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Behind the Curtains of Privacy Calculus on Social Networking Sites: The Study of Germany and the USA

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ABSTRACT

As social networking sites (SNSs) become increasingly global, the issues of cultural differences in participation patterns become acute. However, current research offers only limited insights into the role of culture behind SNS usage. Aiming to fill this gap, this study adopts a 'privacy calculus' perspective to study the differences between German and American SNS users. Results of structural equation modeling and multi-group analysis reveal distinct variability in the cognitive patterns of American and German subjects. We contribute to the theory by rejecting the universal nature of privacy-calculus processes. From a practical standpoint, our results signal that SNS providers cannot rely on the "proven" means in ensuring user participation when crossing geographic boundaries. When financial means are limited, SNS providers should direct their investments into enhancing platform enjoyment and granting users with more control and, paradoxically, lobbying for more legalistic safeguards of user privacy.

Keywords

Social Networking Sites, Self-Disclosure, Privacy, Trust, Culture.

1. INTRODUCTION

Social Networking Sites (SNSs) have become an inseparable part of daily online routines for millions of people. Web analytics companies, like Alexa.com, report that SNSs top the website traffic charts all over the world, thus, pointing to the ubiquitous nature of social networking (SN). Despite this global popularity, the business of SNS providers is far from being easy. Recruitment

of new users as well as retention of existing ones presents a major challenge. Having reached maturity in their home countries, SNS providers increasingly rely on internationalization strategies in their pursuit for growth. For example, Facebook (FB) offers more than 70 translations of its site [10].

This growth strategy, however, is plagued by numerous complexities. When expanding internationally SNS providers have to contend with local rivals. Thus, FB is competing for new members alongside Skyrock in France, Vkontakte in Russia and StudiVZ in Germany. While local SNSs boast first-hand knowledge of their home markets, international platforms like FB are challenged to adopt their platform design, communication strategy and image to national peculiarities.

Given the global nature of users and providers [10] it is crucial to identify, understand and bridge cultural differences in SNS usage. Despite importance of this research question for practice, the literature exploring the moderating influence of culture in the SNS context is largely absent. Filling this gap, our study examines the cultural differences between German and American participants of SNSs. German market is currently dominated by two major players: local StudiVZ and a late entrant FB. In this head-to-head competition for user attention, both platforms have significant advantages on their side: whereas FB is the world leader in SN services, excelling in innovation; StudiVZ has insight into the specific needs of German users.

Building on existing theoretical insights regarding the motivation to use and communicate on SNSs, we propose a theoretical model of SNS participation. Exploring privacy calculus in intercultural setting we examine the moderating effect of culture on construct relationships in our model. Our hypotheses aim to reveal practical insights into the motivational dynamics behind SNS usage. A resulting structural equation model is then tested with American and German FB users. Implications of our results for theory and practice conclude the paper. On the policy side, we expect to offer relevant insights for policy-makers who are interested in protecting the privacy of online users while retaining the unprecedented potential of SNSs to build social capital.

2. RESEARCH MODEL

Krasnova et al. [24] argue that supporting interpersonal communication on the SNS platform is key to user recruitment and retention. Without ongoing communication, network content becomes outdated, leading to decreased user interest and immersion and, as a consequence, lost user loyalty. Beyond

ensuring involvement, user *self-disclosure* is also crucial for financial sustainability of SNSs. Even though advertisers are willing to pay for this large database of potential customers, their interest is contingent on active participation. Indeed, freshly updated user content offers advertisers unlimited opportunities for personalization, customer segmentation and market research. Consequently, in order to remain competitive SNS providers must do their best to motivate SNS users to communicate and *self-disclose* on their platform, and do so frequently. This task, however, becomes increasingly complex when operating in a foreign market. As culture determines the way users behave [15], SNS providers need a deeper understanding of the intercultural dynamics of individual *self-disclosure*.

In the past, researchers have applied a variety of theories to explain the factors behind individual adoption of IT. Theories of Reasoned Action, Planned Behaviour, Technology Acceptance Model, Diffusion of Innovations Theory and Social Cognitive Theory have been frequently used to examine usage intensity in a variety of settings. As participation of SNSs is associated with numerous privacy risks, a number of studies advocate the use of the ‘privacy calculus’ (‘PC’) perspective when investigating self-disclosure on SNSs (e.g. [24]). In line with this theory, online *self-disclosure* is a product of partially conflicting beliefs, such as *expected benefits*, *privacy concerns* and *trusting beliefs* [8]. Based on this view, Krasnova and Veltri [25] propose an extended model of ‘PC’ on SNSs particularly adopted for the purposes of intercultural research. Even though their work provides a sound comparative analysis of the means of the model-relevant constructs for German and American SNS users in their sample, the authors leave validation of their empirical model for future work. We pick up this recommendation and adopt their model for the purposes of our study. As our study is dictated by practical considerations, only constructs of immediate relevance for SNS providers and policy-makers are included in the model (Figure 1). We integrate beliefs regarding *Enjoyment*, *Privacy Concerns*, and *Trust in SNS Provider* as three independent forces defining the dynamics of ‘PC’ on SNSs. In order to supply SNS providers and policy-makers with insights on how these components of ‘PC’ can be leveraged in different cultures, we extend our model with three practice- and policy- relevant antecedents: *Legal Assurance*, *Perceived Control* and *Knowledge*. The reasoning behind the hypothesized relationships as well as their interaction with various cultural dimensions is explained in the following sections.

