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Why men and women continue to use social networking sites: The role of gender differences

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ABSTRACT

Organizations increasingly use social media and especially social networking sites (SNS) to support their marketing agenda, enhance collaboration, and develop new capabilities. However, the success of SNS initiatives is largely dependent on sustainable user participation. In this study, we argue that the continuance intentions of users may be gender-sensitive. To theorize and investigate gender differences in the determinants of continuance intentions, this study draws on the expectation-confirmation model, the uses and gratification theory, as well as the self-construal theory and its extensions. Our survey of 488 users shows that while both men and women are motivated by the ability to self-enhance, there are some gender differences. Specifically, while women are mainly driven by relational uses, such as maintaining close ties and getting access to social information on close and distant networks, men base their continuance intentions on their ability to gain information of a general nature. Our research makes several contributions to the discourse in strategic information systems literature concerning the use of social media by individuals and organizations. Theoretically, it expands the understanding of the phenomenon of continuance intentions and specifically the role of the gender differences in its determinants. On a practical level, it delivers insights for SNS providers and marketers into how satisfaction and continuance intentions of male and female SNS users can be differentially promoted. Furthermore, as organizations increasingly rely on corporate social networks to foster collaboration and innovation, our insights deliver initial recommendations on how organizational social media initiatives can be supported with regard to gender-based differences.

1. Introduction

Over the last decade, social networking sites (SNSs) have evolved from being purely hedonic platforms for private use into potent organizational tools used both internally within an organization and externally for communication and collaboration with various stakeholders (Aral et al., 2013; Jarvenpaa et al., 2015). Internally, embedding SNSs within organizations has been linked to enhanced participation (Denyer et al., 2011; Haefliger et al., 2011) and communication (Miles and Mangold, 2014), empowering employees with a voice in organizational matters. As the workforce becomes increasingly

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mobile, the social fabric created by social media may promote a greater sense of connectedness among employees, enhancing their commitment (Huang et al., 2015) and innovative performance (Ali-Hassan et al., 2015). Externally, SNSs have triggered unprecedented changes in customer relationship management, turning customers into co-creators of company value (Benthaus et al., 2016). Indeed, with 1.18 billion users on Facebook alone (Facebook, 2016), SNSs present companies with unique opportunities to connect with their customers, hear their voice, and engage with them on a more personal level. So far, company participation on social media has been linked to improvements in company reputation (Kim and Ko, 2010), customer equity (Kim and Ko, 2012), and even enhanced purchase behavior (Goh et al., 2013). Considering this potential for value, executives increasingly view social media as "a key strategic enabler" (Huang et al., 2015, p. 58).

However, this potential of SNSs to create value within and beyond an organizational context is contingent on users' willingness to continue using the platform, also known as their *continuance intentions* (Bhattacherjee, 2001). Many SNS providers have not managed to retain the interest of their audiences for long. In the private domain, platforms like Friendster, MySpace, StudiVZ, and Bebo – all once successful – lost members after a relatively short time. Even the SNS giant Facebook is not immune to these threats, as it continues to face a decline in users among its key demographics, such as teenagers (Olson, 2013). Marketers also struggle with shrinking organic reach on Facebook (Constine, 2014), making it increasingly harder for them to sustain user engagement with brand content. Similar trends have been also reported in the enterprise context, with less than half of corporate social networks used regularly (Li, 2015). Indeed, inability to sustain continued use is among the key factors behind failed information technology (IT) initiatives (e.g., Karahanna and Straub, 1999). Considering these dynamics, identifying and addressing the determinants of continuance intentions is a critical task not only for SNS providers but also for organizations who rely on social media to support their marketing strategy and employee collaboration (Jarvenpaa et al., 2015; Chang and Zhu, 2012; Chiu and Huang, 2015; Shi et al., 2010).

So far, multiple studies have attempted to identify the determinants of SNS continuance intentions, mainly in private use (e.g., Sledgianowski and Kulviwat, 2008). However, most of these studies treat SNS users as a homogeneous entity, ignoring potential group differences (Teo and Lim, 2000). At the same time, the increasing diversity of the SNS audience calls for a differential approach to encourage continued user participation. Gender differences in particular may have a pronounced effect on user willingness to further engage with a platform (e.g., Lin et al., in press). Indeed, past studies have identified significant differences in the patterns of IT use by men and women (e.g., Venkatesh and Morris, 2000; Venkatesh et al., 2012), suggesting that the determinants of continuance intentions of male and female SNS members may also differ.

From the perspective of strategic information systems, understanding gender differences in the continued use of SNSs is critical for several reasons (Lin et al., in press). First, gender groups are, by definition, the largest and easiest for SNS providers and marketers to identify. This is because indicating gender is typically required for registration on SNSs and the overwhelming majority of SNS users leave their gender information public (Gross and Acquisti, 2005). Therefore, obtained knowledge on gender differences can be leveraged in ad targeting, feature selection, and interface design. Second, since more and more companies rely on social media brand communities (e.g. private Facebook groups) to build trust and fuel interaction (Porterfield, 2016), they might use their knowledge of gender differences to adjust their communication and copywriting to better cater to the specific needs of their audiences. This is particularly important considering the constantly decreasing levels of organic reach for Facebook pages (Constine, 2014). Third, in contrast to traditional patterns of IT diffusion that emphasize the role of male users as early adopters (Laukkanen and Pasanen, 2008), social media is increasingly popular among women (socialbakers.com, 2014). Women are also more prone to generate word-of-mouth on social media, by commenting, posting, and "liking" content (Hampton et al., 2012, 2011), as well as recommending products to others (Goudreau, 2010; Levey, 2011). Since user-generated word-of-mouth has a stronger impact on consumer purchase behavior than marketer-generated content (Goh et al., 2013), providers and marketers have a special interest in understanding and supporting engagement of the female user segment. Overall, by identifying and addressing the unique characteristics of gender-based groups, platform providers may hope for significant improvements in the sustainability of their user base (Shi et al., 2009, 2010).

Nonetheless, systematic research that addresses gender differences in the context of SNSs is: (1) limited; (2) mainly built around theories of continued information systems (IS) use rather than directed by gender-related theorizing (Shi et al., 2009); and (3) primarily focused on capturing absolute differences in perceptions and behavior of male and female SNS users (Hampton et al., 2011), as opposed to taking a more theory-driven view of the phenomenon (Trauth, 2013). To fill this research gap, we investigate the following research question: What are the gender differences in the determinants of continuance intentions of SNS users?

The remainder of this paper is structured as follows. In the subsequent section, we draw on the expectation-confirmation model (Bhattacherjee, 2001) as well as the uses and gratification theory (Blumer and Katz, 1974) to develop the conceptual model for our study. Specifically, we conceptualize SNS continuance intentions as the outcome of users' satisfaction, which in turn is determined by the gratifications[1] users obtain on an SNS. Next, the theory of gendered self-construal is used to derive the role of gender in the relationships outlined in our model. In the following step, we derive hypotheses about the moderating role of gender in defining the impact of various gratifications on user satisfaction, and thereby, continuance intentions. After this, we test our hypotheses on a sample of 488 SNS users. We conclude by discussing our findings, their theoretical and practical implications, as well as the limitations of this study and related avenues for future research.

[1] The terms "benefit" and "gratification" are used interchangeably in this study.

2. Theoretical framework

2.1. Understanding continuance intention in social networking sites

Defined as the strength of a user's resolve to keep using a system (Ahuja and Thatcher, 2005, p. 431), *continuance intentions* have been intensively studied in the past across a number of contexts (e.g., Bhattacherjee and Barfar, 2011). To provide a theoretical basis for understanding gender differences in the determinants of continuance intentions regarding SNSs, in this study we build on two prominent theories: the expectation-confirmation model (ECM) (Bhattacherjee, 2001) and the uses and gratification theory (U&G) (Blumer and Katz, 1974). While the ECM provides a general framework for our theorizing of SNS users' continuance intentions, the U&G theory brings focus to the specific benefits that may motivate the users to continue using the platform.

Frequently used in the context of private SNS use (e.g., Chang and Zhu, 2012; Kim, 2011; Shi et al., 2010), the ECM represents a leading perspective on modeling continuance intentions in the IS context (Bhattacherjee, 2001). According to the ECM, *users' satisfaction* – defined as affective state of appraisal following IS use – is the strongest predictor of continuance intentions in IS (Bhattacherjee and Premkumar, 2004). In turn, users' satisfaction is formed at the intersection of prior perceptions of *perceived usefulness* – a chief benefit of utilitarian IS systems – and *post-adoption confirmation of users' beliefs*, which reflect "users' perception of the congruence between expectation of [the system] use and its actual performance" (Bhattacherjee, 2001, p. 359). Further developments of the ECM have broadened its scope, suggesting that other benefits of IS use, beyond just perceived usefulness, should also be considered, especially for non-utilitarian types of IS (Bhattacherjee and Premkumar, 2004; Bhattacherjee and Barfar, 2011; Zhou et al., 2014).

In this context, the U&G perspective emerges as particularly important, as it sheds further light on the relationship between individual behavioral intentions and perceptions of benefits. According to the U&G theory, individuals actively choose media based on their needs (Blumer and Katz, 1974), and select the medium that best gratifies these needs. Further, if individuals perceive the obtained gratifications to be satisfactory, they will continue their usage (Ku et al., 2013). Thus, the theory does not only help to explain media selection, but also addresses aspects of continued use (Chiu and Huang, 2015). Two main assumptions underlie the U&G theory (Papacharissi and Mendelson, 2011). First, it is assumed that individuals actively select and use the medium. This assumption holds for the context of SNSs as switching costs are low and there is a wide variety of SNSs available, allowing users to actively select the SNS that best fits their preferences. Second, selection and usage of the medium is assumed to be goal-directed. Specifically, users are expected to choose the medium on purpose and not spontaneously. Moreover, if a medium (e.g., SNS) does not fulfil certain needs, it is assumed that a user will look for another media outlet that is better suited to meet his or her goals.

Similar to the ECM, the U&G theory differentiates between prior and post-adoption beliefs of media users. Specifically, a key distinction between *gratifications obtained* and *gratifications sought* is often made (Palmgreen et al., 1980). Similar to prior perceptions (e.g., perceived usefulness) captured in the ECM, *gratifications sought* are expectations about a medium prior to the real usage. In contrast, *gratifications obtained* are realized after the medium has been selected, which partly corresponds to disconfirmation beliefs focal for the ECM. Importantly, once users have been using a medium for a prolonged period of time, *gratifications obtained* and *gratifications sought* are likely to converge (Palmgreen et al., 1980). Considering that a large share of SNS users have been participating on popular SNSs for several years (e.g., Facebook, 2016), it is plausible to assume that similar effects could be also observed on these platforms.

Fig. 1 conceptually summarizes the key relationships in our study. Building on the propositions of the ECM and the U&G theory, in this study, SNS continuance intention is modeled as the outcome of users' satisfaction, considering the paramount role of this construct according to the ECM (Bhattacherjee, 2001; Zhou et al., 2014). In turn, gratifications obtained are seen as drivers of users' satisfaction, with gender acting on this relationship. While this approach represents a simplification of the original ECM (in which perceived gratifications also directly influence continuance intention), it is justified by our primary focus on gender as a key variable of our investigation, with a number of gender-related studies following this route (Zhou et al., 2014; Shi et al., 2009, 2010).

