey design. To test the two hypotheses, three a priori planned online studies are conducted. The Cognitive Mapping method generally requires the application of two surveys: a qualitative freelist and a consecutive triple task (see Chapter 2.2). Survey 1 incorporates two freelistings, one for the brand and an optional one regarding the self. To keep the respondents motivated, we separate the two triple tasks and conduct an individual survey for each (Survey 2: triple task regarding the brand; Survey 3: triple task regarding the self). In all three surveys, the questionnaire described in chapter 3.2 is included.

Brand and company. An international, market-listed chemical company operating in three business sectors and headquartered in Germany showed interest regarding a hair cosmetic brand and cooperation was agreed on. The brand is famous, both in the branded consumer goods area (hair colorants, hair styling, hair care, and form) as well as in the professional hair salon business. The brand's trademark is well known. None of the participants in any survey mentioned problems regarding associations or evaluations concerning the brand. In this paper, the brand is anonymised and represented by "#".

Sample recruitment. The three surveys (provided in German) were administered online using the online survey service SurveyMonkey. Facebook was the main platform to communicate the study and link to the respective survey, which is a natural consequence of the research object being a Facebook product, namely brand Pages. To ensure a sufficient number of participants linked to the exemplary brand for conducting statistical analysis, people were especially recruited on ten brand Pages of #-sub-brands. Overall, the sample recruitment took three months (from December 2011 to March 2012). A total of 327 subjects opened the link, out of which 285 participants provided enough data for further evaluation. The sample's mean age is 28.53 years ($SD = 9.18$), with 28% male subjects. A majority of the participants (94%) stated to have a Facebook account, out of which 30% were linked to a relevant target brand Page. The latter is not to be taken as representative for the Facebook population, but rather due to the special recruitment as described above.

3.2 Measures

Each survey focuses mainly on the target brand: first, by applying a Cognitive Mapping task (freelisting or triple task, see chapter 2.2) and secondly, by a consecutive set of questions concerning the brand, Facebook usage, Facebook brand Page interaction and characteristics of the participants.

Brand identification: The (personal and household) usage of five #brand product categories, a customer perceived value scale including satisfaction and purchase intention, as well as brand identification were assessed. As usage, satisfaction and identification correlate adequately and achieve similar results, for brevity's sake, only the results

for brand identification are reported. Combining the "Self with Brand Congruence-Scale" (Escalas & Bettman, 2003; e.g., "I use this brand to communicate who I am to other people.", "This brand suits me well.") with the "Self-Concept Connection Scale" (Swaminathan et al., 2007; e.g., "This brand says a lot about the kind of person I am or want to be.", "This brand is a part of me."), the resultant twelve 5-point agreement ratings accomplish Cronbach's $\alpha = .96$.

Facebook usage for entertainment purposes. The Facebook Intensity Scale (Ellison, Steinfield, & Lampe, 2007) was applied. In addition to the rating scale, respondents are asked openly to state: the number of Facebook friends, the number of Facebook groups they are members of, the number of organisations, and celebrities linked to, the estimated time per day spent on Facebook, and the number of brands linked to. Although the resulting values are skewed, an exploratory factor analysis divides them into two clusters: the first four mentioned above form a dimension we call "Facebook usage for social purposes", the latter two form a dimension we call "Facebook usage for entertainment purposes" (Appendix A). The second dimension might be useful to test what relevance incentives hold for linking oneself to brand Pages. The two factors were saved to maintain their orthogonality.

Being linked to the target brand. Applying a binary question, Facebook users are asked if they were linked to a Page regarding the target brand. In case of consent, they were shown seven pictorially presented (sub-)brand Pages and asked to specify which of these Pages they were linked to. In the results section, 'brand Page' refers to the target brand's Facebook Pages.

Brand Page Interaction. Participants linked to one or more relevant brand Page(s) rate their interaction with the Page(s) via 23 self-developed items on a five-point scale from *never* to *very often*. The Eigenvalues suggest three factors. Thus, we created three scales, each represented by three items: receptive interaction ($\alpha = .76$, e.g., "looking at pictures by the Page"), active interaction ($\alpha = .90$, e.g. "sharing the brand's videos"), and incentive seeking ($\alpha = .75$, e.g., "participating in raffles and games by the brand"). Examples are given in Appendix B.