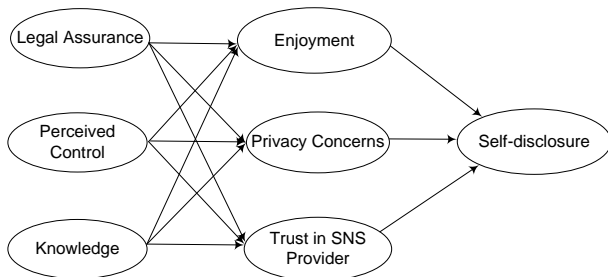


Figure 1. Research Model.

3. PRIVACY CALCULUS IN AN INTERCULTURAL SETTING

Rooted in values, beliefs and traditions, national culture permeates the way people interpret and behave in various

situations. It is therefore natural to expect that cultural norms will influence such daily activities as SN online [28].

Even though a multitude of studies address the differences in culture, a framework by Hofstede [15] has received widespread acceptance. Based on Hofstede’s national culture indices there are several similarities as well as differences between the German and US cultures. Whereas both cultures exhibit *low power distance* (PDI), *low long-term orientation* (LTO) and *high masculinity* (MAS), they have significant differences in the dimensions of *individualism* (IDV) and *uncertainty avoidance* (UAI). As Germans are significantly *lower* on IDV scale, they are likely to be more interdependent, group-oriented, show higher loyalty to other people and institutions, as well as suppress their emotions and behaviour. On the other hand, *high-IDV* Americans are characterized by higher self-reliance, competitiveness, hedonic attitudes and emotional distance from in-groups [47]. Furthermore, due to *higher UAI*, Germans are expected to be more risk-averse, feel threatened by uncertain conditions, exhibit strong faith in institutions and prefer the tried and tested ways over new methods [9]. Overall, numerous studies confirm the leading role of IDV and UAI dimensions as major explanatory variables in a variety of settings (e.g. online shopping) [6, 28]. Hence, in the context of our study we pay particular attention to these dimensions, when discussing moderating effects of culture on the relationships embedded in our model.

4. RESEARCH HYPOTHESES

Before proceeding, it is important to note that even though subsequent analysis is based on a thorough examination of literature, complexity of cultural influence makes our hypotheses only exploratory in nature.

Enjoyment: A multitude of benefits, such as self-presentation, convenience of social interaction, relationship building, may motivate users to self-disclose on a SNS [24]. Despite their diversity, all these motives have one common denominator: enjoyment. Indeed, based on the findings from social psychology, pleasure can be viewed as a “*consequence of gratification of a motive*” ([40] p. 183). For example, Muniz and O’Guinn [34] demonstrate that conversations in the Internet communities are a pleasurable experience for participants. Furthermore, Rosen and Sherman [43] describe SNSs as purely hedonic platforms. Taking into account the leisure-oriented character of SNS platforms, we integrate *enjoyment* as a *positive* determinant of *self-disclosure* on SNSs as depicted in Figure 1.

Overall, SNS providers have long ago acknowledged the role of pleasant experiences as a crucial part of their competitive strategies. Evidently, the satisfaction of users’ desire for fun was the main objective of FB when introducing the News Feed or opening up its platform to third-party developers. As our study aims to deliver practical insights, exploring the role of *enjoyment* in motivating user communication from an intercultural standpoint is important.

Overall, the impact of cultural dimensions on the relationship between *enjoyment* and *self-disclosure* is characterized by high complexity. On the one hand, we expect Germans, as a more *collectivistic* culture, to value in-group interaction and thus enjoy disclosing their information on SNSs as part of group communication process. On the other hand, pleasure-seeking and

hedonism constitute one of the major traits of *individualistic* cultures (like the USA), where people are also more likely to align their behaviour with their own needs and priorities [7, 47].

Besides, it is important to note that both cultures exhibit very low levels of LTO, which implies strong preference for short-term gains as opposed to delayed gratification and forward thinking [15]. As disclosure of information is usually associated with quick reaction from others (e.g. commenting / liking one's status), which in most cases leads to a pleasurable experience, it is plausible to assume that German and American users will be equally encouraged to self-disclose as a result of their anticipated benefits. We therefore hypothesize that:

Hypothesis 1a: *The positive relationship between perceived Enjoyment and Self-disclosure will not differ significantly for US and German SNS users.*

Privacy Concerns: It is a widespread belief that participation on SNSs is associated with significant privacy risks. Indeed, a seemingly innocent piece of information published online may prove to be a career-killer several years later. Employers, law enforcement, tax authorities, creditors, and military recruitment agencies are increasingly relying on SNSs to investigate their clientele. Just recently, a medical insurance company stopped sick-leave payments for their depressed client based on the FB photos depicting her as "happy" [2].

In their attempt to capitalize on privacy concerns of SNS users, providers increasingly integrate privacy-related claims into their web-sites and PR campaigns [3]. Whether or not this strategy will pay off in every country is, however, unclear. On the one hand, the relationship between *privacy concerns* and *self-disclosure* is expected to be strongly negative. However, empirical results provide a mixed picture: whereas a German-based study of Krasnova et al. [24] finds user privacy concerns to be a significant impediment to information sharing on SNSs, a study by Acquisti and Gross [1] finds a discrepancy between claimed privacy concerns and disclosure behaviour for the US respondents. These inconsistencies indicate that the strength of the negative relationship between *privacy concerns* and *self-disclosure* is still to be examined in an intercultural setting.

Lim et al. [28] suggest that both UAI and IDV play a significant role in the formation of *risk attitudes*. People from high-UAI countries have lower tolerance for uncertainty, feel more threatened by ambiguous situations, and perceive more anxiety about the future [15]. As a result, they are likely to be more apprehensive about the consequences of their self-disclosure behaviour. In general, empirical evidence supports a positive link between UAI and the impact of risk perception on the subsequent behaviour. For example, Park [35] finds a positive link between UAI/IDV and insurance penetration on a country-level, hinting that risk-averse individuals are more keen on seeking ways to relieve their anxiety. Similarly, strongly reducing their self-disclosure is a likely response to privacy concerns by people from high-UAI cultures like Germany.