2.2. Gratifications obtained on social networking sites

While a variety of gratifications have been the focus of research that studies actual usage and continuance intentions of SNS users, relationship building, self-enhancement, informational benefits, and enjoyment are among the most common

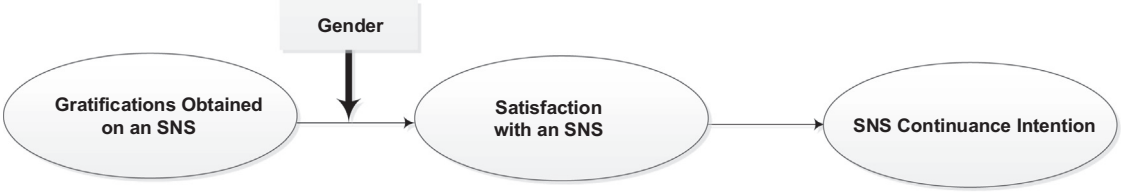

Fig. 1. Conceptual model.

Table 1
SNS gratifications: overview of selected studies.

No	Source	Dependent Variable/Focus	Gratifications				
			Relationship Building	Self-Enhancement	Informational Benefits	Enjoyment	Other Benefits
Empirical Studies Using Causal/Correlational Analysis (Structural Equation Modeling, Regression Analysis)							
1	Basilisco and Cha (2015)	SNS Usage	✓		✓	✓	yes
2	Chang and Zhu (2012)	Satisfaction → Continuance Intention				✓	yes
3	Cheung et al. (2011)	We-Intention	●	✓	●	✓	yes
4	Chen and Kim (2013)	Problematic SNS Use	(✓)	✓	●	●	yes
5	Chiu and Huang (2015)	(Mediators) → Continuance Intention	✓		✓	✓	yes
6	Curras-Perez et al. (2014)	Attitude → Use Intention	✓	●		✓	no
7	Jung et al. (2007)	Update Frequency	●	✓		✓	yes
8	Huang et al. (2014)	Intention to Revisit (hypothesized model)	✓			✓	no
9	Kim et al. (2011)	Attitude (U.S. sample)	✓		●	✓	yes
10	Kim (2011)	Continuance Intention				✓	yes
11	Krasnova et al. (2010a)	Self-Disclosure	✓	●		✓	yes
12	Krasnova et al. (2008)	Participation	✓	✓	●		yes
13	Ku et al. (2013)*	Continuance Intention (overall sample)	✓	✓	✓	✓	no
14	Lin and Lu (2011)	Continued Intention	(✓)		(✓)	✓	no
15	Shi et al. (2009)	Satisfaction → Continuance Intention	✓			✓	no
16	Shi et al. (2010)	Satisfaction → Continuance Intention	(✓)		✓	✓	no
17	Sledgianowski and Kulviwat (2008)	Intention to Use				✓	yes
18	Smock et al. (2011)	Time on SNS	✓	✓		✓	yes
19	Thambusamy et al. (2010)	Hedonic Benefits → Information Privacy-Protective Responses → Intention to Use		✓		✓	yes
20	Wei et al. (2015)	Attitude → Intention to Stick	✓		(●)		yes
21	Xu et al. (2012)	SNS Usage	✓	●		✓	yes
Descriptive, Exploratory, Qualitative Studies (Exploratory Factor Analysis, Grounded/Content Analysis, Meta Review, Conceptual)							
22	Florenthal (2015)	Uses and Gratifications	□	□	□		yes
23	Bonds-Raacke and Raacke (2010)	Motivations for Use	□		□		yes
24	Brandtzæg and Heim (2009)	Motivations for Use	□		□	□	yes
25	Bumgarner (2007)	Motivations for Use	□	□	□		yes
26	Jackson and Wang (2013)	Motivations for Use	□		□		no
27	Joinson (2008)	Motivations for Use	□		□		yes
28	Hew (2011)	Motivations for Use	□	□	□	□	yes
29	Koroleva et al. (2011)	Outcomes of Use	□		□		yes
30	Park et al. (2009)	Motivation to participate in FB Groups	□	□	□	□	no
31	Quan-Haase and Young (2010)	Motivations for Use	□		□	□	yes
32	Raacke and Bonds-Raacke (2008)	Motivations for Use	□		□		yes
33	Special and Li-Barber (2012)	Motivations for Use	□			□	yes
34	Spiliotopoulos and Oakley (2013)	Motivations for Use	□		□		yes
35	Whiting and Williams (2013)	Uses and Gratifications	□	□	□	□	yes
36	Xu et al. (2010)	Perceived Benefits	□	□			yes

Note: ● - Factor tested, but not significant; ✓- Factor tested and significant ($p < 0.05$; few at 0.1 level); □ - Factor identified using qualitative or descriptive methods; (✓) or (●) - Ambiguous interpretation or measurement; *Gratifications measured as a formative construct.

gratifications attributed to SNS use (Table 1 lists selected studies). Defined as "the value users derive from being able to efficiently and easily stay in touch" and develop friendships (Krasnova et al., 2010a, p. 112), *relationship building* has consistently been established as a core determinant of users' participation (Boyd and Ellison, 2007) and satisfaction with SNSs (Shi et al., 2010). For example, Smock et al. (2011) show that relationship building motivates a plethora of SNS activities, including commenting, wall posting, use of private messaging, chatting, and group participation. The definition and operationalization of this construct varies across studies. While some studies differentiate between the use of SNSs to support existing

friendships (Ku et al., 2013) and to find new acquaintances (Kim et al., 2011), most combine these two aspects into one "relationship building" construct (e.g., Park et al., 2009).

SNSs also provide the ability to broadcast information and ideas to others in an asynchronous and controllable fashion, creating vast possibilities for self-presentation (Jung et al., 2007; Thambusamy et al., 2010). As a result, the benefits of self-enhancement may accrue. Defined as "the value users derive from being able to improve their self-concept" (Krasnova et al., 2010a, p. 112), *self-enhancement* is common when users share about their professional lives (Coursaris et al., 2013), appearance (Buffardi and Campbell, 2008), and relationships with others (Tifferet and Vilnai-Yavetz, 2014), just to name a few.

Defined as the increase in the range of things that someone is aware of, knows about, has experienced or is able to do as a result of SNS use (Koroleva et al., 2011, p. 6), *informational benefits* represent another type of gratification SNS users may obtain. Indeed, the global processes of information diffusion common for SNSs allow users to learn new things within and outside of their usual boundaries (Bakshy et al., 2012), which may motivate their continued participation. So far, existing research has mainly focused on *general information* about events, trends, and business news as a major informational benefit of SNSs (e.g., Koroleva et al., 2011). In contrast, Krasnova et al. (2015, p. 4) argue that *social information* – defined as "information about others, including user-related news, facts, and opinions" – is another informational benefit of SNSs.

Finally, reflecting the value users derive from having pleasant and enjoyable experiences on SNSs, *enjoyment* is often seen as a gratification, both following from and motivating SNS use (e.g., Krasnova et al., 2010a; Brandtzæg and Heim, 2009). However, numerous studies from social psychology view pleasure rather as a consequence of satisfying other motives (Reiss, 2004). Moreover, since satisfaction reflects a user's affect towards the system, user enjoyment could rather be viewed as a constituent part of a user's perceptions of satisfaction rather than its motivational determinant. For example, Baloglu (2002) singles out emotional commitment to the brand, reflected in the level of enjoyment and liking, as an important component of customer loyalty. Hence, in this study, the enjoyment gratification is not included as an antecedent of users' satisfaction and continuance intentions, but is rather viewed as an integral component thereof.

Therefore, in this study we focus on three key groups of gratifications obtained on SNSs – relationship building, self-enhancement, and informational benefits – as key determinants of users' satisfaction and, hence, continuance intentions. In the following sections, we develop a theoretical basis for explaining the moderating role of gender in these relationships.

2.3. Gender differences in the theoretical discourse

A number of theoretical frameworks have been used to organize and explain differences in the perceptions and behavior of men and women in both offline and online settings, wherein the role of evolutionary (Buss, 1988) and social factors (Eagly and Wood, 1991) has been particularly emphasized. Evolutionary psychology explains gender differences by human ancestral past, in which both men and women competed to assure reproductive success (Darwin, 1871), with women taking on a larger share of parental investment and men establishing themselves in their role of providers (Buss, 1988). Over thousands of years this role separation fostered women to be more caring towards others, but at the same time more selective towards their mating partners. At the same time, men were motivated to be more industrious and competitive as they aspired to gain access to the best mating opportunities as well as provide for their offspring (Stewart-Williams and Thomas, 2013). Complimentary approaches from social psychology view gender differences as an outcome of societal role expectations (Eagly et al., 2000). In other words, sex differences are socially constructed in "response to the particulars of the local situations and histories" (Wood and Eagly, 2002, p. 700). As a result, men and women self-select into socially endorsed gender patterns, as they learn those from observing and socially interacting with others.

Extending these theories, a recent view on gender differences as a product of diverging *self-construal* – the core of one's self-definition – has gained significant recognition (Cross and Madson, 1997; Baumeister and Sommer, 1997; Martin and Ruble, 1997). Self-construal is at the root of an array of mental processes, including information processing, emotional regulation, and volition (Cross and Madson, 1997; Maddux and Brewer, 2005). Consequently, self-construal underlies many human behaviors, directing the decisions and intentions of the subject. Fueled by in-born differences, socially-endorsed views and structures brand the self-construal of men and women in distinct ways (Cross and Madson, 1997). For example, since childhood, men and women socialize and are socialized differently. Since perceptions of others are typically developed on the basis of one's self-views (Carpenter, 1988), these differences in socialization are likely to result in diverging attitudes towards social ties, social information, as well as distinct behavioral patterns in social environments (Cross and Madson, 1997; Gabriel and Gardner, 1999).

Considering the focus of SNSs on identity construction in a public social environment, effects of self-construal are likely to be particularly pronounced in these settings. This is because most public engagement is self-conscious (Boyd and Ellison, 2007; Gonzales and Hancock, 2011), suggesting a guiding role of individual self-construal in users' behavior on the network. Against this background, in this study we focus on the self-construal perspective to guide our theoretical efforts. Our study represents one of the few theory-guided efforts to explain gender differences in the continued use of IS in general and on SNSs in particular (e.g., Trauth, 2013).

2.4. Self-construal as a source of gender differences: relational versus collective interdependence

A number of competing perspectives organize and explain differences in gendered self-construal. Building on an extended literature review, Cross and Madson (1997) attribute independent self-construal to men and interdependent self-construal

to women. According to the authors, from a very early age, girls are expected to be social and nurturing. Their play is also more private, exclusive, aimed at cooperation, and often has no specific goal (Lever, 1976; Jackson et al., 2001). Consequently, women develop a more pronounced tendency towards interdependence, defining themselves in terms of their connectedness to others (Baumeister and Sommer, 1997). In contrast, boys are encouraged to be independent and assertive. They are also more likely to play competitive outdoor games in larger and more age-heterogeneous groups (Lever, 1976), which fosters their autonomy and strengthens their desire to keep up with others. Thus, men learn to define themselves in terms of their separateness from others, drawing their self-esteem from the level of independence and autonomy (Cross and Madson, 1997).