Big Five: Because the associations regarding the self listed by respondents of Survey 1 mostly resemble the Big Five factors of personality, we included a Big Five inventory into Survey 3, in order to validate the core distance measure of Cognitive Mapping as an indicator for self-relevance. The BFI-10 (Rammstedt, 2007) was administered and resulted in unremarkable values for the 75 respondents of Survey 3 (Agreeableness $M = 3.20$, $SD = 0.72$; Emotional Stability $M = 3.39$, $SD = 0.89$; Conscientiousness $M = 3.57$, $SD = 0.90$; Extraversion $M = 3.48$, $SD = 1.02$; Openness $M = 3.80$, $SD = 0.94$).

Employee status: Among other demographics (age, gender, postal code), the results of which do not relate to the hypotheses, the respondents also stated whether they were currently, or have been in the past, employed by the target company. The resulting binary variable was expected to confound brand identification as well as being linked to a #-brand Page. It was therefore used as a control factor. Employee status applied to 6% of the total sample (Survey 1: 8%, Survey 2: 6%, Survey 3: 4%).

4 Results

In the first step, we test the proposition that linking oneself to a brand on Facebook is more than mere Facebook habitus. In the second step, we analyse the semantic representation of the brand and that of the self, as well as how both differ for respondents linked to and those highly identified with the brand.

4.1 Why Linked to a Facebook Brand Page?

Pooling the subjects of all three Surveys, 85 (30%) of the 272 respondents are linked to one of the company's brand Pages on Facebook. Being linked to a brand page strongly correlates with brand identification ($r = .49$), but also with employee status ($r = .38$) and using Facebook for entertainment purposes ($r = .38$). To control these confounding factors and to account for the dichotomy of the dependent variable, a stepwise logistic regression of being linked to a brand Page was conducted (see Table 1).

Table 1: Stepwise logistic regression of being linked to a Facebook brand Page on brand identification, controlled for employee status and Facebook entertainment purpose (Surveys 1-3, $n = 277$).

	<i>b</i>	Wald	<i>df</i>	<i>p</i>	Nagelkerke ΔR^2
Constant	-3.50	44.1	1	< .001	
Employee	1.46	12.4	1	< .001	.18
Facebook entertainment purpose	1.24	18.2	1	< .001	.25
Brand identification	11.41	22.1	1	< .001	.14
				$\Sigma R^2:$.57

In the first step, employee status alone explains 18% of variance for being linked to a brand Page. The inclusion of the factor using Facebook for entertainment purposes in the second step raised explained variance to 43%, thus, an additional 25%. Including brand identification in the third step enhances explained variance to 57%, again an additional 14% of variance. Therefore, brand identification, the Facebook factor entertainment and employee status each independently influence being linked to the brand on Facebook.

The subset of linked participants evaluated their interaction with the brand Page(s), regardless of which Survey they took part in. A stepwise regression for the three brand Page interaction scales in Table 2 confirms brand identification to be an effectual source of brand Page interaction.

Table 2: Stepwise Regression of brand Page interaction on brand identification, controlled for employee status and Facebook entertainment purpose (Surveys 1-3, subset of linked respondents $n = 52$).

	receptive interaction		active interaction		incentive interaction	
	β	ΔR^2	β	ΔR^2	β	ΔR^2
Employee	.19	.09*	-.26*	.01	-.52*	.14*
Facebook entertainment purpose	.08	.02	.03	.01	.29*	.14*
Brand identification	.34*	.10*	.43*	.16*	.44*	.16*
ΣR^2 :		.21		.19		.45

* $p_{it} < .05$

Incentive oriented brand Page interaction is of special interest, since it is critical to the marketers' concerns. Incentive oriented brand Page interaction is most likely shown by those respondents with entertainment oriented Facebook usage (bivariate $r = .36$). Employees practice receptive but no incentive brand Page interaction (Table 2), whereas the Facebook factor entertainment purpose significantly increases the explained variance of incentive brand Page interaction. Including brand identification in the third step of the regression calculation enhances explained variance for all three Facebook interaction types and gains medium effect sizes. Therefore, both dependent variables, being linked to the brand (Table 1) and the brand Page interaction type (Table 2) converge to a similar pattern: Some people are linked to the brand for mere extrinsic reasons like entertainment oriented Facebook usage or employee status. The majority, however, seems to be linked to the brand on Facebook for pure brand identification and shows all types of brand Page interaction (receptive, active, and incentive).