Even though IDV may also play a role in the formation of privacy concerns, the role of this cultural dimension is ambiguous. On the one hand, because *individualistic* societies are typically very competitive as well as opportunistic, SNS users may be more conscious about the sensitivity of the information they publish

online, as it can be used to damage their reputation or careers. In support of this argument, Dinev et al. [6] find a stronger impact of *Privacy Concerns* on the use of e-commerce for the US as opposed to Italian subjects. On the other hand, *collectivistic* cultures are more likely to be anxious about the consequences of their self-disclosures. Indeed, public mockery of one's postings by outsiders may lead to the so much feared "loss of social face" in the in-group [33].

Investigating interaction of UAI and IDV in the context of risk perceptions, Lim et al. [28] show that for countries with relatively high uncertainty avoidance levels, as is the case for Germany, IDV dimension shows little impact on Internet shopping. Acknowledging the leading role of UAI in defining the role of *risk perceptions* in user behaviour we hypothesize that:

Hypothesis 1b: *The negative relationship between Privacy Concerns and Self-disclosure will be stronger for German users than for US users.*

Trust in SNS Provider: Trust is a central construct whenever relationships between parties involve some degree of risk or uncertainty. Whereas trust does not necessarily lead to the elimination of risk beliefs, it can overrule their negative impact on self-disclosure [8]. This is consistent with the threshold model which suggests that formation of trust is independent of risk beliefs. Once the level of trust has exceeded the threshold of perceived risk, the trustor will engage in a risky behaviour [12]. In this respect, trust in the network may be the key to explaining the dichotomy between expressed attitudes and actual behaviour of the American SNS users [1].

In the SNS context, authors differentiate between *Trust in SNS Provider* and *Trust in SNS Members* (e.g. [24]). Given practical considerations, in this study we concentrate exclusively on *Trust in SNS Provider*, which we conceptualize as a set of individual beliefs regarding provider's benevolence and integrity. Even though studies from various contexts confirm the positive impact of trust on individual willingness to self-disclose (see [24]), the strength of this influence is likely to be defined by cultural norms [25].

Lim et al. [28] argue that particularly IDV and UAI dimensions are likely to affect individual willingness to engage in risky transactions, which constitutes the basis for trusting intentions. People from high-UAI cultures (like Germany) are likely to be more pessimistic about the incentives of companies, including SNS providers [15]. Because they are afraid of becoming vulnerable to the other party in a transaction, they are also less likely to take a "leap of faith" and actually *act* on the basis of trust. On the other hand, people from the low-UAI cultures (like the USA) may place less emphasis on privacy concerns and rather concentrate on collecting evidence of the trustworthiness of the other party. As a result, they are more likely to engage in a risk-taking behaviour on the basis of trust [9].

Furthermore, most authors hold IDV as more favourable for trust-based behaviour. For example, Dinev et al. [6] argue that members of *collectivistic* cultures strongly differentiate between in- and out-group members when developing trust. Hence, it is unlikely that Germans will exhibit higher readiness than Americans to make themselves vulnerable to socially- and

geographically-distant FB (e.g. translate their trusting beliefs into trusting intentions and then into behaviour [9]).

Furthermore, differences in IDV dimension trigger distinct mechanisms in the trust-formation process. Whereas collectivists (1) concentrate on *predictability* of future actions of the trustee, (2) look for cues that the trustee will *act in their best interests (benevolence)* as well as (3) *easily transfer* trust from one to another within their group; individualists primarily (1) *calculate* the costs and benefits of the defection behaviour of the trustee as the basis of trust [9]. Analysing these differences in the trust-formation patterns in the context of online shopping, Lim et al. ([28], p. 549) argue that as *predictive* trust is more difficult to develop “*Internet shopping is more appealing to individualists than to collectivists*”. In the SNS context, more collectivistic German users may also find it hard to form sound *predictions* about the future behaviour of the US-based FB. The *transference* process is also complicated by the controversy of messages present in the German society: while some may admire FB for its structured website design, others scorn it for carelessness in handling user privacy [4]. This complexity of the situation is, however, conducive to the individualistic formation of trust on the basis of calculative thinking. Thus, high-IDV American users may figure that SNS providers have more to lose than to gain by violating their privacy: Once privacy abuse comes to surface, SNS provider will have to deal with ruthless media criticism, stalling user numbers, decreased communication, and even expensive lawsuits. Summarising, *trust* is expected to play a higher role in the decision-making process of high-IDV cultures. Therefore, we hypothesize that:

Hypothesis 1c: *The positive relationship between Trust in SNS Provider and Self-disclosure will be stronger for US than for German SNS users.*

As discussed above, three major forces are critical for the individual disclosure online: *platform enjoyment*, *privacy concerns*, and *trust in SNS provider*. From a practical standpoint, however, our analysis will not be complete without understanding of how the development of these ‘PC’-relevant perceptions can be managed. On the policy side, *legal assurance* may impact the dynamics of ‘PC’ decisions. On the managerial level, enabling users with *control* over their privacy as well as informing them about the essence of the adopted information-handling practices (*knowledge*) represent two interrelated strategies of addressing individual perceptions. We therefore integrate them as positive antecedents of our ‘PC’-variables as depicted in Figure 1 and discussed below.