Subsequent studies, however, have challenged this view on the male desire to achieve total independence (Baumeister and Sommer, 1997; Gabriel and Gardner, 1999). Relying on the belongingness theory (Baumeister and Leary, 1995), Baumeister and Sommer (1997, p. 38) argue that since the urge for interdependence is universal, both men and women actively seek to satisfy their need for social connection, albeit "in different spheres and (hence) with different strategies and by different criteria". Specifically, the pursuit of *collective interdependence* is better aligned with the male self-construal, with men striving to expand their social network and establish themselves within a broader social unit (Baumeister and Sommer, 1997; Ajrouch et al., 2005). At the same time, achieving *relational interdependence* is the primary focus for women. The latter is in line with the views of Cross and Madson (1997), and implies a tight interconnection between the definition of self and social context, so that individual goals reflect a "heightened concern with close relationships" (Gabriel and Gardner, 1999, p. 643).

A growing body of research supports the relational versus collective interdependence view on female and male self-construal across a variety of sought-after gratifications (Gabriel and Gardner, 1999; Melnyk et al., 2009), including relationship building, informational and self-enhancement benefits that motivate continued usage of SNSs (see Fig. 1). For example, when it comes to relationship building, women are found to be more likely to describe themselves in terms their relatedness to close others (Gabriel and Gardner, 1999) and trust those who share a relational connection with them (Maddux and Brewer, 2005). At the same time, men are more prone to define themselves in terms of their group membership (McGuire and McGuire, 1982), and exhibit higher loyalty to companies and organizations (Melnyk et al., 2009). Similar dynamics can also be observed in the information processing of men and women. For example, Gabriel and Gardner (1999) find that women have a greater recall of relational events, whereas men remember collective events more.

Differences in self-construal are also visible in the content of self-enhancement both men and women rely on. Since achieving collective interdependence implies establishing oneself within "a broader social structure with a larger number of people" (Baumeister and Sommer, 1997, p. 39), underlining abilities, competencies, and importance emerges as a viable strategy to enhance self-esteem and gain social acceptance (Gefen and Straub, 1997). Indeed, empirical findings show that boasting about abilities (Maccoby and Jacklin, 1974) and making self-congratulatory comments (Frey and Ruble, 1987) is more common for boys. In contrast, women seek ways to positively stand out in other areas that are better aligned with the criteria of social acceptance inherent in their relational orientation (e.g., Ickes et al., 1986). For example, considering that physical attractiveness has been traditionally viewed as a "ticket to social acceptance" for women, significant emphasis on appearance exists among the female population (Baumeister and Sommer, 1997, p. 41; Jackson et al., 1988). Women are also more likely to discuss their social, family, and romantic relationships off- and online (Mazur and Kozarian, 2010; Liu and Mihalcea, 2007; Argamon et al., 2007), which matches with their relational preferences (McGuire and McGuire, 1982).

Relational interdependence of women and collective interdependence of men can also be traced in technology contexts. For example, when it comes to new technology adoption, women are more influenced by opinions of others and relational uses (Venkatesh and Morris, 2000). Furthermore, early research on the Internet use has found women to be more likely to use email and other communication platforms, signaling relational uses of IT by women (Jackson et al., 2001; Boneva et al., 2001; Gefen and Ridings, 2005; Joiner et al., 2005). At the same time, men spend more time researching the Web on a variety of issues or to solve certain tasks (Gefen and Ridings, 2005), an activity which may make them more relevant in the group context. While a full overview of studies on gender and IT use is beyond the scope of this paper, available findings from off-line and technology contexts provide evidence for the existence of relational and collective orientation in the self-construal of women and men. This suggests that these differences may impact the behavioral determinants and perceptions of SNS users as discussed in the following sections.

2.5. Understanding the influence of gendered self-construal on SNSs

SNSs are designed to support interpersonal connections as their major value proposition. Therefore, SNSs may functionally empower users with both types of interdependence. By enabling users to connect and exchange social information within a circle of close friends, SNSs may support the relational orientation of female users. At the same time, male users who seek collective interdependence have means to grow large social networks of acquaintances, establish their position within these networks, and informationally gain from them. Hence, both men and women may benefit from the functional affordances of SNSs, although in different ways. Indeed, even though research findings remain controversial, there is growing evidence that men and women use SNSs in line with their collective and relational self-construal, respectively (see Table 2).

Specifically, in terms of their relationship building behavior, male users of SNSs are more proactive. They are more likely to send friend requests (Hampton et al., 2012), look at profiles of other people to find friends (Haferkamp et al., 2012), and organize their SNS use around their hobby or interest (Smith, 2011; Zhang et al., 2013), which is characteristic of the

Table 2
Selected evidence for the presence of gendered self-construal across key gratifications.

	Evidence for Female Relational Interdependence	Evidence for Male Collective Interdependence
Relationship Building	Focus on **closer** relationships • Female SNS users report a higher proportion of family contacts than male users (Binder et al., 2009). • Women are more likely to mention family connections as a major reason for using Social Media (Smith, 2011). • Women are more satisfied with the ability of FB to help maintain relationships (Special and Li-Barber, 2012). • Effect of disconfirmation of maintaining offline contacts on satisfaction is more important for women on SNS (Shi et al., 2009). • Women attach greater importance for such "uses" of SNS as 'social connection' (Joinson, 2008). • Women are more likely to use SNSs to keep in touch with existing friends (Tufekci, 2008). • Women are more interested in friendships on SNSs (Thelwall, 2008). • Female users focus more on their top friends (Backstrom et al., 2011). • Females are more likely to report feeling closer to SNS friends than those seen daily (Thompson and Lougheed, 2012).	Focus on **broader** network • Men are more likely to look at other people's profiles to find friends (Haferkamp et al., 2012). • Men are more likely to send friend requests (Hampton et al., 2012). • Men more often check the number of friends of their friends (McAndrew and Jeong, 2012). • Male respondents are more likely to list friends with the same interest/activity (Zhang et al., 2013). • Men use SNS for "making new relationships" more than the females (Mazman and Usluel, 2011). • Men are more influenced by peer pressure from new friends on an SNS (Benson et al., 2010). • Men are slightly more likely to use Social Media to connect around a hobby or interest (Smith, 2011). • Men are more interested in online bridging capital than in family capital on SNSs; have networks that are more formal; and reflect their employment or occupational status (Brandtzæg et al., 2010). • Male users are less interested in future family contacts on SNSs (Brandtzæg et al., 2010).
Information Processing	Focus on **social information** • Women are more likely to ask home and family questions (Morris et al., 2010). • Females are more interested in social topics (Lester et al., 2012)	Focus on **general information** • Men are more likely to ask technology-related questions on SNS (Morris et al., 2010). • Men are more likely to use SNS to learn about events (Raacke and Bonds-Raacke, 2008). • Male students more likely to use SNS for educational purposes (Hall et al., 2013). • Male fans follow social networks more frequently for sports-related reasons (Oezsoy, 2011).
Self-Enhancement	**Self-enhancement** • Women stress attractiveness and affiliative disposition; they are perceived to work harder on profiles especially in terms of physical beauty (Manago et al., 2008). • Females more likely to reveal social conditions, such as relationship status, household, and kids (Kisilevich et al., 2012). • Women are more likely to write about family, romantic relationships, friendships (Jones et al., 2008). • Women are over 2.5 times more apt to mention their significant other in the "About Me" section (Magnuson and Dundes, 2008). • Women are more likely to stress relationships, feelings, partying on an SNS (Sveningsson Elm and Sundén, 2007). • Females accentuate familial relations in photos on SNS (Tifferet and Vilnai-Yavetz, 2014). • Women are more likely to have attractive and fun photos (Buffardi and Campbell, 2008). • Women are more likely to self-promote in the "Main Photo" section (Mehdizadeh, 2010).	• Men are more likely to promote their work on SNS (Smith, 2013). • Men stress strength and power in their portrayals (Manago et al., 2008). • Men are more likely to mention sports, humour, motor vehicles, exposure of status, technology, politics, and heterosexuality (Sveningsson Elm and Sundén, 2007). • Men provide more information about political and religious views (Nosko et al., 2010). • Men are more likely to engage in one-to-many public communication (Underwood et al., 2011) and share information about themselves (Bonds-Raacke and Raacke, 2010). • Men are more likely to use SNS to seek social compensation, and social identity gratifications (Barker, 2009). • Men are higher in self-status seeking motivation on SNS (Dong et al., 2012). • Men are more likely to post risky pictures (involving sex or alcohol) (Peluchette and Karl, 2008); have a profile photo with raised middle finger, hands in pockets, and erect posture (Kane, 2008).
	• No difference in self-presentation (Boyle and Johnson, 2010). • No difference regarding the amount of information disclosed in their online profiles (Nosko et al., 2010). • For teenagers, no difference in sharing self-created content (Lenhart et al., 2010). • Men and women equally likely to have "Groups" and "Interests" sections on their profiles (Kolek and Saunders, 2008).	

individual pursuit of collective interdependence. Women, on the other hand, report a higher proportion of family contacts (Binder et al., 2009), are more likely to use SNSs to maintain ties to existing friends (Tufekci, 2008), and engage in family activity (McAndrew and Jeong, 2012), thereby manifesting their relational interdependence.

Similarly, gender differences in self-construal appear to permeate informational uses of SNSs. Specifically, women have been shown to express greater interest in social topics (Lester et al., 2012), as well as home and family questions on SNSs (Morris et al., 2010), which is helpful in maintaining close social ties, and fits relational self-construal. At the same time, male users exhibit greater inclination towards issues of a more general nature, such as technology (Morris et al., 2010), sports (Oezsoy, 2011), and education (Hall et al., 2013), which may enhance their competence and thereby strengthen their position in a group – motivation that aligns with collective orientation.

Finally, both men and women appear to rely on SNS capabilities to engage in self-enhancement (Boyle and Johnson, 2010; Nosko et al., 2010), albeit focusing on distinct areas that are congruent with their type of interdependence. Specifically, men are more likely to emphasize strength and power in their visual portrayals, appearing risky (Peluchette and Karl, 2008), aggressive (Kane, 2008) and self-promoting (Caverlee and Webb, 2008; Fogel and Nehmad, 2009; Manago et al., 2008; Thelwall, 2008). In contrast, women tend to emphasize their affiliative disposition (Manago et al., 2008), are more likely to share about their familial and romantic relationships (Jones et al., 2008), as well as work to impress with their physical attractiveness on SNSs (Manago et al., 2008; Raacke and Bonds-Raacke, 2008; Buffardi and Campbell, 2008). As such, these approaches to self-enhancement may help men and women in strengthening their positions in broader and closer social circles, respectively (Cross and Madson, 1997).

Taken together, it appears that differences in self-construal permeate the way men and women use and benefit from SNSs. However, the presence of these differences in the motivational structure of male and female users on SNSs has not been systematically explored. Therefore, we build on the concepts of relational and collective interdependence to hypothesize that satisfaction and consequently continuance intentions of SNS users are likely to be differentially influenced by such gratifications as relationship building, informational benefits, and self-enhancement. In the next section, we dissect these three groups of gratifications with regard to their applicability to relational and collective self-construal of women and men respectively.

3. Research hypotheses

3.1. Relationship building

So far, SNS research has mainly explored the importance of the overall ability of SNSs to establish and support relationships with others (e.g., Park et al., 2009). However, differences in self-construal may accentuate the type of relationships individuals are seeking to establish and maintain on SNSs. Hence, based on characteristics of relational and collective interdependence, a critical distinction between two types of relationship building gratifications should be made: ability to maintain ties with close friends and ability to broaden one's social network.

