ONE SIZE FITS ALL? MANAGING TRUST AND PRIVACY ON SOCIAL NETWORKING SITES IN RUSSIA AND GERMANY

Krasnova, Hanna, Humboldt-Universität zu Berlin, Institute of Information Systems, Spandauerstr 1, 10178 Berlin, Germany, krasnovh@wiwi.hu-berlin.de

Kolesnikova, Elena, helena_kolesnikova@yahoo.de

Günther, Oliver, Humboldt-Universität zu Berlin, Institute of Information Systems, Spandauerstr 1, 10178 Berlin, Germany, guenther@wiwi.hu-berlin.de

Abstract

When it comes to platform sustainability, mitigating user privacy concerns and enhancing trust represent two major tasks providers of Social Networking Sites (SNSs) are facing today. State-of-the-art research advocates reliance on the justice-based measures as possible means to address these challenges. However, as providers are increasingly expanding into foreign markets, the effectiveness of these measures in a cross-cultural setting is questioned. In an attempt to address this set of issues, in this study we build on the existing model to examine the impact of culture on the robustness of four justice-based means in mitigating privacy concerns and ensuring trust. Survey responses from German and Russian SNS members are used to evaluate the two structural equation models, which are then compared. We find that perceptions regarding Procedural and Informational Justice are universally important and hence should be addressed as part of the basic strategy by the SNS provider. When expanding to collectivistic countries like Russia, measures enhancing perceptions of Distributive and Interpersonal Justice can be additionally applied. Beyond practical implications, our study makes a significant contribution to the theoretical discourse on the role of culture in determining individual perceptions and behavior.

Keywords: Social Networking Sites, Culture, Justice, Structural Equation Modelling, Multi-group Analysis.

1 Introduction

Millions of users are flocking daily to Social Networking Sites (SNSs) like Facebook. The reasons for these impressive growth rates lie in the unprecedented convenience these platforms provide for keeping in touch, getting updated about one's friends and even enhancing relationships. Attracted by this popularity and seeming simplicity of the underlying business model, new players are constantly coming to the market competing for user time and attention. As competition intensifies, existing SNS providers face a major challenge of *recruiting new* users as well as *retaining them*.

When it comes to getting *new* subscriptions, internationalization into foreign markets often represents the only alternative. Even now popular networks like Facebook, Hi5, Orkut, or StudiVZ are fighting for the clientele way beyond their home markets (Bonneau and Preibusch, 2009). When entering a foreign market, SNS providers are typically facing fierce competition from indigenous providers skilled in addressing the needs of their home audiences. As a result foreign entrants experience significant pressure to adopt their expansion strategy to new *cultural* realities (Krasnova and Veltri, 2011).

Beyond recruitment of new members, *supporting user come-back rates* often represents even a bigger challenge. Even though SNS members are interested in developing their social network online, a wave of privacy critique has made many users wonder whether active participation, reflected in the amount of self-disclosure, is worth the risks. Sensitized by discussions in the media, users are getting less trustful in their attitudes towards established providers (Krasnova and Veltri, 2010). As a result, increasing cautiousness in communication on the platform (Krasnova et al., 2010a) threatens to undermine the long-term sustainability of established SNSs. Indeed, sluggish self-disclosures were shown to have a strongly negative influence on user involvement and business value of SNSs (Boyd and Heer, 2006).

However, despite the risks these developments bring with them, little research exists to empower SNS providers with effective *operable* means to leverage user privacy concerns, enhance trust and thereby ensure healthy levels of self-communication in a *cross-cultural* setting. In an attempt to address these issues, in this study we build on the existing theoretical model to examine the impact of culture on the effectiveness of various measures in supporting disclosure-relevant variables. Survey responses from German and Russian SNS members are used to evaluate two structural equation models, which are then compared. Beyond practical implications, our study makes a significant contribution to the theoretical discourse on the role of culture in determining individual perceptions and behaviour.