Legal Assurance: As perceptions regarding benefits, privacy risks and trusting beliefs are situational, they are likely to be influenced by the *institutional structures* inherent in the environment in which SN services are consumed [32]. Indeed, when engaging into such risky behaviour as self-disclosure, users are likely to rely on *legal structures* - privacy-related laws, formal policies and procedures – which are designed to give them confidence that things will go well.

By and large, IS-researchers agree that sound legal framework may help to create an atmosphere of *trust* on the platform. In particular, when a relationship is associated with numerous risks – as is the case for SNSs - the legal mechanisms may work to create a much needed “*trust infrastructure*”. Furthermore, in the absence

of obvious means to control the use of personal data by providers, *legal assurances* are likely to be the best solution to *privacy concerns* [30]. Finally, by setting the rules of the ‘privacy game’, law-makers ensure that users feel at ease releasing their personal information on a SNS. This, in turn, is likely to allow them to gain the benefits of relationship maintenance, self-presentation and, above all, *enjoyment*. Hence, it comes as no surprise that SNS providers are increasingly relying on third party seals to signal their compliance with the required standards.

As perceptions regarding *legal assurance* are likely to motivate the development of *trusting beliefs* and *enjoyment* as well as mitigate *privacy concerns*, the strength of their impact is likely to differ from country to country.

People in risk-averse cultures like Germany are likely to exhibit “...*higher needs for structure (i.e., formal rules and regulations), and stronger faith in institutions (e.g., the government)*” ([28], p. 547). By establishing protective norms and rules, these cultures are trying to minimize their risk-related anxiety [7]. Significant differences in privacy regulation between Germany and the USA provide support for the validity of this argument. While Americans leave numerous privacy aspects to industry self-regulation, Germans have a comprehensive legal framework covering multiple aspects of personal data access, collection and use. We argue that as risk-averse cultures attach greater importance to rules and standards, these legal assurances will also play a bigger role in the formation of beliefs relevant for ‘PC’. We hypothesize that:

Hypothesis 2a: *The positive relationship between perceptions regarding Legal Assurances and Enjoyment will be stronger for German than for US SNS users.* **Hypothesis 2b:** *The negative relationship between perceptions regarding Legal Assurances and Privacy Concerns will be stronger for German than for US SNS users.* **Hypothesis 2c:** *The positive relationship between perceptions regarding Legal Assurances and Trust in SNS Provider will be stronger for German than for US SNS users.*

Perceived Control: In the light of privacy discourse, many authors equate the presence of *control* with the notion of privacy. For example, Son and Kim ([45] p. 504) define information privacy as “*individual’s ability to control when, how, and to what extent his or her personal information is communicated to others*”.

In the context of SNSs, *control* may take two forms: *control over accessibility of personal information* and *control over information use* [23]. However, the latter type of control needs is hard to address under a current revenue model of SNS providers. In fact, whereas business networks like Xing have long ago introduced premium accounts to capitalize of the privacy needs of its members [3], SNS providers offer their users a sole “take-it-or-leave-it” option when it comes to the use of their personal data. This lack of flexibility in choosing an appropriate mode of information secondary use is partly compensated by *accessibility control* options, which give users the possibility to protect their information from the prying eyes of third parties and other users. We therefore concentrate on this form of *control* to fulfil the purposes of our study.

Overall, Pavlou and Gefen [36] argue that market-driven mechanisms, like *control*, are powerful means to ensure desired

organizational outcomes. Indeed, empowering users with refined and easy-to-understand privacy settings is likely to support their beliefs that SNS provider is acting in their best interests thereby providing basis for *trust*. Indeed, investigating user behaviour on FB, Krasnova et al. [23] show that perceptions of *control* lead to enhanced *trusting beliefs* and reduced *privacy concerns* on the network. Moreover, users are even willing to pay significant sums of money to have more refined control over accessibility of their information on SNSs [21]. Overall, adjusting profile visibility constitutes a central strategy when it comes to resolving a conflicting pressure between the desire to self-present and the need to keep one's information private [48]. We assume that by actively defining the accessibility of their information to the outside world, SNS users are likely to feel themselves in the driver's seat when it comes to managing their privacy. These feelings are likely to lessen individual perceptions of riskiness of the SNS experience as well as contribute to the development of more positive attitudes towards the network, including platform *enjoyment*.

Taken together, studies from various contexts underscore the role of *control* in mitigating user *privacy concerns*, ensuring *trust* and enabling desired outcomes. However, even though the need to *control* one's outcomes is likely to be universal across cultures, we expect significant differences in the weight and consequences different cultures associate with it.

The role of *control* as an intercultural phenomenon has been intensively discussed in the context of organizational fairness. In these studies *control* is viewed as a major dimension of procedural justice and reflects the freedom to *voice* an opinion about how one's personal information will be used [31]. Konovsky [19] argues that cultural *individualism* may be influential in determining attitudes to *voice*. However, empirical evidence regarding the importance of *voice* perceptions is controversial. On the one hand, Leung and Lind [27] find that people in high-IDV cultures (like USA) show higher preference for *process control* as opposed to collectivistic cultures (like China). The reason for these differences may lie in the inherent competitiveness of high-IDV cultures. Collectivists, on the other hand, are more inclined towards harmony and hence attach less importance to *voice* in the decision-making process. On the other hand, some studies find that justice perceptions are equally important across *individualistic* and *collectivistic* cultures [33].