3.1.1. Maintaining ties with close friends

In line with their expected predisposition towards relational orientation, women have been consistently shown to seek close relationships with others, focus on rapport and cooperation, and define themselves in terms of their connectedness (Cross and Madson, 1997). By allowing users to select friends, define groups, and facilitate information exchange across social circles, SNSs may support these preferences. Indeed, female SNS users focus more on their top friends (Backstrom et al., 2011), are more interested in supporting friendships (Thelwall, 2008), and report feeling closer to SNS friends than those seen daily (Thompson and Lougheed, 2012). Moreover, women are more privacy sensitive and use privacy controls more on SNSs (Bonds-Raacke and Raacke, 2010), which signals their interest in maintaining an existing circle of friends and their reputation within it. Overall, considering the congruence of female relational goals and system capabilities to support close relationships, we expect women to place greater weight on the ability to maintain close friendships on SNSs. Conversely, when unable to develop closeness – for example, due to low SNS adoption by peers, lack of privacy, or public and therefore non-intimate nature of communication – women are likely to be more dissatisfied with their SNS experience than their male counterparts. Hence, we hypothesize that:

Hypothesis H1. The ability to maintain ties with close friends will have a stronger positive association with users' satisfaction with an SNS for female than for male SNS users.

3.1.2. Broadening social network

Beyond developing closeness, SNSs allow users to create and expand their social network by offering convenient tools for finding new contacts and connecting with them. Moreover, established social norms make friendship requests less intrusive and more acceptable than in offline encounters (Krasnova et al., 2010b), which fits well with the collective self-construal attributed to men. Indeed, available findings support this view: male users are found to be more promiscuous in their network building behavior (Hampton et al., 2012; Mazman and Usluel, 2011), more likely to use social platforms to connect around a hobby or interest (Smith, 2011), and have networks that reflect their employment or occupational status (Brandtzæg et al., 2010), rather than their familial connections (Brandtzæg et al., 2010). Signaling their openness to a larger network of acquaintances, men are also more likely to make their profile visible to everyone (Tufekci, 2008) and disclose their contact information (Special and Li-Barber, 2012). Taken together, by tapping into the essence of collective interdependence, perceived ability of SNSs to broaden one's network is likely to be a more powerful determinant of satisfaction for men. Hence, we hypothesize that:

Hypothesis H2. The ability to broaden one's social network will have a stronger positive association with users' satisfaction with an SNS for male than for female SNS users.

3.2. Informational benefits

SNSs represent large databases of information of all kinds. As mentioned above, a distinction between two types of informational benefits is often made. While *general information* subsumes topics of general interest (Koroleva et al., 2011; Ku et al., 2013; Chiu and Huang, 2015), *social information* includes news regarding others in the network (Krasnova et al., 2015). Building on the characteristics of relational and collective interdependence, in this study we additionally differentiate between *social information on close friends* and *social information on a broader network*.

3.2.1. General information

Guiding principles inherent in one's self-construal are likely to influence individual attention and memory for information users encounter on SNSs (Markus, 1977). Therefore, individuals with collective self-construal are likely to be more attentive to the information that exceeds the frames of their relational context, which may include news, developments in the world, politics, and other topics of broader interest. This knowledge may be more beneficial for them, as obtained competencies may help to improve their position in the collective (Baumeister and Sommer, 1997). Consistent with this view, research of the Internet use has revealed that male users are more goal-oriented, striving to inform themselves on a variety of issues online (Boneva et al., 2001; Gefen and Ridings, 2005; Joiner et al., 2005). Similarly, male blog contributors are more interested in the general informational aspects of blogging (Pedersen and Macafee, 2007). In the SNS context, male users are also more likely to broadcast their general ideas and links as well as discuss the shared content with others in their network (Underwood et al., 2011). Based on these insights, we hypothesize that:

Hypothesis H3. The ability to inform oneself on general topics will have a stronger positive association with users' satisfaction with an SNS for male than for female SNS users.

3.2.2. Social information on close friends

Assuming female predisposition towards relational interdependence, it can be expected that women will be more likely to attend to social information relevant for their close relationships (Cross and Madson, 1997; Baumeister and Sommer, 1997). This is because individuals become sensitive to the deeply-entrenched mental structures, and hence are better predisposed to process stimuli that correspond to them (Markus, 1977). Since females are assumed to have greater relational tendencies, and the exchange of social information is a critical determinant of intimacy development and friendship longevity (Jourard, 1971; Reis and Shaver, 1988), they may be particularly attentive to details regarding their close friends. Indeed, in the offline context, women have been shown to pay more attention to their conversational partners, and report more direct thoughts about him or her (Ickes et al., 1986). Following this logic, SNS-enabled ability to gain this information is likely to drive satisfaction for female users, whereas absence of details shared by close friends may cause disappointment. Taken together we argue that:

Hypothesis H4. The ability to gain social information on close friends will have a stronger positive association with users' satisfaction with an SNS for female than for male SNS users.

3.2.3. Social information on a broader network

In contrast, predisposition towards collective interdependence is likely to direct male attention towards information on a broader group (Baumeister and Sommer, 1997). Men have been shown to have a better recall with regard to collective events (Gabriel and Gardner, 1999) and people in general (McGuire and McGuire, 1982). Furthermore, improving one's social standing can be a powerful motivator to track details from a broad network of acquaintances (Tannen, 1994), since this specific knowledge may transform into future networking benefits (Koroleva et al., 2011) and improve one's ability to navigate in a large network of acquaintances. Hence, we hypothesize that:

Hypothesis H5. The ability to gain social information on a broader network will have a stronger positive association with users' satisfaction with an SNS for male than for female SNS users.

3.3. Self-enhancement

Aimed at improving one's self-esteem and social standing, self-enhancement is a powerful motivator of SNS participation (Boyd and Ellison, 2007). To gain these benefits, SNS users engage in the conscious self-selection of visual and verbal information that emphasizes desirable and conceals undesirable details regarding themselves (Hui et al., 2006, p. 10). While both men and women have interest in seeing and presenting themselves in a positive light to others, their approaches to do so may be contingent on their self-construal. Male users may be more likely to value the opportunity to broadcast their abilities to the outside world via SNSs, which corroborates their search for collective interdependence (Cross and Madson, 1997). Indeed, male SNS users have been shown to post more self-promotional content in the "About Me" and "Notes" sections (Mehdizadeh, 2010), and exhibit greater interest in drawing attention to their uniqueness (Strano, 2008). At the same time,

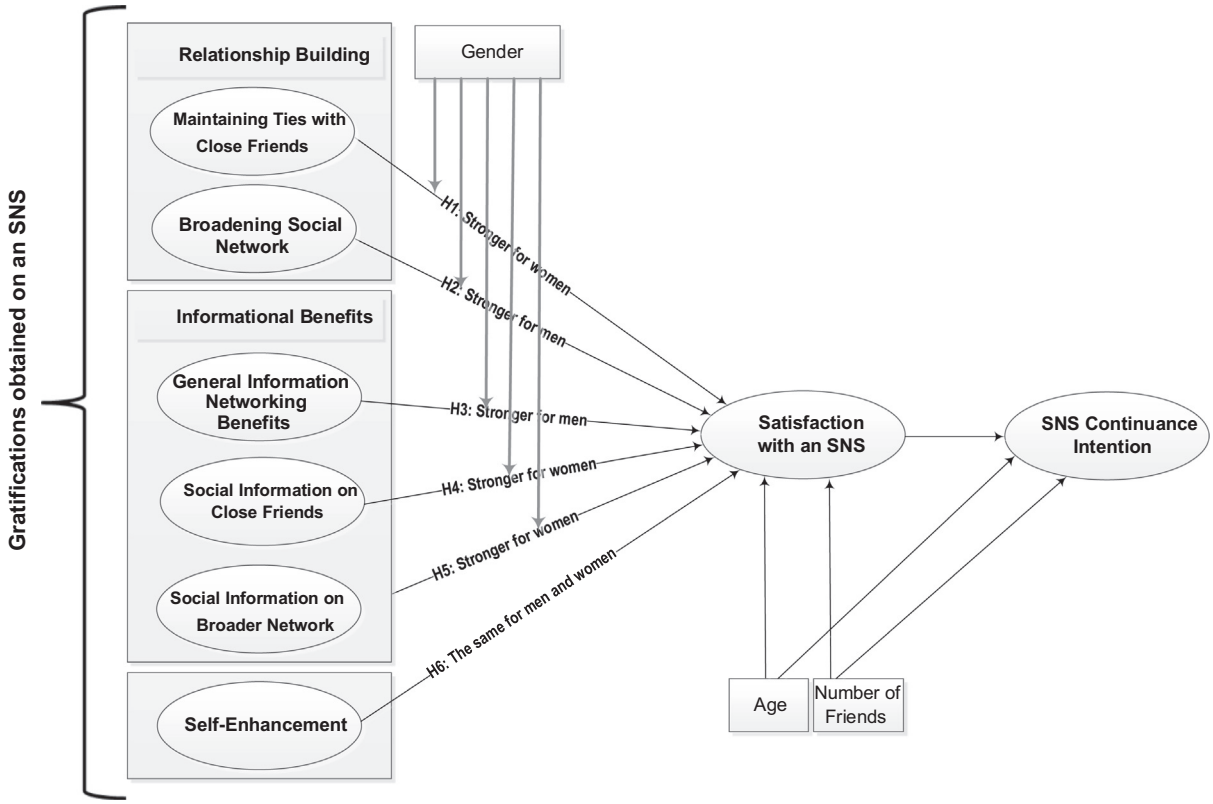

Fig. 2. Research model.

female users of SNSs appear to obtain the benefits of self-enhancement by drawing attention to their physical attractiveness and emphasizing their affiliative disposition (Manago et al., 2008). All in all, we argue that even though men and women are likely to approach their self-enhancement differently, they may equally draw satisfaction as they benefit from it. Therefore, we hypothesize that:

Hypothesis H6. Self-enhancement benefits will have an equally important positive association with users' satisfaction with an SNS for male and female SNS users.

3.4. Control variables

Even though user age and number of SNS friends are not the focus of this study, we integrate them as control variables in our model. In marketing literature, age is often linked to the stability of customer preferences, with older people exhibiting greater levels of loyalty (Mittal and Kamakura, 2001). Moreover, younger generations of SNS users have been showing signals of SNS fatigue (Bercovici, 2013), suggesting the need to control for the age factor in the SNS context. The number of SNS friends may also influence the frequency of new updates a user receives on the News Feed, and hence his or her access to social information from others. Moreover, the length of the friends list may work as a barrier for switching, since users with a higher number of contacts may be less likely to move their accounts elsewhere (Zengyan et al., 2009).

In line with our conceptual model shown in Figs. 1 and 2 summarizes all the relationships discussed above.

4. Empirical study

4.1. Scale development and sampling

We chose Facebook as the SNS platform because it has over one billion daily active users (Facebook, 2016) and it is important for both users and advertisers. All latent constructs in our study were operationalized with multiple items and modeled reflectively. The 7-point Likert scales were used throughout the survey. The only exception was the measurement of satisfaction with an SNS, for which 1 = extremely (dissatisfied), 4 = neither nor, 7 = extremely (satisfied) anchors[2] of the semantic

[2] Four items were used with the following anchors: dissatisfied – satisfied; displeased – pleased; frustrated – contented; terrible – delighted.

Table 3
Demographic characteristics of the sample used in the study.