2 Research Model

Research suggests a number of models to explain intensity of participation and self-disclosure on SNSs. In the initial stage of research traditional technology acceptance models have been modified and extended. For example, Rosen and Sherman (2006) integrate *perceived enjoyment* as a replacement for perceived usefulness in a TAM-like model. Sledgianowski and Kulviwat (2008) extend the TAM with a few other constructs to examine the adoption of SNSs from a hedonic standpoint. However, as users gradually gain awareness for the privacy problems present on SNSs, 'privacy calculus' (PC) perspective is gaining impetus (e.g. Krasnova et al., 2010a). According to 'PC' approach, three types of beliefs are significant when users are confronted with a self-disclosure decision: *perceived benefits*, *privacy risks* and *trusting beliefs*. Indeed, on the one hand, diverse benefits, such as enjoyment or socialization, may motivate uses to self-disclose on the platform (Krasnova et al., 2010a). On the other hand, privacy concerns, reflecting individual anxiety regarding "*possible loss of privacy*" (Xu et al., 2008, p.4), represent significant impediments to information sharing. The negative impact of privacy concerns can be mitigated by user trust in SNS provider, which reflects user beliefs that SNS provider possesses characteristics that hold it back from engaging in opportunistic behaviour (McKnight et al., 2002). Even though all three ingredients are important,

they differ in their practical relevance. Thus, Krasnova et al. (2010b) argue that as perceptions about *benefits* are mostly formed intrinsically, SNS providers should in the first place concentrate their efforts on *mitigating privacy concerns* and *enhancing trust*

Existing studies, however, offer only limited and often abstract insights into how *privacy concerns* and *trusting beliefs* of SNS users can be managed in practice. For example, Krasnova et al. (2010a) show that providing users with functional controls represents a powerful means to improve user trust and reduce privacy-related anxiety. Xu et al. (2008) find that perceptions regarding the effectiveness of the privacy policy and well as privacy social norm have an indirect impact on individual privacy concerns. The notable exception is the study by Krasnova et al. (2010b) who rely on the *justice/fairness* framework to operationalize the means at the disposal of an SNS provider. In particular, the authors reinterpret four dimensions of justice – distributive, procedural, informational and interpersonal – from the standpoint of their practical applicability for the SNS context. In the next step, these dimensions are integrated in a research model as direct antecedents of *privacy concerns* and *trusting beliefs*. Empirical validation of the model results in a set of practical recommendations for SNS providers. Overall, studies from organizational and social psychology provide strong support for the practical value of justice dimensions stressing the *relative ease* with which they can be translated into specific actions. As a result, specific *guidelines for management* can be derived (Aryee et al. 2002). In the online context, Son and Kim (2008) rely on the use of *fairness dimensions* to operationalize *tactical* means at the disposal of a service provider. Taken together, *justice/fairness* framework appears to be particularly suitable to study how *privacy concerns* and *trusting beliefs* of SNS users – two variables of importance – can be leveraged in practice. With most budgets under pressure, however, SNS providers have a strong incentive to understand *which justice-based measures in particular* prove to be most effective in the countries they operate. Indeed, even though justice values are universal in nature, the consequences of justice perceptions are likely to be contingent on culture (Morris and Leung, 2000; Konovsky, 2000). Hence, whether the relationships identified by Krasnova et al. (2010b) for a culturally-mixed sample would hold when applied to specific countries needs to be explored.

Recognizing the value of justice perspective for the purposes of our study we adapt the research model by Krasnova et al. (2010b) as presented in Figure 1. To test for cross-cultural differences, we evaluate this model on the basis of two samples: German users of Facebook and Russian users of vkontakte.ru.