A number of studies support importance of voice in the trust-building process for countries with high IDV levels. For example, in an organizational context, Pillai and Williams [38] find that procedural justice is a more important predictor of trust in the US, than in Germany. Furthermore, Lim et al. ([28] p. 548) argue that as individualistic cultures build trust on a calculative basis, they are more likely to look for cues that indicate opportunism or trustworthiness of the provider. In this case, available privacy controls, "*vendor's recourse and refund policy and/ or the existence of third-party certifications, such as eTrust, BBB Online*" may provide such assurances. Furthermore, Dinev et al. [7] argue that people in individualistic and masculine societies will be more willing to depend on a trustee, if appropriate degree of control is provided. Taken together, if based solely on IDV dimension, the impact of control on trusting beliefs should be higher for the USA than for Germany. However, German users also exhibit high levels of UAI, which makes them particularly

aware of possible vulnerability inherent in a trusting relationship. As a result, German users may be particularly sensitive to the availability of controls when deciding to intentionally expose themselves to privacy-related threats. Taken together, the impact of low IDV on the relationship between *control* and *trust* is likely to be *balanced out* by high level of UAI in Germany.

When it comes to the link between *control* and *privacy concerns*, UAI is likely to be a dominant factor in determining the strength of this relationship. Indeed, as people from high-UAI cultures experience stronger fear for the unknown, they actively seek for means to relieve this anxiety [15]. Dinev et al. ([7], p. 395) argue that people in risk-averse cultures would "*attempt to control almost everything in order to avoid the unexpected*". Therefore, it is conceivable that German SNS users would attach higher relevance to privacy controls when forming their judgements about privacy risks.

Whether or not the influence of *control* on *enjoyment* will be stronger in Germany as opposed to the USA is a complex issue. On the one hand, as collectivists prefer in-group communication, they are likely to find it more enjoyable when they are sure that no out-group members have knowledge of it. Furthermore, collectivists are more likely to rely on procedures which retain inter-personal harmony [33]. In this case privacy settings offer excellent means to regulate the outgoing information without offending anyone. Individualists, on the other hand, may enjoy self-expression beyond their group of friends and hence be more relaxed in the absence of mechanisms controlling their information stream. Whether this argument would hold, however, is debatable. Even though Germany is much more collectivistic than the USA, its IDV index is much higher than the world average (67 vs. 43 [14]). Moreover, Lind and Early [29] argue that even the most individualist people care about group-related issues.

Taken together, we hypothesize that:

Hypothesis 3a: *The positive relationship between Perceived Control and Enjoyment will not differ significantly for US and German SNS users.* **Hypothesis 3b:** *The negative relationship between Perceived Control and Privacy Concerns will be stronger for German than for US SNS users.* **Hypothesis 3c:** *The positive relationship between Perceived Control and Trust in SNS provider will not differ significantly for US and German SNS users.*

Knowledge: Even when favourable information-handling practices and controls are in place, users may be unaware of their existence or content [45]. Many privacy policies are written in a complicated legalistic language illegible for an ordinary user. In 2006 Acquisti and Gross [1] found that around one third of their respondents were not aware about searchability control options, even though they were implemented on FB. Recognizing the ubiquitous nature of this problem for online companies, Malhotra et al. [31] acknowledge awareness about information-handling procedures as the key element of online privacy. In their view, increasing user awareness is likely to enhance *trust* and mitigate *privacy concerns*.

Even though people are expected to rely on their *knowledge* to categorize their experiences as threatening or safe, the role of *knowledge* in the context of privacy is ambiguous. For example,

Bonneau and Preibusch [3] develop a game-theoretical model for the privacy communication game on SNSs. In order to increase self-disclosure on SN platforms they recommend minimizing privacy priming for non-fundamentalists by hiding the privacy policy into the backrooms of SN websites. These privacy policies should, however, be fair enough to ensure the needs of privacy fundamentalists are addressed and their complaints prevented. Even though this approach partly reflects the current behaviour of many SNS providers, the long-term impact of such strategy is hard to predict. If a SNS provider avoids directly informing users about its information-handling practices, the media will do so, once the network becomes popular. This negative publicity may lead to undesirable ‘halo’ and ‘sleeper’ effects, under which a single negative piece of information (often from an untrustworthy source) spills over to damage the whole image of the provider. Lacking factual knowledge about privacy practices on their SNS, users may attribute unjustified level of risk to their self-disclosures – a highly undesirable development for any SNS provider. In support of our argument, Krasnova et al. [23] show a positive impact of *awareness* of enhancing *trust in SNS provider*.

Even though ‘notice’ constitutes a basic element of fair information practices important for both Germany and the USA, and, hence, is likely to mitigate *privacy concerns*, enhance *trust* and ensure *enjoyment* in both countries, its impact is likely to be contingent on culture. Indeed, Doney et al. [9] argue that culture plays a significant role in how individuals process information and integrate it into their decision-making process.

Overall, information-based cues may facilitate the *trust*-building process for both individualists and collectivists. However, whereas individualistic cultures may feel more confident in assessing the cons and pros of the provider’s defection behaviour (calculative-based thinking), collectivists are likely to have a hard time assessing the predictability and benevolence of the provider on the basis of available facts [28]. Even though this argument speaks for a slightly higher importance of knowledge for US subjects, studies on the impact of *interactional justice* - reflective for the transparency and communication style of the trustee - on *trust* reveal no significant differences between individualistic and collectivistic countries [33]. Moreover, high UAI inherent in German culture may also intensify the value attached to *knowledge* when forming *trusting beliefs*. By and large, we expect no major differences in the link between *knowledge* and *trusting beliefs* for US and German subjects.

Similar to *perceived control*, we expect *knowledge* to play a more salient role in mitigating *privacy concerns* in such highly risk-averse society as Germany. Indeed, by getting informed about information-handling procedures, risk-averse SNS users may feel at least passively in control of their information [31] and hence perceive much less risk when communicating on the platform.