4.2 The Self as Part of the Representation of the Brand

The brand evokes an average of five associations ($M = 5.05, SD = 2.68$) in the 127 respondents of Survey 1. The number of associations listed already correlates with being linked to the brand Page on Facebook ($r = .19, p_{it} = .03, n = 100$), and with brand identification ($r = .32, p_{it} = .001, n = 107$), but neither with employee status ($r = .06, p_{it} = .25$) nor with entertainment-oriented Facebook usage ($r = .01$).

Applying qualitative condensation, the 14 most frequently listed tailor-made terms were generated, still comprising 57% of all initial associations, ranging from the product category "shampoo" (62% of respondents) over "# brand logo" (13% of respondents) to a brand purpose "beauty"

(9% of respondents). The term "I" is included as 15th term into the triple comparison task in Survey 2. The 94 respondents of Survey 2 achieved a fair consensus of mean $r = .22$ concerning the individual distance matrixes. The aggregated distance matrix shows the terms "shampoo", "hair", "hair color", "# brand logo" and "care" to have the smallest core distances. The tree-dimensional reduction of the aggregated distance matrix results in the cognitive map of the brand (Figure 1).

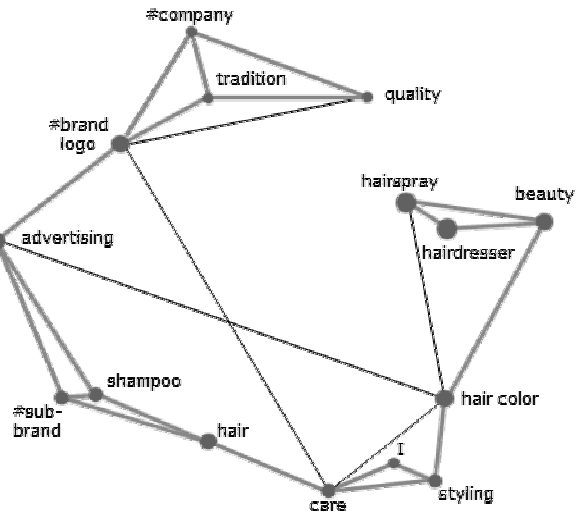


Figure 1: The cognitive map of the hair cosmetic brand (Survey 2, $n = 94$).

At the bottom of Figure 1 the product category "shampoo", which is the term with the smallest core distance, and "# sub-brand" (a famous shampoo sub-brand) connect to "hair". The latter is equivocally the body part the brand's products are used for, thus connects to the self-relevant cluster, which is comprised of "care", "styling" and "I". The purpose "styling" forms a bridge, via "hair color", to the more abstract cluster of "beauty", "hairdresser", and "hairspray". The self-cluster thus connects the hair cosmetics company via its products to the applied hairdressing business.

The self was hypothesised to form a core concept within the brand map for subjects with high brand identification and those linked to the brand on Facebook. Against that background, the cognitive map in Figure 1 is a primary indication that people are able to surround their self with the product, brand and company on the one hand, and its functions and applied business on the other. Nevertheless, the core distances of the 15 terms in the aggregated map of Figure 1 allow further hypothesis testing by analysing the individual variability and its covariances in the map's structure (Table 3).

Table 3: Correlations of the core distances of terms of the brand map with important predictor variables (negative correlations indicate the term to be in the core of the cognitive map, Survey 2, n = 81).