Gender	**Share**
Male	40.6%
Female	59.4%
Education	**Share**
Vocational training	3.3%
Finished high school	42.2%
Finished bachelor degree	36.7%
Finished master degree	15.8%
Doctorate	1.0%
Age	**Share**
18–25	55.3%
26–34	37.5%
35–44	3.9%
45–51	1.8%
Mean	25.8
Median	25
Standard Deviation (SD)	5.7
Students	82.4%

differential scale were used. Pretested scales were used where possible. However, some items had to be modified to better reflect the context of our study. Table A.1 of Appendix A lists items used for model evaluation.

Potentially, common-method bias might be a concern for studies that use self-reported measures to capture dependent and independent variables in the same survey (Podsakoff et al., 2003). To minimize this threat, several procedural remedies have been taken (Ayyagari et al., 2011). First, measures of dependent and independent variables were psychologically separated by putting in two statements of trivia. After answering questions concerning their continuance intention and satisfaction with an SNS, respondents were presented with the following text on a separate page: "For distraction, here are two interesting facts about Facebook: 1. Original Facebook homepage included the face of Al Pacino. 2. The 'like' button on Facebook was originally intended to be called 'awesome'." Second, respondents' anonymity was assured at the beginning of the survey. Third, measures of potential gratifications were captured. Finally, survey scales were carefully formulated and tested to avoid unfamiliar and unclear terms.

Since the study was based in Germany, the English version of the survey was translated into German by one author of the study. Then, the preliminary version of the translation was discussed by co-authors until a final consensus was reached. Overall, Germany is an ideal country for gender comparisons; according to Hofstede (2001), the masculinity score for the German society (66) is only slightly higher than the World Average (50). Therefore, cultural influences are unlikely to interfere with the results of our study.

Respondents for the online survey were recruited by using mailing lists of two German universities in two waves. Responses collected in the first wave were used to adjust survey items following the feedback left in the "comments" section (n = 161). In the second wave, responses to the finalized version of the survey were collected. As a reward for their participation, respondents were entered into a draw of 20 10-Euro Amazon.de gift certificates. In total, 644 respondents accessed the final version of the survey. As part of the initial screening, responses from non-users of Facebook, observations with unspecified gender or gender specified as "other" than "female" or "male", and observations with predominantly missing values were removed. The final net sample included 488 observations (see Table 3): 198 from male (mean age = 26.43; SD = 6.67) and 290 from female (mean age = 25.45; SD = 4.97) Facebook users.

The majority of our respondents were 18–25 (55.3%) and 26–34 (37.5%) years old. Our sample is representative of a significant share of the Facebook population (socialbakers.com, 2014) because users in these two age categories constitute the largest Facebook demographic; 47.1% (51.8%) of all Facebook users are 18–34 in the U.S. (Germany). Furthermore, respondents in our sample mainly came from Germany (92.6%). The students had diverse educational backgrounds: the most common major was "language and culture studies" (18.7%), followed by "business and economics" (11.9%). The daily time spent on Facebook varied significantly across respondents, with a mean time of 61.7 min (median = 40.0; SD = 68.4). There were no significant differences in the mean number of Facebook friends between male and female users, with a median of 209.5 friends (mean = 253.5; SD = 200.95).

4.2. Empirical results

We compared the first 25% with the last 25% of responses from participants who took the survey in order to examine whether their interest in the topic had any effects (Armstrong and Overton, 1977). Using non-parametric Mann Whitney *U* test, we identified no significant differences in the answers to questions across all variables used in our model (the only exception was RB1 item, p = 0.048). Further, the absence of common method bias in the collected data was assured in two steps. In the first step, Harmon's one-factor test was conducted using principal components analysis on all eight constructs

Table 4
Standardized path coefficients, significance levels and p-values for MGA.

Construct → Satisfaction with an SNS	Path Coefficient		Hypothesis: Result
	Female	Male	
H1: Maintaining Ties with Close Friends	**0.174***	0.088	Supported: stronger for female users
H2: Broadening Social Network	0.065	−0.005	Rejected: not significant for both
H3: General Information	−0.119	**0.234****	Supported: stronger for male users
H4: Social Information on Close Friends	**0.152***	−0.103	Supported: stronger for female users
H5: Social Information on Broader Network	**0.202****	0.087	Rejected: stronger for female users
H6: Self-Enhancement	**0.128***	**0.137***	Supported: no difference (MGA p-value = 0.536)
Construct → Construct	Female	Male	Relationship
Satisfaction with an SNS → SNS Continuance Intention	**0.644****	**0.500****	Stronger for female users (MGA p-value = 0.015*)
Number of SNS Friends → Satisfaction with an SNS	**−0.136***	0.031	Stronger for female users
Age → Satisfaction with an SNS	−0.033	0.013	No significance
Number of SNS Friends → SNS Continuance Intention	0.072	**0.198****	Stronger for male users
Age → SNS Continuance Intention	−0.01	0.036	No significance

* Significance at 5%.
** Significance at 1% or lower.

included in our main model (Podsakoff and Organ, 1986). The unrotated solution with a number of extracted factors fixed to 1 rendered a component explaining only 28.5% of the overall variance. Additionally, extraction of factors with Eigenvalues greater than 1 rendered seven factors, with the Eigenvalue of the eighth factor reaching the level of 0.908 (see Table B.1 of Appendix B). Moreover, the mean share of variance across these eight factors comprised only 9.23% (median = 7.43; SD = 8.18). Together, these results provide evidence that our analysis is unlikely to be affected by common method bias (Podsakoff and Organ, 1986). Furthermore, exploratory factor analysis with the number of extracted components fixed to eight rendered an acceptable solution: all items loaded on their respective components (see Table B.2 of Appendix B).

In the second step, the research model was evaluated using the Partial Least Squares (PLS) methodology. The non-normality of our data dictated our choice of this approach. The estimation was conducted separately for male and female users with the help of SmartPLS (v. 3.1.9) software (Ringle et al., 2015). Measurement Model (MM) was assessed by evaluating the criteria for Convergent and Discriminant Validity. To ensure convergent validity, parameters for indicator reliability (IR), composite reliability (CR), and average variance extracted (AVE) were computed. With one exception (loading of SBr4 = 0.68, male sample), loadings of all items used in the model evaluation for both female and male samples exceeded the 0.7 threshold (Hulland, 1999), which provides evidence of IR. CR values for all constructs in both models were higher than the required level of 0.7 (Hulland, 1999). AVE values for all measured constructs by far surpassed the threshold level of 0.5 (Quan-Haase and Young, 2010). Finally, Cronbach's alpha (CA), reflecting the internal consistency of the construct scales, was higher than the required threshold of 0.7 for all constructs in both models as summarized in Table C.1 of Appendix C (Nunnally, 1978). Therefore, convergent validity can be assumed. Next, discriminant validity was assessed by ensuring that the square root of AVE for each construct was higher than the correlation between a particular construct and any other construct in the model (Hulland, 1999, p. 200). This requirement was fulfilled for all constructs in both models, as summarized in Tables C.2 and C.3 of Appendix C. Taken together, the MMs for both male and female samples are well-specified.

Next, the Structural Model (SM) for each user group was evaluated. Our model explains 12.2% and 20.7% of the variance in the satisfaction with an SNS for males and females respectively. It also explains 31.5% and 41.4% of the variance in the SNS continuance intention of male and female users respectively. Considering the exploratory nature of our investigation, this level of explanatory power is appropriate. Size and significance of path coefficients were evaluated based on the PLS algorithm and a bootstrapping procedure (pairwise deletion was used as a missing value treatment method), as summarized in Table 4 and Appendix D. Comparison of significant path coefficients between female and male samples were performed using an MGA procedure implemented in SmartPLS (v. 3.1.9) (Henseler, 2012). While the distributional characteristics of data were often ignored in previous studies due to the lacking methodology (e.g., Keil et al., 2000), PLS-MGA procedure was recently developed to address the intricacies of the non-normal data.

Our findings supported most of our hypotheses, while others were rejected. The ability to maintain close ties has a significant positive association with the satisfaction with an SNS for female, but not for male users; therefore, H1 is supported (β_{female} = 0.174, p-value = 0.022; β_{male} = 0.088, p-value = 0.413). The ability to broaden one's social network by using the functionality of SNSs does not contribute to the satisfaction of either female or male users; therefore H2 is rejected (β_{female} = 0.065, p-value = 0.264; β_{male} = −0.005, p-value = 0.953). The satisfaction with an SNS for male users is positively associated with their ability to gain general information on the platform, whereas female users are not motivated by this affordance; therefore H3 is supported (β_{female} = −0.119, p-value = 0.093; β_{male} = 0.234, p-value = 0.002). The satisfaction with an SNS of female users is motivated by the ability to obtain social information on close friends; therefore, H4 is supported (β_{female} = 0.152, p-value = 0.050; β_{male} = −0.103, p-value = 0.272). Satisfaction with an SNS for female users is also positively related to their ability to gain social information on a broader network of acquaintances, whereas male users are not motivated by this benefit; therefore, H5 is rejected (β_{female} = 0.202, p-value = 0.001; β_{male} = 0.087, p-value = 0.274). Finally, we observe that both female and male users derive their satisfaction with an SNS by engaging in self-enhancement on the platform (β_{female} = 0.128, p-value = 0.035; β_{male} = 0.137, p-value = 0.041). PLS-MGA procedure applied to assess the extent of

gender differences in the strength of this determinant revealed no significant differences; therefore, H6 is supported (MGA p-value = 0.536).

As a secondary analysis, further relationships in our model were tested. We observe that the satisfaction with an SNS is a significant positive determinant of SNS continuance intention for both male and female users, even though the effect for the latter is stronger (β_{female} = 0.644, p-value = 0.000; β_{male} = 0.500, p-value = 0.000; MGA p-value = 0.015). Looking at the effects of control variables, we observe that the age of respondents does not have an effect on their satisfaction with an SNS (β_{female} = −0.033, p-value = 0.628; β_{male} = 0.013, p-value = 0.860) or SNS continuance intention (β_{female} = −0.01, p-value = 0.829; β_{male} = 0.036, p-value = 0.486). The number of SNS friends has a significant positive association with the SNS continuance intention of male SNS users, but is not related for females (β_{female} = 0.072, p-value = 0.119; β_{male} = 0.198, p-value = 0.000). In fact, for female users in our sample a greater number of SNS friends has a negative relationship with the satisfaction with an SNS (β_{female} = −0.136, p-value = 0.023; β_{male} = 0.031, p-value = 0.746).

5. Theoretical implications

From the perspective of strategic information systems, SNSs can be viewed as an IS artifact that can be used to enhance communication, gain access to novel ideas, develop new organizational capabilities, and achieve strategic value (Jarvenpaa et al., 2015; Lee et al., 2015; Spagnoletti et al., 2015). However, this potential for value is contingent on users' continued participation, with the number of users and their engagement defining the rise or fall of a social media platform (Koch, 2010). Hence, supporting continued use emerges as a key strategic challenge for any platform provider or organization that seeks to leverage social media for value. Against this background, our study investigates the following key research question: What are the gender differences in the determinants of continuance intentions of SNS users?