Finally, Dinev et al. [7] argue that while *collectivistic* cultures, like Germany, are more careful in forming their attitudes, people from *individualistic* societies, like USA, feel empowered with *knowledge* and, hence, form their perceptions (e.g. regarding *enjoyment*) more readily. On the other hand, high risk-averseness in Germany is likely to level up this effect. By and large, we expect no major differences in the link between *knowledge* and *enjoyment* perceptions of the US and German respondents. Taken together, we hypothesize that:

Hypothesis 4a: *The positive relationship between Knowledge and Enjoyment will not differ significantly for German than for American SNS users.* **Hypothesis 4b:** *The negative relationship between Knowledge and Privacy Concerns will be stronger for German than for American SNS users.* **Hypothesis 4c:** *The positive relationship between Knowledge and Trust in SNS provider will not differ significantly for American and German SNS users.*

5. EMPIRICAL STUDY

5.1 Survey development, design and sampling

Participants from Germany and the USA were recruited by posting announcements on university mailing lists, campus bulletin boards and on FB groups throughout Fall 2008 and Winter 2009. German and American respondents were offered a reward of EUR5 or \$5 respectively. A total of 138 German subjects and 193 American subjects took part in the survey. 40.6% / 65.3% of the German / US sample were female and 57.2% / 34.2% were male. 85.5% / 42% of the participants in Germany/ USA were between 20 and 29 years old. In the USA 51.3% of the participants were between 18 and 20 years of age. Overall, both samples were dominated by students – an important group of FB audience. Recognizing some demographic differences, we consider both samples to be comparable.

A questionnaire was initially developed in English and then carefully translated into German. English and German versions of the survey were offered to German residents. Validity of the translation was ensured as described in [25]. Each construct was modeled as reflective and measured on a 7-point Likert scale (unless specified otherwise). We relied on the pre-tested scales where possible. Scales for *Self-Disclosure (SD)*, *Legal Assurance (LA)* and *Enjoyment (EN)* are partly presented in [22] as well as [25] and included 6, 3 and 2 items respectively. 5 items for *Trust in SNS Provider (Tr)* were adapted from McKnight et al. [32]. 6 items for *Privacy Concerns (PC)* and 3 items for *Perceived Control (PCtrl)* are presented in Krasnova et al. [23]. Items for *Knowledge (KN)* were self-developed as shown in Table 1. Overall, the paper by Krasnova and Veltri [25] provides a good overview of the scales used in the study.

Table 1. Construct Operationalization

KN	1. I am well-informed about FB privacy policies; I know exactly: 2. ... how the information I provide on FB is allowed to be used by other users or companies; 3. ... how the information I provide on FB can and cannot be used by FB; 4. ...how existing laws regulate the use of my information on FB.
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5.2 Evaluation of the Model

Our model has been tested using the Partial Least Squares methodology. The reasons for the choice of this approach was the non-normality of our data as well as a limited size of the German sample (less than 200 observations), as typically required by covariance-based methods [5]. Models for both countries were estimated separately using SmartPLS 2.0.M3 [42]. Measurement Model (MM) was evaluated in the first step. Parameters for

Indicator Reliability, Composite Reliability (CR) and Average Variance Extracted (AVE) were assessed to ensure Convergent Validity. Only 2 items in the German sample had loadings of 0.67 and 0.69, with all other items in both samples exceeding 0.7 threshold [16]. The CR values for all constructs in both models exceeded the required level of 0.7 [11]. The AVE values for all measured constructs by far surpassed the threshold level of 0.5 [41]. Finally, Cronbach's Alpha (CA) – a measure of Internal Consistency – was higher than a threshold of 0.7 for all constructs in both models [16]. Taken together, all criteria for Convergent were met. In the next step, Discriminant Validity was assessed, by ensuring that the square root of AVE for each construct was higher than the correlation between this construct and any other construct in a model [11]. This requirement was fulfilled for all constructs in both models (all results are available upon request). Summarizing, the MMs for both countries were well-specified. In the next step, the Structural Model (SM) was evaluated. We find that our 'PC' variables explain 24.0% and 15.8% of variance in *Self-disclosure* in the USA and Germany respectively. As we aimed to integrate only practice-relevant factors into our model - possibly omitting such influential variables as expected benefits of relationship maintenance or self-presentation - this level of explanatory power is adequate.

Table 2. Standardized path coefficients and p-values for MGA

Hyp.	A → B	Path Coefficient		p-value for MGA
		GER	USA	
H 1a	EN → SD	0.139***	0.268***	0.176
H 1b	PC → SD	-0.181**	0.032	0.065
H 1c	Tr → SD	0.070	0.329***	0.026
H 2a	LA → EN	0.101	-0.009	0.184
H 2b	LA → PC	-0.245***	-0.175	0.353¹
H 2c	LA → Tr	0.216***	0.299***	0.244
H 3a	PCtrl → EN	0.022	0.348***	0.004
H 3b	PCtrl → PC	-0.143***	0.056	0.063
H 3c	PCtrl → Tr	0.140***	0.207***	0.270
H 4a	KN → EN	-0.206	0.046	0.025²
H 4b	KN → PC	-0.021	0.066	0.294
H 4c	KN → Tr	-0.079	0.113*	0.059

Significance: * at 10%; ** at 5%; *** at 1% or lower

Next, path coefficients were evaluated based on PLS algorithm. In line with the accepted practice, significance of path coefficients was determined via a bootstrapping procedure by setting the number of cases equal to sample size and the number of bootstrap repetitions to 200. Results are summarized in Table 2. Finally, Multi-Group Analysis (MGA) comparing path coefficients across two models was conducted. We note that MGA with non-normal