	I (myself)	quality	tradition	# sub-brand	care	shampoo	# brand logo	# company	beauty	advertising	hair	hairspray	hair color	styling	hairstylist
Employee	.15	-.09	-.12	.04	-.15	.06	.08	.14	-.20	.07	-.10	.04	-.01	.09	-.02
Facebook entertainment purpose	-.08	.17	.01	-.20	.00	-.02	.04	.27	-.04	.19	-.09	-.10	-.08	.04	-.09
Brand identification	-.19	-.29	-.29	-.17	.04	-.02	-.01	-.11	-.03	.09	.16	.16	.21	.14	.44
Linked to brand	.02	-.21	-.18	-.23	-.07	-.07	-.04	.08	.08	.02	.06	.07	.06	.13	.30

With a small but one-tailed significant correlation, people with high brand identification have the self-term “I” closer to the core of the brand map (Table 3, $r = -.19$, $p_{1t} = .05$, $n = 81$). However, being linked to the brand on Facebook does not directly influence the self-term “I” ($r = .02$). This might be due to the three different sub-sets of people linked to brand Pages that were identified in Table 1 (fans, employees, and entertainment oriented Facebook users). Employees have the self-term “I” rather in the periphery of their cognitive map of the brand ($r = .15$, Table 3). They represent the brand with the core concepts “care” and “beauty”. When controlling for employee status, the core distance of the self-term “I” slightly tends to connect more to being linked to the brand Page ($r_{part} = -.13$, $p_{1s} = .14$).

Table 4: Regression of the core distance of the self term “I” in the brand-map on brand identification and on being linked to the brand Page, controlled for employee status and Facebook entertainment purpose. Negative coefficients indicate core proximity (Survey 2, n = 81).

	brand’s core distance			
	β	ΔR^2	β	ΔR^2
Employee	.18	.02	.15	.02
Facebook entertainment purpose	-.05	.01	-.03	.00
Brand identification	-.21*	.04*		
Linked to a brand Page			-.02	.00
ΣR^2 :		.07		.03

* $p_{1t} < .05$

However, when including the Facebook entertainment purpose in the second step and being linked to the brand Page in the third, being linked to the brand cannot contribute independently (Table 4). Nevertheless, a second look at Table 4 shows that the brand-relevant associations “quality”, “tradition” and “# sub-brand” are closer to the core of the cognitive map for respondents who are identified with or linked to the brand on Facebook ($-.30 < r < -.17$). Therefore, we tentatively accept hypothesis 1.

4.3 The Brand as Part of the Representation of the Self

In the freelist task, the self evokes an average of six associations ($M = 6.38$, $SD = 2.29$) within the 45 remaining subjects in that optional part of Survey 1. The number of associations listed does not correlate with employee status, Facebook entertainment usage, being linked to the brand Page, or brand identification ($r < .20$, $p > .09$), but naturally, it correlates with the number of associations listed in the preceding association task regarding the brand ($r = .69$).

Qualitative condensation resulted in the 13 most frequently listed terms, representing 52% of all initial associations, ranging from “determined” (40% of respondents) over “fashion—conscious” (27% of respondents) to “friends” (15% of respondents). Except for “fashion—conscious” all terms can be ascribed to the Big Five of personality and are arranged in Table 5 accordingly. The terms “I” and “# brand” were included as 14th and 15th term into the triple comparison task in Survey 3. The 86 respondents of Survey 3 achieved a consensus of $mean_r = .22$ regarding the individual distance matrixes, the same value as in the triple comparison regarding the brand; concerns regarding high variability in the individual selves are unsustainable. The aggregated distance matrix shows the terms “fun-loving”, “helpful”, “open”, “communicative” and “friendly” to possess the overall smallest core-distances, possibly reflecting the social desirability of social selves.

The tree-dimensional reduction of the aggregated distance matrix results in the cognitive map of the self (Figure 2). The cognitive map of the self consists of more or less four clusters: The term “capricious” is rather offside, it connects to “I”, which forms the center of the nodes “# brand”, “friendly” and “friends”.