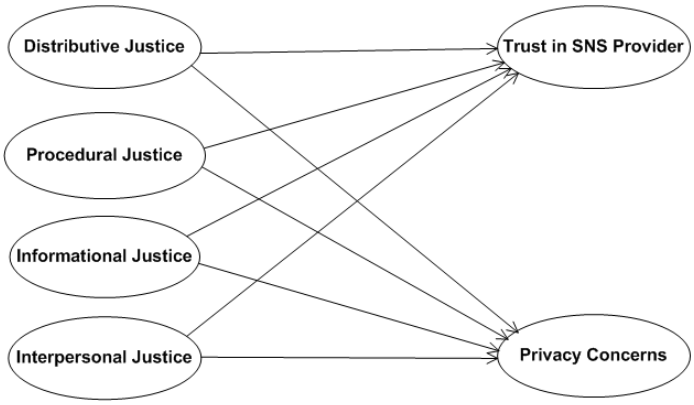

Figure 1. Research model adopted from Krasnova et al. (2010b).

3 Cultural Differences: Germany vs. Russia

The choice of particularly these two countries was not accidental. Bonneau and Preibusch (2009) argue that SNS providers should address concerns of privacy fundamentalists first. Considering that Germany belongs to one of the most privacy-conscious nations, insights from our study promise to have a significant value beyond inter-cultural discourse. Russians, on the other hand, represent the most engaged audience of the SNSs, spending on average 6.6 hours per month on these plarforms. In

contrast, German and American users spend 4.5 and 4.2 hours respectively (comScore, 2009). As a result, Russia belongs to one of the most luring markets for SNS providers.

Even though multiple views exist on how cultural differences can be systematically studied, the framework by Hofstede (2001) is the most accepted in research. Hofstede (2001) singles out power distance (PDI), individualism (IDV), masculinity (MAS), uncertainty avoidance (UAI) and long-term orientation (LTO) as five major dimensions characterizing a particular culture. Comparison of scores across these dimensions allows researchers to make more structured conclusions about the nature of the inter-cultural differences. When applying the framework by Hofstede (2001), we, however, encountered one major difficulty: While the values published by Hofstede (2001) for Germany were empirically validated, scores for Russia have been only projected on the basis of various national reports, observation and descriptive data (see Table 1). Whether or not these projected scores are reflective for the reality of such rapidly changing society as Russia is a matter of heated debate. For example, whereas Hofstede (2001) attributes a very high level of 95 for UAI to Russia, a more recent study by Naumov and Puffer (2000) report a more moderate value of 68. Similarly, the high value of 93 for PDI reported in Hofstede (2001) is found to be much lower in the studies by Bradley (1999) (PDI=45) and Naumov and Puffer (2000) (PDI=40). After careful consideration of applied methodology, sampling and timeline of the data collection, we decided to rely on the scores by Naumov and Puffer (2000) as the most reflective for the Russian culture of today. This decision reflects the best judgement of the authors' team, which involved two Russian researchers.

Country	IDV	UAI	PDI	MAS	LTO
Russia (estimated, Hofstede, 2001)	39	95	93	36	n.a.
Russia (Bradley, 1999)	28	104	45	-8	18
Russia (Naumov and Puffer, 2000)	41	68	40	55	n.a.
Germany (Hofstede, 2001)	67	65	35	66	31
World Average (Hofstede, 2001)	45	64	55	50	45

Table 1. Cultural Dimensions for Germany and Russia.

We find that Russia and Germany exhibit significant dissimilarities on IDV dimension, suggesting that Russians attach significant value to group support as well as tend to define their self-concept in terms of a group. Germans, on the other hand, tend to be more self-reliant, underscore personal goals over collective ones as well as prefer loose connections as opposed to closely knit circles (Hofstede, 2001; Doney et al., 1998). When it comes to UAI, PDI, MAS and LTO dimensions, Germany and Russia are roughly comparable: both demonstrate moderate aversion to uncertainty, low tolerance for inequality, dominance of masculine traits (e.g. assertiveness, competitiveness) and strong preference for immediate gratification (LTO score for Russia was taken from Bradley (1999) as it was not available in other studies). Overall, it appears that the moderating impact of culture will most likely be rooted in the differences in *IDV* between German and Russia.

4 Research Hypotheses

Before we proceed with theorizing about the potential impact of culture on the model relationships, we note that the complexity of the cultural influence makes our hypotheses only exploratory in nature.