¹ Even though the MGA p-value is insignificant, Legal Assurance does not exert a significant impact on Privacy Concerns in the USA. We therefore consider H2b to be supported

² Even though the difference between path coefficients is significant, Knowledge does not exert a significant impact on Enjoyment in both USA and Germany. We therefore consider H4a to be supported.

data in PLS is still 'terra incognita' for most researchers in the field. As a temporary solution, some relied on a parametric approaches, disregarding distributional characteristics of their data (e.g. [18]). In a recent study, Henseler et al. [13] propose a PLS-MGA procedure, which is free of distributional assumptions. The accompanying spreadsheet implementation of their solution is, however, limited to only 100 bootstrap repetitions. As we intended to use 200 bootstrap repetitions, a testing procedure in GNU R was implemented, which builds on the spreadsheet formula but helps to overcome existing limitations [46]. P-values obtained via our PLS-MGA implementation of Henseler et al. [13] approach are presented in Table 2. The supported hypotheses are selected in **bold** in Table 2. Considering that our study is exploratory in nature, a significance level of 10% was considered acceptable. Finally, for the ease of comprehension, our results for both countries are also sketched in Figures 2 and 3: paths selected in **bold** are significant at least on 5%-level; a path selected in **dashed bold** is significant on 10%-level.

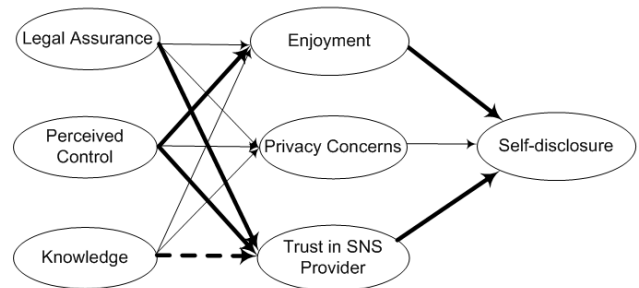


Figure 2. Results of the Structural Model for the USA.

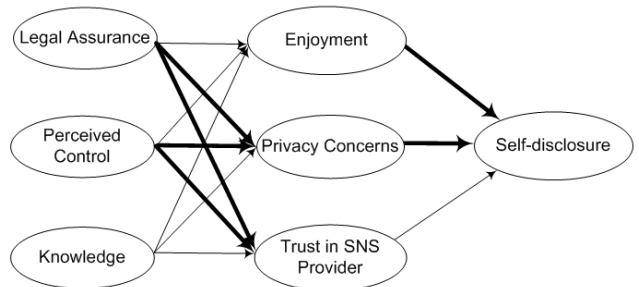


Figure 3. Results of the Structural Model for Germany.

6. THEORETICAL FINDINGS

Our results deliver important *theoretical* insights. First, we find that 'PC' of US and German subjects is characterized by distinct cognitive patterns. On the one hand, both cultures appear to be equally motivated by *enjoyment* in their decision to self-disclose (H1a supported). On the other hand, whereas Germans rather adjust their self-disclosure on the basis of *privacy concerns* (H1b supported), Americans base their decisions on their perceptions of the *trust in SNS Provider* (H1c supported). It appears that privacy-relevant mechanisms are helpless in ensuring *Enjoyment* in German culture. At the same time, and contrary to our expectations, a feeling of being in *control* emerges as a powerful booster for *enjoyment* for the individualistic American counterparts (H3a rejected). Even though users from both cultures report experiencing *enjoyment* from communicating with their

peers, more *individualistic* American users may be increasingly apprehensive about the opportunistic behaviour of other users. As a result, they are likely to find their SNS experience as more pleasing once control means are in place. We find remarkable differences in the formation of *privacy concerns*. None of the factors we tested appears to exert an impact on the magnitude of *privacy concerns* in the USA. Insignificance of *legal assurances* may be explained by the autonomous character of individualistic US culture, which speaks against strong reliance on the government. Germans, on the other hand, are more collectivistic and risk-averse, which may explain their preference for legalistic remedies (H2b supported). Furthermore, as in the case with *enjoyment*, insignificance of *legal assurances* in mitigating *privacy concerns* may be explained by the relative unimportance of institutional privacy as opposed to social privacy for US subjects [39]. A closer look at the answers to “*privacy concerns*” items reveals that US subjects are particularly fearful of losing control over their data online, and less so when it comes to “behind-closed-doors” commercial processing. Whereas *legal assurances* may prevent abuse of personal data by corporations and other legal entities, they are ineffective in preventing the bullying, ridicule or secret sharing in a social environment. The same logic may explain the insignificance of *knowledge* about practices of SNS Provider in mitigating *concerns* over social privacy for US subjects. This, however, does not explain insignificance of *knowledge* in mitigating *privacy concerns* of German respondents, who express high anxiety over commercial use of their information (H4b rejected). One possible explanation may be that as Germans are more distrustful of companies, they may not internalize privacy-related claims of geographically distant FB. While Germans view active *control* as a salient determinant of their *privacy concerns*, we find it not relevant whatsoever for American subjects (H3b supported). On the one hand, this complete detachment may signal the irrational nature of privacy perceptions of US users. Furthermore, American users may pessimistically (or realistically?!) assess the level of protection offered by even most refined controls. They may assume that no matter how hard they protect their information, it can still be spread if “friends” choose to copy it into a malicious email. This logic is plausible, as *individualism* allows for self-serving behaviour of others [9]. With an average user having 130 FB friends ([10], this arguments may indeed be reflective of the true state of things. In both countries *control* perceptions and *legal assurance* were equally important in determining *trust in SNS provider* (H3c supported; H2c rejected). This result rejects our hypothesis (H2c) about the relative unimportance of legal means in ensuring *trust* for American vs. German subjects. It is possible that as the legal framework determines the negative side of the deviant behaviour, American users are likely to integrate it when forming *trust* on a calculative basis. Finally we find *knowledge* to be insignificant for the formation of *trusting beliefs* for German, and only weakly significant (at 10%-level) for American subjects (H4c rejected). As mentioned above, people from individualistic cultures are more proficient in aligning their behaviour with available cues. At the same time, socially and geographically-distant German users may find it difficult to collect evidence relevant for the development of prediction-based trust, which is typical for collectivistic cultures [9]. Taken together, results of our study provide a unique theoretical insight into the cross-cultural generalizability of the ‘PC’ theory. Distinct differences identified in our study signal that many privacy-