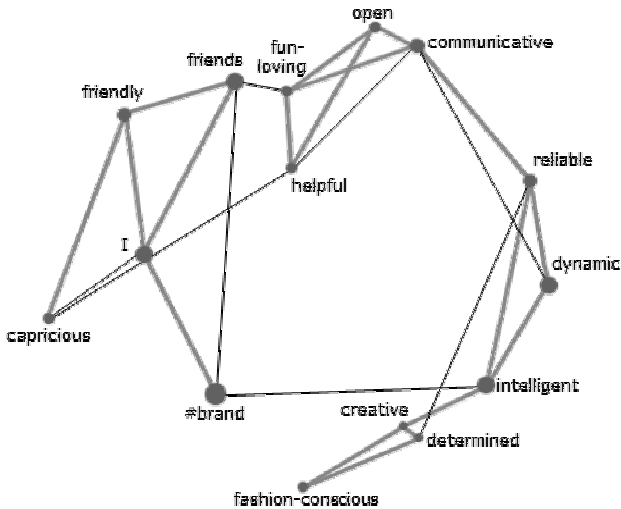


Figure 2: The cognitive map of the self (Survey 3, n = 86).

The latter two pro-social terms connect to an extraversion cluster (“fun-loving”, “helpful”, “open”, and “communicative”), which in turn connects to a conscientious/creative cluster (“reliable”, “dynamic”, “intelligent”, “determined”, “creative”, and “fashion-conscious”). Because most of the self-terms allocate to the Big Five of personality, the convergent validity of the core distance measures can be tested against the more explicit questionnaire assessment of the Big Five. The results are shown in the upper part of Table 5. People with high agreeableness tend to have the terms “friendly” and “friend” closer to the core of their self-map ($r = -.15; -.12$). Participants with higher emotional stability represent their self as “dynamic” ($r = -.25$) and “communicative” ($r = -.18$) and dispel “capricious” (neuroticism is the complement of emotional stability)

towards the periphery of their self-map ($r = .22$). Although emotional stability and conscientiousness are not correlated in this sample ($r = .05, n = 75$), the terms “dynamic” ($r = -.25$) in the core and “capricious” in the periphery ($r = .23$) mark the self of conscientious participants, too. The terms “fun-loving” ($r = -.24$) and “communicative” ($r = -.23$) represent the self of extravert participants. Openness to experience is represented by the terms “creative” ($r = -.24$) and “open” ($r = -.11$). Overall, this pattern allows to assume convergent validity of the core distance measure.

The bottom of Table 5 allows for testing hypothesis 2. At first sight, the brand (“# brand”) seems to be systematically closer to the core of the self-map the higher the respondents’ brand identification ($r = -.44, p_{it} < .001, n = 79$; Table 5). Respondents linked to the brand on Facebook represent the brand similarly within their self-map ($r = -.20, p_{it} = .04, n = 77$). Employees also include the brand into their selves ($r = -.34, p_{it} = .001, n = 86$). Whereas being linked to the brand Page failed to reach significance in the third step of a multiple regression ($\Delta R^2 = .04, F(1,45) = 2.03, p_{2t} = .16$), the impact of brand identification proves against its confounders (Table 6). Thus, hypothesis 2 is accepted. Table 5 additionally shows that the higher identified the participant is with the brand the closer to the core of the self-map the self-aspect “fashion conscious” is located ($r = -.24, p_{it} = .02, n = 79$). The same holds for being linked to a Facebook brand Page of the hair-cosmetics brand ($r = -.12, p_{it} = .16, n = 77$), without any extrinsic confounder, respectively.

Table 5: Correlations of the core distances of terms of the brand map with the Big Five and with important predictor variables (negative correlations indicate the term to be in the core of the cognitive map, Survey 3, n = 49-86).