Gender is a key defining characteristic of IT users and hence is an important factor to account for when studying IS use on an individual level (Trauth, 2011; Trauth et al., 2006). Nonetheless, a recent review of Trauth (2013) suggests that even with a growing body of knowledge, current IS research on gender is still in a pre-theoretical stage, with most existing studies not sufficiently theorized. In particular, most studies remain descriptive in nature and often rely on another IS or management theory as a lens for data interpretation (Trauth, 2013). Indeed, in the context of our study, we observe that extant gender-related research on users' continuance intentions is mainly built around theories of continued IS use (e.g., Shi et al., 2009), with most studies focusing on comparing process differences in already established models (e.g., the ECM model by Bhattacherjee, 2001) without adjusting existing models to gender theories (e.g., Shi et al., 2009; Kefi et al., 2010). At the same time, gender theory can be used as a guide for data collection and analysis. It may also contribute to better "understanding the phenomenon of gender in the context of IS (analysing, explaining), establishing causality (predicting) or guiding action (design and action)" (Trauth, 2013, p. 278).

Answering this call for more gender theory-driven modeling in the area of IS (Trauth, 2013), this study builds on the self-construal theory of gender and its extensions to inform and extend theories traditionally used to model continued use of IS (the ECM and U&G theory). According to this approach to gender, female inclination towards relational self-construal implies heightened interest in closer and more intimate relationships, whereas collective self-construal attributed to men signifies greater importance of broader social circles (Baumeister and Sommer, 1997). We build on these assumptions as a guide to derive a more granular view of the gratifications that may motivate female and male users on the platform. Most studies take a general perspective of relational and informational benefits (e.g., Shi et al., 2009; Lin et al., 2013). We, however, differentiate between two types of relational benefits: (1) maintaining ties with close friends and (2) broadening one's social network – which correspond respectively to the relational interdependence of women and the collective interdependence of men. We also differentiate between three types of informational benefits: (1) gaining social information on close friends, which corresponds to the relational interdependence of female users; (2) informing oneself on general topics; and (3) gaining social information on a broader social network, which are more in line with male collective interdependence (Baumeister and Sommer, 1997). We hypothesize that continuance intentions of female and male SNS users will align with gratifications that best match the particularities of their relational and collective self-construal respectively.

We find that women are motivated to stay on SNSs because they can maintain ties with close friends and gain social information on these close connections, which is in line with their relational orientation and supports our hypotheses. Moreover, our findings suggest that while female users are not interested in broadening their social circle, they are nonetheless encouraged by the ability to obtain social information on a broader network of acquaintances, which goes beyond their hypothetical focus on only close and intimate friendships as suggested by Baumeister and Sommer (1997). It appears that while female users focus on maintaining strong relationships with close ties, they appreciate the ability to monitor the social environment on a larger scale. Male users, on the other hand, are mainly driven by the ability to gain general information on SNSs. Clearly, being better informed on topics of broader interest is seen as beneficial by men, because obtained knowledge may help them enhance their position in a larger network of social connections. This is in line with the collective self-construal attributed to men, and supports our hypothesis. However, contradictory to the main assumption of collective self-construal (Baumeister and Sommer, 1997), such expected gratifications as the ability to broaden social network and gain social information on broader network do not define satisfaction of male SNS users. Perhaps male users of SNSs have already defined their network of connections on SNSs and hence do not explicitly seek to expand it further. Finally, we find that both female and male users are motivated by their ability to self-enhance on the network, which is the only gratification that equally motivates both male and female audiences to continue using an SNS.

Overall, our study is one of the first attempts in the area of IS to systematically integrate a gender theory into the model-building process. Our findings suggest that the relational and collective self-construal attributed to women and men respectively might not reflect the entire complexity of preferences and behaviors of these two user groups on SNSs (Baumeister and Sommer, 1997). In fact, the interest of female users in social information on a broader network and male users in solely non-relational factors, such as gaining access to general information, may suggest partial support for Cross and Madson's (1997) view of male separateness and female relatedness, as we point out in our suggestions for future research below.

Our study contributes to a better understanding of continuance intentions on SNSs – a pivotal issue for the "post adoption" stream of IS research (e.g., Bhattacherjee, 2001; Bhattacherjee and Premkumar, 2004). By showing that (apart from self-enhancement) a different set of determinants defines the satisfaction and hence continuance intentions of female and male users, our findings call for more attention towards potential gender effects in future studies. For example, gender analysis could extend studies that focus on continuance intentions of SNS users in the private realm (e.g. Xu et al., 2014; Chang and Zhu, 2012; Lin and Lu, 2011), but also research on the adoption, continued use, and impact of enterprise social software platforms (e.g. Ali-Hassan et al., 2015; Kuegler et al., 2015; Barnes and Böhringer, 2011).

Our theory-driven dissection of relational and informational benefits sensitizes researchers with regard to the nuanced character of gratifications users pursue on SNSs. We argue that ignoring such distinctions could undermine the validity of obtained insights and lead to confounding effects. Both gender-related and non-gender-related IS studies could benefit from this approach. For example, in a gender-related study, Shi et al. (2009) explore the impact of disconfirmation of maintaining offline contacts on the satisfaction of users with an SNS. Since their operationalization of the "disconfirmation" construct includes references to both 'old friends' and 'new acquaintances', their study could be extended by differentiating between the two types of disconfirmation – that of maintaining ties with close friends and that of establishing connection to a broader social network.

Non-gender related studies could also profit from taking a more nuanced approach to capturing user gratifications. For example, in their investigation of user intentions to switch from one SNS to another, Xu et al. (2014) found that user dissatisfaction with socialization support is a significant contributor to overall dissatisfaction, whereas dissatisfaction with information quality does not contribute to overall dissatisfaction. Per the results of our investigation, a more precise operationalization of socialization support as well as information quality could extend this study and possibly render a more refined picture of the dynamics of user dissatisfaction, especially from the perspective of gender differences. Finally, studies that view gratifications on an aggregate level – for example, by operationalizing them as a single second-order formative construct (Ku et al., 2013; Hsu, 2014; Xu et al., 2012) – could also benefit from treating separate gratifications as distinct constructs and focusing on a more granular level of operationalization.

Taken together, by bridging two independent research areas – IS continuance and gender, our study enriches state-of-the-art understanding of the processes that underlie female and male continued use of SNSs, which represents an increasingly relevant area of strategic information systems (e.g., Xu et al., 2014).

6. Managerial implications

SNS providers, marketers and organizations involved with managing enterprise social software platforms can apply gender-specific motives for continued use to develop individual- and gender-based social media strategies that can create business value (Wakefield and Wakefield, 2016). In this context, we contribute to strategic information systems literature, and its newest area of "individual-based IS strategies," which examines how individuals use information and, more importantly, how these uses can be strategically managed (Ward, 2012, p. 168).

6.1. SNS providers

Supporting continuance of platform use is a key task of any SNS provider. This is because SNS markets are highly competitive, the switching costs are low, and a stable and active user base is an important prerequisite to revenue generation and platform attractiveness (Krasnova et al., 2010a, 2012). Our results reveal that satisfaction and, hence, continuance intentions of male and female SNS users are driven by the different gratifications they obtain from SNS use, which suggests that SNS providers should use differential gender-specific strategies to ensure sustainability.

Facing dangerous decline in the level of original sharing (Efrati, 2016), providers should work to support the interest of female audience. This is because female users are generally more active on social media, as they are more likely to update their profile, post pictures (Hoy and Milne, 2010), update their status (Hampton et al., 2012) and engage with others (Fogel and Nehmad, 2009). Following our findings, we observe that female participation is chiefly driven by their desire to maintain ties to close friends and monitor social information from close and broader networks. Hence, to improve female users' satisfaction, SNS providers should utilize algorithms that prioritize social interests of women by offering them social information from friends and acquaintances in their News Feed. At the same time, content unrelated to social connections should be minimized. Female users could also be given more opportunities to engage with other members more closely, for example by participating in private interest groups.

Male users, on the other hand, place significant value on their ability to gain general information, such as on current affairs, politics, money, business, and other topics of broad interest (Sveningsson Elm and Sundén, 2007; Argamon et al., 2007). This corresponds to the overrepresentation of male users on Reddit, Digg or Slashdot platforms that mainly focus

on content, as opposed to relationship building (Anderson, 2015). Based on these findings, SNS providers interested in promoting male users' continued use should focus on delivering relevant and timely content. For example, they could adjust their News Feed algorithms for male users to include more informational posts of a general nature both from their connections and beyond. Highlighting news articles or friends' posts that match the specific interests of male users could be another way to deliver informational value to this user segment. Furthermore, offering male users thematic versions of their News Feed reflecting their specific informational interests in business, technology, or politics could be helpful (Argamon et al., 2007). For example, a popular Russian news site *lenta.ru* is now offering a supplementary "good news only" edition of its newspaper.

Finally, even while we find that offering SNS platform features to support self-enhancement is an effective strategy to promote satisfaction of both female and male users, a distinction between female and male areas of self-enhancement could be useful (Baumeister and Sommer, 1997). This is because female and male users self-enhance in different ways (Manago et al., 2008). Hence, corresponding to their relational self-construal, female SNS users could be offered built-in apps or features that publicize their connectedness, affiliative predisposition, and their physical attractiveness (Buffardi and Campbell, 2008). Current market behavior is reflective for these trends. Snapchat has recently acquired Looksery, and Facebook has bought Masquerade – two apps that allow users to experiment with their appearance, apply filters, masks, effects, and stickers to their selfies and videos – all features of particular appeal for female audiences. Integrating easily accessible functionalities for face airbrushing or "digital botox" could be further steps to keep female audiences involved. Male users, on the other hand, may be more likely to use SNS apps that showcase their accomplishments in the professional or athletic arena. Importantly, these functional extensions should allow users to easily select friend circles to share their activities: While female users may prefer to share with "only close friends", male users could be more likely to choose "all people in my network", based on their self-construal (Baumeister and Sommer, 1997).

6.2. Marketers

As providers fiercely fight for the loyalty of their members, the amount of third-party content that reaches SNS users organically has decreased dramatically (Constine, 2014). In response, marketers increasingly shift their attention to paid formats of advertising offered on the platform. Here, the knowledge of gender differences emerges as important, since gender is one of the most basic forms of ad targeting on Facebook and other SNSs. In this context, our insights can help marketers in sharpening their copy-writing skills to better address unique preferences of female and male audiences. Furthermore, as women pay close attention to their social connections and their social activities, companies using SNSs to support promotion and sales may incorporate more social promotion strategies for female users (e.g., personal recommendations). For male users, promotional content may be best delivered through links to informational articles or blog posts (Goudreau, 2010; Levey, 2011).

Finally, as more and more companies and entrepreneurs rely on private SNS groups to build community, develop trust and boost sales (e.g. "SayNoToNinetoFive" community on Facebook), the issues of continuance gain increasing attention for marketers as well (Porterfield, 2016). Following our insights, delivering valuable content on a consistent basis could help in supporting the interest of male participants. At the same time, the interest of a female audience could be supported by promoting a community feeling on the platform, as well as offering members more opportunities for networking and exchange with the help of skillful moderation. This is particularly important considering that females are much more likely to be active influencers than men (Ermecke et al., 2009), and are also more perceptive to word of mouth and social influence (Kempf and Palan, 2006; Bae and Lee, 2011; Fan and Miao, 2012).

6.3. Providers and managers of enterprise social software platforms

As the intra-organizational use of social media continues to grow, our findings may be helpful for companies that seek to attract and keep the interest of employees in enterprise social software solutions – an important area of interest for strategic information systems research (Huang et al., 2015). We suggest that companies should engage female users through their social circles and encourage contributors to share their ideas and updates with their network. From the policy perspective, hedonic use of organizational SNSs should be allowed. This type of participation has been linked to closer interpersonal ties at work, which leads to better innovation performance (Ali-Hassan et al., 2015), but also strengthens satisfaction with an SNS at least for the female segment, as our findings suggest. Alternatively, male users may be more motivated by the opportunity to gain access to company and industry updates and present their achievements to a broader circle of stakeholders.