mechanisms are culturally-determined and, hence, SNS providers cannot rely on the success of the “proven” means in ensuring positive outcomes when crossing boundaries, as discussed in the following section.

7. MANAGERIAL IMPLICATIONS

Our results provide a starting point for SNS providers who are looking for *practical* recommendations on their path to internationalization. We find that stimulating *enjoyable* experiences appears to be an important internationalization strategy. Recognizing that *socialization* on SNSs typically translates into *enjoyment*, one possibility is to open up as many channels of active communication and passive following as possible. Even though FB probably had exactly the same idea when introducing News Feed, many users find it useless and boring due to ineffective information filtering [20]. Hence, there is a pressing need to improve the criteria for the selection of the social content. Even though *trust in SNS provider* emerges as a relevant determinant of *self-disclosure* for US users, a quick look at the responses at the item level shows that US (as well as German) subjects are at best *slightly positive* about the trustworthiness of FB. Boyd and Hargittai [4] argue that a lot of this distrust comes from a heated media-driven discussion of inadequate approach of FB in managing user privacy. Amidst these debates, cross-cultural *legal assurances* may come as a much-needed help, as individualistic cultures are likely to rely on them when determining provider’s losses in case of a broken trust – a backbone of calculative trust-building process [9]. Hence, by relating information misuse to financial repercussions (e.g. monetary fines in case of a litigation), policy-makers can make the process of calculative thinking more concrete. Finally, user *control* and involvement into privacy-relevant decisions appears to be an indispensable part of the trust-building effort in both Germany and the US. Indeed, in an individualistic culture like the US even rank-and-file members expect to be informed, asked and involved when relevant decisions are made. Our data shows that *self-disclosure* decisions of German users are contingent on the magnitude of *privacy concerns* they perceive. Again, providers may mitigate these negative perceptions by giving users more *control* over their information as well as, paradoxically, by supporting *legal enforcement* of fair information-handling practices. Other measures, outside of our model, may include feedback mechanisms when privacy-relevant decisions are being planned. As FB privacy record demonstrates: When user involvement in privacy-relevant decisions, even good ones, is missing, the consequences are overblown beliefs of privacy threats [44]. Altogether our results show that if financial means of SNS providers are limited, they should in the first place direct their investments in enhancing platform *enjoyment*, granting users with more *control* and, paradoxically, lobbying for more *legalistic safeguards* of user privacy. Although effects of *control* differ from country to country, our study shows that *control* perceptions influence “disclosure-relevant” constructs in both countries: *privacy concerns* in Germany as well as *trusting beliefs* and *enjoyment* in the USA. We note that even though increasing user *knowledge* regarding privacy issues maybe a good idea (significant at 10% level in the USA), it should not be the first priority of SNS providers when expanding internationally. On the policy side, our study reveals a paramount role of *global* institutional assurances in enhancing platform *trust* in both

countries, as well as in mitigating *privacy concerns* in Germany. So far limited, more regulation is likely to follow shortly as announced by the EU Justice Commissioner in January 2010 [37]. We argue that SNS providers should welcome these efforts as they are likely to motivate communication on their sites. Taken together, our results call for greater involvement of policy-makers in safeguarding user privacy. By taking a more active stance, politicians could help retain the unique potential of SNSs to create and maintain social capital.

8. CONCLUSION

The aim of this paper was to investigate intercultural dynamics behind 'PC' on SNSs. Using samples from Germany and the USA, major culturally-determined differences were discovered. Our results provide evidence that while some elements, such as *enjoyment*, are equally important across cultures, relevance of other constructs varies from country to country. For example, while Americans base their self-disclosure decisions on the basis of *trust*, Germans are driven by *privacy concerns*. Furthermore, even though *control* and *legal assurances* are important in both countries, the mechanisms of their integration into individual privacy decisions are distinct. These differences signal that SNS provider should adopt more flexible strategies when expanding internationally. From the policy perspective, our findings support legal intervention into privacy regulation on SNSs, as besides protecting users these measures are likely to help SNS providers in supporting sustainability of their networks. Our study suffers from several limitations, which, however, offer exciting venues for future research. First, both American and German samples were dominated by students. Even though student samples are acceptable when the research question is "universalistic" in nature and involves general psychological constructs [26], we encourage validation of our findings on the basis of more representative samples. Second, by adopting a 'PC' lens we assume that SNS users have a stable preference for privacy. John et al. [17], however, argue that privacy preferences are context-dependent and a behavioural perspective would be more appropriate when studying privacy-related decisions. Hence, future researchers may extend our study by accounting for these cognitive limitations. Finally, as our study was exploratory in nature, it was expected that while many of the culture-relevant hypotheses would get supported, some would not. In this respect, our analysis provides evidence for the complexity of cultural impact on privacy-relevant perceptions and behaviour.

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