	# brand	fashion-conscious	friendly	helpful	capricious	dynamic	determined	reliable	intelligent	fun-loving	communicative	friends	open	creative	I (myself)
Agreeableness	-.36	.03	-.15	-.01	.11	.18	.20	.17	.26	.14	.20	-.12	-.1	.16	-.35
Emot. Stability	.13	-.06	.17	.01	.22	-.25	.06	-.04	-.13	-.03	-.18	-.1	.11	.02	-.04
Conscientiousness	-.17	.02	.19	.15	.23	-.18	-.09	-.16	-.11	.26	-.01	-.01	.03	-.03	.00
Extraversion	.06	.01	-.06	.09	.13	-.12	.16	.12	-.01	-.24	-.23	-.14	-.11	.15	.01
Openness	-.06	.01	.08	-.01	.08	-.08	.06	.07	.07	.11	-.04	.01	-.11	-.24	.02
Employee	-.34	.08	.21	.14	.02	-.16	-.04	-.07	.15	.23	-.07	.05	-.02	-.00	.03
Facebook entertainment purpose	.13	.01	.02	-.21	-.21	-.13	.04	-.03	.19	.06	.19	-.06	.04	.17	-.08
Brand identification	-.44	-.24	.21	.08	-.03	-.03	.10	-.01	.26	.23	.24	-.05	.10	.10	-.10
Linked to the brand	-.20	-.12	.20	.16	-.04	-.15	.06	-.12	.05	.14	.08	-.01	-.06	.09	.09

Table 6: Regression of the brand's core distance in the self-map on brand identification and on being linked to the brand Page, controlled for employee status and Facebook entertainment purpose. Negative coefficients indicate core proximity (Survey 3, $n = 72-86$).

	Brand's core distance			
	β	ΔR^2	β	ΔR^2
Employee	-.19	.11*	-.24	.11*
Facebook entertainment purpose	.22*	.01	.24	.01
Brand identification	-.44*	.10*		
Linked to a brand Page			-.25	.04
ΣR^2 :		.29*		.16*

* $p_{it} < .05$

5 Discussion

This research tested the proposition that linking oneself to a brand on Facebook is a matter of identity formation in the sense of self-completion. The results shall give companies a better understanding of the benefits being present and active on Social Networking Sites can have for their brands.

We reconsidered contemporary research, indicating Facebook to be a significant realm for identity formation (Döring, 2003; Ellison et al., 2011; Gilpin, 2011; Krämer & Haferkamp, 2011; Robinson, 2007; Zhao et al., 2008), and related these findings to classical theories of social psychology (e.g., Tajfel, 1974; Wicklund & Gollwitzer, 1981). Both theories, social identity theory and self-completion theory, are based on the consistency paradigm. Although social identity theory is the more prominent, for this paper we believe self-completion theory to be the more coherent as it proposes direct relations between the self and symbols (e.g., brands) instead of mediated self-relevance via group identification, which is more in line with our understanding of Facebook usage. Nevertheless, a model applying social identity theory instead is not rejected by our data. However, the notion of self-completion theory (Gollwitzer et al., 2009; Wicklund & Gollwitzer, 1981) led us to try visualising the self as a part of the representation of a brand the subject has linked her-/himself to on Facebook. Complementarily, as individuals are thought to claim self-definitions and support them with socially acknowledged symbols, the brand should become part of the representation of the self for brand-linked subjects.

The first part of the studies' results indicate that linking oneself to a brand on Facebook can be regressed to brand identification and self-relevance. Minor sub-samples who are linked for more extrinsic reasons (being an employee or using Facebook for entertainment purposes) could be identified and statistically controlled. Reflecting our questionnaire, we especially appreciate the Facebook Intensity

Scale (Ellison et al., 2007), which allows to differentiate two general Facebook usage factors: using Facebook for social purposes (high numbers of friends and groups) or for mere entertainment oriented purposes (time spent per day and number of brands linked to, Appendix 1; the latter ranging from 20-200 brands for the upper tenth part of the sample). The second factor is a fruitful variable, allowing us to incorporate some of the marketers' concerns into the statistical analysis. Consequently, by applying a stepwise regression procedure, the additional variance explained by brand identification or being linked to the brand could be tested more rigidly.