4.1 Distributive justice

In the online context, distributive justice (DJ) is defined as "*users' perceived fairness of the outcome that they receive from online companies in return for releasing their personal information*" (Son and Kim, 2008, p. 510). Culnan and Bies (2003) argue that leveraging outcome distribution can be viewed as one of the competitive strategies companies can make use of. From the operational perspective, perceptions of DJ can be enhanced by further developing and advertising the positive side of SNS participation: communication convenience, endless possibilities for self-presentation and enjoyment.

At the same time, the price users have to "pay" in terms of their information should be clear and adequate. As users are likely to engage in the process of platform comparison, the sites with low "benefits to privacy risks ratio" may find themselves losing the market share to others with better distributional outcomes. On the contrary, positive perceptions of DJ are likely to mitigate user *privacy concerns* and enhance *trust in SNS provider* as hypothesized by Krasnova et al. (2010b).

Even though efforts to enhance DJ are likely to be welcomed by all users, the effectiveness of these measures in ensuring organizational outcomes appears to be culture-dependent (Morris and Leung, 2000). Our analysis hints that *Russian users are likely to be more sensitive* to the changes in DJ perceptions compared to their German counterparts. The nature of this cultural dynamics is likely to be two-fold. *First*, as Russia is rapidly moving away from its Soviet past, increased financial stratification is making the issues of redistribution and social comparison particularly acute. Whereas equality or notoriously known '*urovnilovka*' was entrenched as a norm in the Soviet system, modern Russians are increasingly questioning the fairness of the distribution decisions. We expect this social sensitivity to transfer to SNS context as well with users placing increasing emphasis on DJ in their attitudes to the provider and SNS environment. *Second*, as individualistic cultures like Germany tend to have higher acceptance of inequality (Giacobbe-Miller et al., 1998), they are unlikely to perceive provider's attempts to capitalize on user-provided content as unacceptable. In fact, negative changes in the "benefits to costs" ratio are likely to be viewed as an inevitable part of the market reality and a toll for the benefits they obtain. As a consequence, only limited changes in users' trust towards the provider as well as privacy concerns can be expected. In contrast, keen on engaging in social comparison (Morris and Leung, 2000), Russian users are likely to exhibit much stronger reactions whenever the norms of DJ are allegedly violated. Largely disregarding the value they receive from participating on a SNS, many are likely to overstress the cost side, seeing themselves as victims to a "greedy" SNS provider who is trying to take advantage of them. Indeed, the stereotype that making money on others is immoral is still deeply embedded in the Russian mentality: "*wealth is incompatible with morality*" (Pravda.Ru, 2002). For example, those who were trying to make a living on reselling goods in the Soviet Union were regarded as dishonest and branded with a negative word '*spekulant'*. Following this logic, as Russian users become aware that a provider is trying to "exploit" their data for its personal gain, they are likely to feel deceived. As a consequence, trust in the provider will decrease significantly. Furthermore, privacy concerns are likely to be magnified, as users will expect a provider to "go all lengths just to make profit". Against this background, we hypothesize that:

Hypothesis 1a (1b): The positive (negative) relationship between perceptions about DJ and Trust in SNS Provider (Privacy Concerns) will be stronger for Russian than for German SNS users.

4.2 Procedural justice

In the online context, procedural justice (PJ) is defined as the "*degree to which an Internet user perceives that online companies give him or her procedures for control of information privacy and make him or her aware of the procedures*" (Son and Kim, 2008, p. 511). Overall, giving people control over decision-making process is considered to be central to ensuring positive perceptions of procedural justice (Konovsky, 2000). Acknowledging its importance, SNS providers take considerable efforts to enable users with *control over accessibility* of their information via diverse privacy options. Addressing the need for *control over information use*, StudiVZ.net is offering users a possibility to choose whether their data can be used to send targeted advertisements to them.