All in all, by pointing out gender-related differences and similarities, our findings provide practitioners with actionable recommendations on how user satisfaction and continuance intentions can be promoted on SNSs, thereby extending the toolkit of IS strategists.

7. Limitations and future research

As with any research, there are several limitations to our study. First, our results are based on the empirical data from users of only one SNS – Facebook. However, the finding by Zhou et al. (2014) indicate that men might be motivated by

different factors to use entertainment and utilitarian systems. Hence, we urge future research to verify our findings with other popular SNSs for private use, such as Instagram, Reddit, and LinkedIn. Additionally, gender effects on enterprise social software platforms, like Yammer, should be further explored to ensure that insights gained in our study also hold for organizational uses of social media. Further, the dominant share of our user sample is from Germany. Therefore, we caution providers when applying our recommendations to other markets and call for additional studies especially for those markets that are culturally different from Germany. Finally, 55.3% of respondents in our sample are between 18 and 25 years of age. Calder et al. (1982, p. 241) argue that "as long as a sample is relevant to the universe of the theory, it constitutes a test of that theory". Nonetheless, other age segments increasingly join SNSs (Su, 2010). Thus, we encourage future research to validate our findings with other demographic segments of working population.

Beyond sampling, we urge future research to take a number of steps to deepen theoretical understanding of gender-differences on SNS. Specifically, in this study we have focused on the gender theory of self-construal and its extensions (Baumeister and Sommer, 1997). Some controversies in our findings, however, suggest that there are larger theoretical complexities that surround female and male patterns of continued use. Hence, future research could extend our findings by measuring and exploring the moderating role of self-construal constructs as suggested by Gabriel and Gardner (1999). This approach may help in disentangling the influence of two competing theories: relational vs. collective self-construal suggested by Baumeister and Sommer (1997), and relational vs. independent self-construal originally proposed by Cross and Madson (1997). Further, integrating alternative gender perspectives – including the social role (Eagly and Wood, 1991), gender schema (Bem, 1981) and evolutionary (Buss, 1988) theories – could be another step to better explain the dynamics of the continued use of SNSs from a gender standpoint.

Finally, our study is based on a cross-sectional investigation of user perceptions. Future studies could benefit from longitudinal research designs with real activity trackers to get objective measures of SNS participation, as opposed to self-report measures (e.g. Kross et al., 2013). Furthermore, considering that active user participation is critical for the sustainability of SNSs in both private and enterprise contexts, our research could be extended by looking at gender differences in the drivers of information sharing and self-disclosure.

Taken together, our study represents a valuable extension of existing knowledge on gender differences in users' continuance intentions, paving the way for further research in this domain.

8. Conclusion

As organizations increasingly use social media systems to support their business strategy and create value, social media has received significant attention in recent strategic IS literature. Building on the gender theory of self-construal and its extensions (Cross and Madson, 1997; Baumeister and Sommer, 1997), we contribute to this growing body of research by developing and testing a theoretical model of gender differences in continuance intentions of SNS users. We show that, with the exception of self-enhancement, a different set of determinants defines satisfaction and continuance intentions of female and male members of SNSs. While women are mainly driven by relational uses, such as maintaining close ties and getting access to social information on close and distant networks, men base their continuance intentions on their ability to gain information of a general nature. By showing such different determinants for male and female users, our findings question the applicability of insights obtained in numerous previous studies that disregard gender differences. Taken together, our study represents a valuable extension of existing knowledge on gender differences in users' continuance intentions, paving the way to further research in this domain. On a practical level, our study provides insights for SNS providers and marketers into how satisfaction and continuance intentions of male and female SNS users can be differentially promoted. Further, as corporate social networks are increasingly used in enterprise settings to foster collaboration, our findings provide initial insights into how these communities can be supported.

Appendix A

See Table A.1.

Appendix B

See Tables B.1 and B.2.

Appendix C

Tables C.1–C.3

Appendix D

See Figs. D.1 and D.2.

Table A.1
Construct operationalization and descriptive statistics.

Construct (Source)	Item	Item Wording	Loading		Mean		SD	
			m	f	m	f	m	f
SNS Continuance Intention (Bhattacherjee, 2001)	CI1	I intend to continue using Facebook, rather than discontinue its use.	0.89	0.86	5.14	5.20	1.47	1.24
	CI2	My intentions are to continue using Facebook than use any alternative Social Network.	0.87	0.78	4.57	4.82	1.67	1.49
	CI3	If I could, I would like to discontinue my membership on Facebook. *(reverse coded).*	0.81	0.79	4.66	4.33	1.76	1.67
Satisfaction with an SNS (Bhattacherjee, 2001)	How do you feel about your overall experience of Facebook use: *(Scale: 1 = extremely; 2 = quite; 3 = a little; 4 = neither nor; 5 = a little; 6 = quite; 7 = extremely)*							
	ST1	Dissatisfied – satisfied	0.85	0.85	4.36	4.09	1.24	1.30
	ST2	Displeased – pleased	0.87	0.84	4.04	3.98	1.02	1.03
	ST3	Frustrated – contented	0.83	0.76	4.13	3.92	0.87	1.01
	ST4	Terrible – delighted	0.79	0.81	4.02	3.96	0.69	0.84
Maintaining Ties with Close Friends (partly based on Joinson, 2008)	Using Facebook,							
	RC1	…I develop closeness to people I particularly like.	0.89	0.83	2.82	3.01	1.57	1.64
	RC2	…I intensify my connection to my close friends.	0.91	0.89	3.10	3.12	1.75	1.71
	RC3	…I stay in constant contact with my close circle of friends.	0.84	0.87	3.66	3.64	1.85	1.86
	RC4	…I maintain close bond to friends I care about.	0.84	0.90	3.71	3.68	1.85	1.85
Broadening Social Network (partly based on Joinson, 2008)	Using Facebook,							
	RB1	…the number of people I know is increasing.	0.84	0.86	3.14	3.18	1.74	1.78
	RB2	…I expand my circle of acquaintances.	0.87	0.87	3.19	3.09	1.73	1.71
	RB3	…I come in contact with new people different from myself.	0.87	0.80	2.77	2.97	1.57	1.68
	RB4	…I undertake more activities with people that otherwise would not be on my radar.	0.71	0.75	3.20	3.21	1.65	1.63
	RB5	…I get to know new people.	0.86	0.82	2.64	2.61	1.66	1.60
General Information (based on Koroleva et al., 2011)	On Facebook,							
	IB1	…I keep myself updated on the new developments in the world.	0.94	0.95	3.78	4.34	1.90	1.77
	IB2	…I find information on socially relevant topics.	0.91	0.90	4.18	4.84	1.75	1.64
	IB3	…I stay up-to-date on what is happening in the world.	0.94	0.91	3.91	4.53	1.91	1.77
	IB4	…I learn new things (e.g. about economy, science, technology, politics).	0.93	0.88	3.88	4.42	1.84	1.75
Social Information on Close Friends (partly based on Joinson, 2008)	On Facebook,							
	SIC1	…I get to know more about lives of people I care about.	0.91	0.86	3.28	3.25	1.66	1.77
	SIC2	…I get information about people from my close circle of friends.	0.92	0.88	3.73	3.78	1.68	1.74
	SIC3	…I receive news from my good friends.	0.87	0.87	4.36	4.32	1.53	1.67
Social Information on Broader Network (partly based on Joinson, 2008)	On Facebook,							
	SBr1	…I stay updated about acquaintances I otherwise rarely see.	0.89	0.82	5.11	5.51	1.48	1.34
	SBr2	…I get information about distant acquaintances I otherwise would not have received.	0.91	0.83	5.24	5.51	1.50	1.44
	SBr3	…I get to know more about lives of remote acquaintances.	0.85	0.88	4.82	5.15	1.58	1.51
	SBr4	…I inform myself about people I otherwise know little about.	0.68	0.80	4.83	4.99	1.45	1.52
Self-Enhancement (Krasnova et al., 2010a)	On Facebook,							
	SE1	…I emphasize special qualities that distinguish me.	0.80	0.82	2.57	2.76	1.54	1.65
	SE2	…I show abilities that distinguish me from others	0.80	0.86	2.57	2.67	1.55	1.56
	SE3	…I assert my position in front of others	0.76	0.78	2.47	2.56	1.43	1.51
	SE4	…I attract attention of others.	0.79	0.85	2.85	2.84	1.62	1.66
	SE5	…I tell others about my achievements	0.84	0.82	2.88	2.96	1.64	1.74
	SE6	…I win respect in the circle of my friends and acquaintances.	0.89	0.85	2.60	2.69	1.49	1.52

Note 1: m → male; f → female.
Note 2: 7-point Likert scales were used throughout the survey: 1 = Strongly Disagree; 7 = Strongly Agree.
Exception: Satisfaction with an SNS: 1 = extremely (anchor)/4 = neither nor/7 = extremely (anchor).

Table B.1
Exploratory factor analysis: principal component analysis.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative%
1	**9.403**	**28.493**	**28.493**	9.403	28.493	28.493	4.453	13.493	13.493
2	**3.271**	**9.912**	**38.405**	3.271	9.912	38.405	4.298	13.024	26.517
3	**2.787**	**8.445**	**46.850**	2.787	8.445	46.850	3.528	10.692	37.209
4	**2.669**	**8.089**	**54.939**	2.669	8.089	54.939	3.417	10.355	47.564
5	**2.234**	**6.770**	**61.708**	2.234	6.770	61.708	3.078	9.326	56.890
6	**2.091**	**6.336**	**68.044**	2.091	6.336	68.044	2.915	8.834	65.724
7	**1.006**	**3.050**	**71.094**	1.006	3.050	71.094	1.772	5.370	71.094
8	**0.908**	**2.752**	**73.846**						
9	0.660	2.000	75.847						
10	0.623	1.887	77.733						
11	0.534	1.619	79.352						
12	0.524	1.588	80.940						
13	0.513	1.554	82.494						
14	0.456	1.382	83.876						
15	0.430	1.304	85.180						
16	0.410	1.242	86.423						
17	0.400	1.212	87.634						
18	0.366	1.110	88.745						
19	0.341	1.032	89.777						
20	0.335	1.016	90.793						
21	0.319	0.966	91.759						
22	0.304	0.920	92.679						
23	0.288	0.873	93.552						
24	0.274	0.831	94.383						
25	0.269	0.817	95.200						
26	0.248	0.751	95.950						
27	0.240	0.728	96.678						
28	0.230	0.696	97.374						
29	0.207	0.628	98.003						
30	0.193	0.584	98.586						
31	0.187	0.567	99.153						
32	0.171	0.518	99.671						
33	0.108	0.329	100.000						

Note: Extraction Method: Principal Component Analysis. Extraction Method: Eigenvalues greater than 1.

Table B.2
Exploratory factor analysis: rotated component matrix.