However, the focal results are attained by looking at the two cognitive maps (Figure 1 and 2), as well as the correlations of the core distances of the comprised terms (Table 3 and 5). The Cognitive Mapping method has been applied to visualise brands in the past (Müller et al., 2002; Strack et al., 2008). In Survey 2, the self was included as a predefined term for the cognitive map of the target brand. The resulting map shows that participants linked to the brand on Facebook tend to, and participants highly identified with the brand clearly do represent the self closer to the core of their cognitive map of the brand. Thus, they seem to perceive themselves to be a relevant aspect of that brand. More unambiguously, people with high brand identification and those linked to the brand on Facebook represent the brand and other aspects, that are closely connected to brand-services, as core concepts of (the cognitive map of) their self.

Attempting to represent the participants' individual selves by applying a method designed for socially shared constructs (i.e. Cognitive Mapping) also involved questioning the practicability of the method. The freelisting regarding the self (Survey 1) resulted in a large amount of conventional self-descriptive terms; terms more or less corresponding to the Big Five factors of personality, reflecting only one side of each personality dimension. Additionally, the individual distance matrixes resulted from the triple test (similarity task in Survey 3) support the application of Cognitive Mapping, because the representation of "the self" achieved a similar consensus as the representation of the brand in Survey 2 (mean_r = .22; both marginally smaller than reported by Strack et al., 2008, for strong brands). This conclusion is also supported by participants' readiness to apply the presented terms (Survey 3) to their self, and especially the convergent validity of the Big Five regarding the core distances in the cognitive map of the self. Accordingly, Cognitive Mapping can be considered a suitable method for measuring self-relevance or "the self". Moreover, the method allows to include different concepts in the form of terms, e.g., in this case brands. Therefore, Cognitive Mapping can be used to assess self-completion in an amazingly transparent and apparent way.

Although the design of the presented studies was cross-sectional and correlational only, it holds significant value for further understanding individuals' actions on Facebook.

The majority of people seems to be linked to brand Pages on Facebook for reasons of identification and self-relevance in the sense of self-completion theory.

With regard to their social media activities, companies need to consider that they touch their fans at a very vulnerable and equally valuable point, their self. Possibly, Facebook brand Pages could be used to actively increase brand identification among their consumers and thus bring up an indispensable, credible network of loyal brand ambassadors.

6 References

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Appendix A: Factor analysis of questions from the Facebook Intensity Scale (Ellison, Steinfield, & Lampe, 2007). The two varimax rotated factors were saved to maintain their orthogonality (Surveys 1-3, $n = 220$ participants using Facebook)

	<i>M</i>	<i>SD</i>	F1: Facebook usage for social purpose (26 % Variance)	F2: Facebook usage for entertainment purpose (23 % Variance)
The number of Facebook friends (open format)	257	196	.822	-.223
The number of Facebook organisations (open format)	10	36	.694	.206
The number of groups (open format)	6	12	.468	.005
The number of celebrities (open format)	7	11	.440	.235
The estimated time spent on Facebook per day (6 point rating, categories recoded by their average in minutes)	71	61	.148	.805
The number of brands linked to (open format)	9	21	-.032	.769

Appendix B: Brand Page Interaction scales. 5 point ratings from 1 = "never" to 5 = "very frequently" (Surveys 1-3, $n = 71$ linked participants)

How frequently do you do the following on Facebook?	<i>M</i>	<i>SD</i>	Dimension	Cronbachs α	<i>M</i>	<i>SD</i>	<i>r</i>
Visit a #brand Page	2.48	1.16					
Read posts by the #brand	3.22	1.21	Receptive	.773	2.91	1,01	1.000
Look at pictures by the #brand	3.10	1.23					
„Share“ posts of other followers of the #brand	1.81	0.97					
Comment on videos by the #brand	1.77	1.02	Active	.895	1.81	0.90	.365 1.000
“Share” videos by the #brand Page	1.83	1.00					
Take part in raffles, games etc. by the #brand Page	2.52	1.41					
Post onto the #brand Page	2.08	1.03	Incentive	.738	2.14	0.95	.459 .537 1.000
Comment on posts by the #brand	1.80	1.04					Receptive Active Incentive

Note: The German version of the 9 Items (or of the initial set of 23 items) can be requested from the first author.