Items	Component							
	1	2	3	4	5	6	7	8
SE1	**0.832**	.095	.092	0.116	0.005	0.106	0.059	0.038
SE2	**0.857**	0.120	0.108	0.104	0.013	0.025	0.093	0.035
SE3	**0.691**	0.198	0.129	0.152	0.161	0.069	0.041	−0.062
SE4	**0.816**	0.157	0.052	0.076	0.082	0.083	−0.038	0.016
SE5	**0.788**	0.114	0.074	0.066	0.072	0.109	0.121	0.149
SE6	**0.794**	0.173	0.128	0.139	0.128	0.058	0.110	0.025
RB1	0.149	**0.838**	0.127	0.046	0.018	0.126	0.084	0.079
RB2	0.200	**0.853**	0.057	0.090	0.064	0.067	0.065	−0.010
RB3	0.183	**0.781**	0.162	0.143	0.021	0.045	0.144	0.008
RB4	0.243	**0.581**	0.082	0.271	0.086	0.184	−0.043	−0.038
RB5	0.094	**0.852**	0.064	0.082	0.055	0.049	0.091	0.072
IB1	0.134	0.127	**0.904**	0.095	0.043	0.101	0.101	0.059
IB2	0.129	0.090	**0.864**	0.056	0.077	0.133	0.025	0.057
IB3	0.118	0.144	**0.889**	0.082	−0.001	0.149	0.122	0.056
IB4	0.134	0.093	**0.885**	0.099	0.012	0.061	0.094	0.085
RC1	0.281	0.314	0.103	**0.692**	0.086	0.050	0.172	0.077
RC2	0.166	0.097	0.120	**0.844**	0.090	0.013	0.198	0.112
RC3	0.115	0.104	0.098	**0.827**	0.080	0.099	0.242	−0.001
RC4	0.118	0.114	0.033	**0.820**	0.091	0.098	0.240	0.061
ST1	0.101	0.097	0.025	0.098	**0.759**	0.060	0.042	0.292
ST2	0.093	0.031	0.068	0.121	**0.791**	0.094	0.016	0.197
ST3	0.078	−0.017	0.038	0.046	**0.811**	0.014	0.081	0.068
ST4	0.086	0.084	−0.011	0.041	**0.792**	0.035	0.061	0.134

Table B.2 (*continued*)

Items	Component							
	1	2	3	4	5	6	7	8
SBr1	0.064	0.062	0.125	0.158	0.044	**0.800**	0.076	0.117
SBr2	0.036	0.086	0.119	0.100	0.062	**0.827**	0.003	0.139
SBr3	0.182	0.108	0.068	0.059	0.060	**0.838**	0.070	0.017
SBr4	0.094	0.110	0.096	−0.073	0.047	**0.752**	0.140	0.066
SIC1	0.135	0.183	0.150	0.414	0.072	0.022	**0.723**	0.020
SIC2	0.131	0.098	0.128	0.339	0.073	0.150	**0.800**	0.000
SIC3	0.107	0.124	0.124	0.296	0.109	0.184	**0.749**	0.108
CI1	0.078	0.020	0.124	0.152	0.341	0.221	−0.002	**0.749**
CI2	0.047	0.000	0.126	0.066	0.196	0.104	0.087	**0.824**
CI3	0.045	0.108	0.012	0.001	0.412	0.080	0.015	**0.625**

Note: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 7 iterations. Number of extracted factors set to 8.

Table C.1
Quality criteria of the constructs.

Construct	Female			Male		
	AVE	CR	CA	AVE	CR	CA
SNS Continuance Intention	0.66	0.85	0.74	0.73	0.89	0.81
Satisfaction with an SNS	0.66	0.89	0.83	0.70	0.90	0.86
Maintaining Ties with Close Friends	0.76	0.93	0.90	0.75	0.93	0.90
Broadening Social Network	0.67	0.91	0.88	0.69	0.92	0.89
General Information	0.83	0.95	0.93	0.86	0.96	0.95
Social Information on Close Friends	0.76	0.91	0.84	0.81	0.93	0.88
Social Information on a Broader Network	0.70	0.90	0.86	0.70	0.90	0.86
Self-Enhancement	0.69	0.93	0.91	0.67	0.92	0.90

Table C.2
Square root of AVE (Diagonal Elements) and correlations between latent variables (Off-diagonal Elements) for female sample.

Construct	CI	ST	MCF	BSN	GI	SICF	SIBN	SE	NFR	AGE
SNS Continuance Intention (CI)	**0.81**									
Satisfaction with an SNS (ST)	0.64	**0.81**								
Maintaining Ties with Close Friends (MCF)	0.19	0.33	**0.87**							
Broadening Social Network (BSN)	0.16	0.22	0.33	**0.82**						
General Information (GI)	0.14	0.09	0.27	0.30	**0.91**					
Social Information on Close Friends (SICF)	0.20	0.33	0.64	0.31	0.36	**0.87**				
Social Information on a Broader Network (SIBN)	0.27	0.25	0.15	0.28	0.35	0.25	**0.84**			
Self-Enhancement (SE)	0.16	0.27	0.40	0.47	0.34	0.39	0.26	**0.83**		
Number of Friends (NFR)	0.03	−0.07	0.07	0.22	0.19	0.05	0.16	0.19	**1.00**	
Age (AGE)	−0.03	−0.02	−0.01	0.01	0.04	0.02	0.01	0.05	−0.08	**1.00**

Table C.3
Square root of AVE (Diagonal Elements) and correlation between latent variables (Off-diagonal Elements) for male sample.

Construct	CI	ST	MCF	BSN	GI	SICF	SIBN	SE	NFR	AGE
SNS Continuance Intention (CI)	**0.86**									
Satisfaction with an SNS (ST)	0.53	**0.84**								
Maintaining Ties with Close Friends (MCF)	0.29	0.18	**0.87**							
Broadening Social Network (BSN)	0.14	0.16	0.50	**0.83**						
General Information (GI)	0.34	0.29	0.31	0.30	**0.93**					
Social Information on Close Friends (SICF)	0.22	0.11	0.70	0.39	0.32	**0.90**				
Social Information on a Broader Network (SIBN)	0.33	0.16	0.34	0.27	0.18	0.37	**0.84**			
Self-Enhancement (SE)	0.24	0.24	0.44	0.42	0.28	0.28	0.25	**0.82**		
Number of Friends (NFR)	0.26	0.13	0.23	0.26	0.24	0.08	0.14	0.16	**1.00**	
Age (AGE)	0.03	0.03	0.05	0.14	−0.05	0.01	0.08	0.13	−0.11	**1.00**

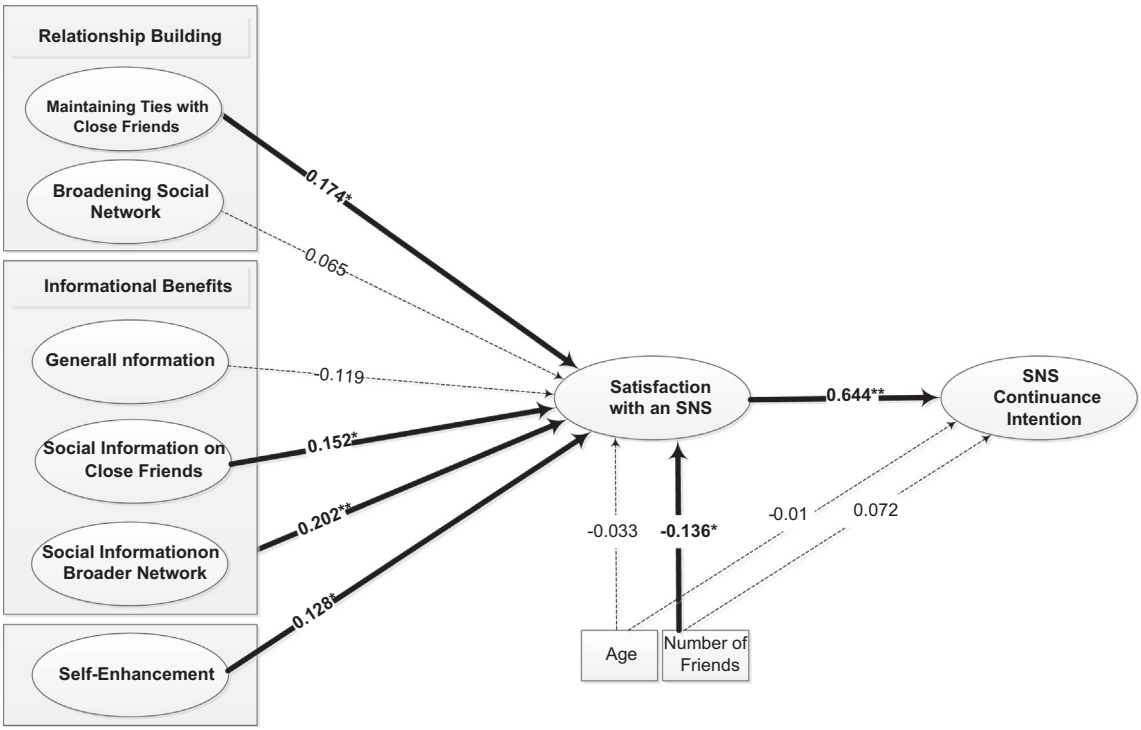

Fig. D.1. Results of the structural model testing: female sample.

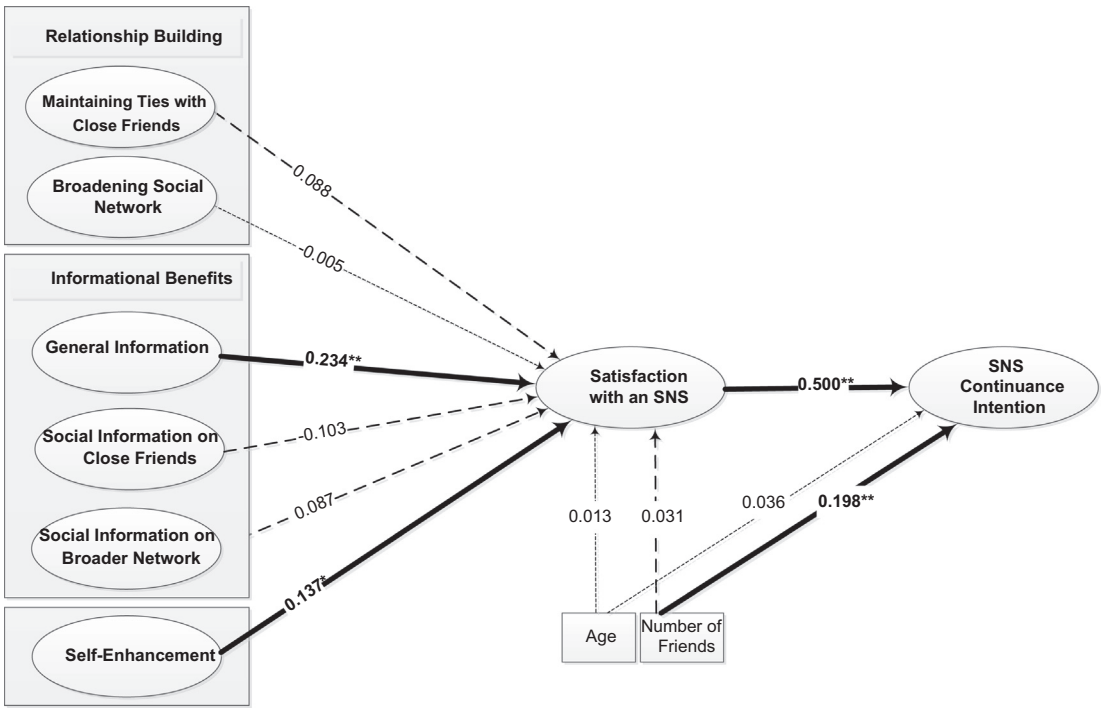

Fig. D.2. Results of the structural model testing: male sample.

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