Even though positive perceptions of control have been shown to translate into strengthened trust and reduced privacy concerns (Krasnova et al., 2010a), a number of studies hint at a moderating role of culture in these relationships (Morris and Leung, 2000). In fact, most theoretical evidence hints at a higher importance of *control for German as opposed to Russian culture*. For example, Konovsky (2000) argues that as individualistic cultures, like Germany, are more confrontational in nature, these societies are likely to exhibit stronger preference for control as a basis for trust. In addition, individualism appears to provide a favourable ground for the development of *internal locus of control*.

Indeed, in line with the Western way of thinking, individuals have control over their lives and are responsible for the outcomes. In contrast, recent polls in Russia demonstrate that "*optimistic fatalism coexisting with passivity and non-interference with life*" still constitutes an important part of the Russian mentality (Pravda.Ru, 2002). Similarly, Kaufmann et al. (1995) show that in comparison to their Western counterparts, Russian students were more likely to attribute control over the events of their lives to powerful others and to chance. Hence, as German users may feel responsible for the protection of their privacy, they are more likely to appreciate control options. In contrast, Russian users may attach less value to control mechanisms due their fatalistic attitude. Furthermore, Brockner et al. (2001) demonstrate that people from 'low PDI' countries will respond less favourably to lower levels procedural justice. As PDI score for Germany is lower, we expect German users to be less comfortable with autocratic processes (Konovsky, 2000). Therefore they are more likely to place high value on the control options when forming their attitudes.

Taken together, we hypothesize that:

Hypothesis 2a (2b): The positive (negative) relationship between perceptions about PJ and Trusting in SNS Provider (Privacy Concerns) will be stronger for German than for Russian SNS users.

Interactional justice, reflecting the fairness of interpersonal treatment of one party in an exchange relationship with another (Son and Kim, 2008), is typically singled out as the third pillar of justice perceptions. Organizational scholars differentiate between *informational* and *interpersonal* dimensions of interactional justice (Colquitt, 2001). In an attempt to adapt these dimensions to the SNS context, Krasnova et al. (2010b) associate *informational component* of justice with the *transparency* of SNS provider with regard to its information-handling practices. The *interpersonal component* is reinterpreted as a *warning* about privacy risks. Indeed, considering the multitude of privacy threats on SNSs, it is fair to expect that SNS provider will proactively warn its user base about their existence as well as instruct on possible protection methods.

4.3 Informational justice

In the SNS context, informational justice (InfJ) refers to the adequacy of the information provided to users regarding data-handling practices (Colquitt, 2001). Overall, even when favourable information-handling practices and controls are in place, users may be unaware of their content or existence (Son and Kim, 2008). Many privacy policies are written in a complicated legalistic language illegible for an ordinary user. As a result, it is not surprising that an overwhelming majority is reluctant to read them. Recognizing the ubiquitous nature of this problem for online companies, Culnan and Bies (2003) call for more action to improve user *awareness* of the information-handling procedures. The rationale behind this recommendation lies in a widespread notion that enhancing users' access to information enables more *trust* and mitigates *privacy concerns*.

Cultural background is a strong determinant of how available information is internalized, processed and integrated into behaviour (Doney et al., 1998). Overall, most of our findings speak for the higher importance of *informational justice for German SNS users*.

First, Dinev et al. (2009) argue that *individualistic* cultures like Germany attach higher value to information and tend to readily integrate it into their decision-making process. At the same time people from *collectivistic* cultures like Russia appear to be more cautious when it comes to forming their attitudes. Second, *awareness* about information-handling procedures is more likely to facilitate the development of trusting attitudes in *individualistic* than in *collectivistic cultures*. This is due to the distinct nature of trusting-building processes both groups adopt. Specifically, Doney et al. (1998) argue that while collectivists are more likely to account for the *predictability* and *benevolence* of the trustee when forming their trusting attitudes, individualists tend to take a *calculative* perspective by assessing the benefits and costs of SNS provider's defection (e.g. malicious misuse of user data). Considering the nature of the information involved (e.g. privacy policy, terms of use, press releases, media reports), it seems easier to adopt a calculative approach as opposed to looking for cues hinting

at provider's predictability or benevolence (Lim et al., 2004). Hence, *individualistic cultures* are more likely to develop trust towards the SNS provider. Third, as German culture exhibits a high preference for formalized rules and welcomes regulation at the most minute level of detail, German users are particularly likely to emphasize the transparency of information-handling procedures when forming their attitudes (Pillai et al., 2001). Finally, considering that awareness about existing procedures goes hand in hand with having control over one's information (Malhotra et al., 2004), a majority of arguments advanced for the case of PJ will also apply to its informational counterpart. Taken together we hypothesize that:

Hypothesis 3a (3b): The positive (negative) relationship between perceptions regarding InfJ and Trusting Beliefs (Privacy Concerns) will be stronger for German than for Russian SNS users.

4.4 Interpersonal justice: warning

Participation on SNSs is related to numerous threats to one's privacy. Even though some are on the surface, others can only be foreseen by competent privacy and security experts. Considering that users' expertise is typically limited, it is fair to expect that SNS provider will warn its users with regard to emerging risks and instruct on the efficient protection methods. Krasnova et al. (2010b) view this approach to provider-user communication as the essence of interpersonal justice (IntJ) in the SNS context. For example, users of vkontakte.ru are warned about possible security risks when following links to the third-party web-sites. Overall, by timely warning their user base about daunting privacy threats, SNS providers are likely to position themselves as a trustworthy company putting the needs of its users first. Additionally, as users will learn to be warned about possible risks their privacy concerns are likely to lessen.

Even though privacy-related warnings are likely to be welcomed by users in all countries, their effectiveness in enhancing *trust* and mitigating *privacy concerns* is expected to be culture-dependent. Our analysis of literature hints at a *higher importance of these measures for the Russian SNS users*.

First, considering that Russian culture exhibits less tolerance to uncertainty expressed in higher UAI, Russian SNS users will be more likely to put weight on being told about existing threats. Second, Russia exhibits a much higher level of paternalism in comparison to Germany: 59 (Naumov and Puffer, 2000) vs. 21 (Hofstede, 1980) respectively. This hints that Russian SNS users may be unwilling to act for themselves and assume responsibility (Pravda.Ru, 2002). These infantile beliefs are likely to underlie resulting attitudes and behaviour. In particular, as Russian users exhibit strong willingness to be taken care of, they are likely to appreciate SNS provider acting as a caring and well-meaning "parent". In contrast, hushing up negative consequences of SNS participation may lead them to post factum blame SNS provider for their woes. This, in turn, will decrease users' trust and magnify privacy concerns. Against this background we hypothesize that:

Hypothesis 4a (4b): The positive (negative) relationship between perceptions about IPJ and Trusting Beliefs (Privacy Concerns) will be stronger for Russian than for German SNS users.

5 Empirical Study

5.1 Measurement scales and sampling

The items measuring our constructs are presented in Krasnova et al. (2010b). As the scales were originally in English, we translated them in German and Russian. In both cases several native-speakers were involved to ensure the appropriate quality of the translation. Both surveys were conducted online using the same interface.

Participants for the German version of the survey were recruited among Facebook users throughout Fall 2008 via university mailing lists and by advertising a survey link on numerous Facebook groups. Participants were offered EUR5 reward for filling out the survey. In total, 237 subjects have answered

the survey, 138 of them German. Only responses from the German subjects were integrated into the study.

Russian users of vkontakte.ru were recruited throughout Spring 2009 by posting on various vkontakte.ru groups. Overall, vkontakte.ru has a similar look and feel as Facebook and is currently the most popular platform in Russia, counting more than 100 million members (vkontakte.ru, 2011). When advertising our survey, we concentrated on users from Russian Federation (RF) and Belarus – both representatives of the Russian cultural archetype. Indeed, Belarus and RF are geographical neighbours; share the same Soviet past, language and cultural mindset (Burant, 1995). On the political level, Belarus is often referred to as the small sister of Russia. The focus on these two population groups was reflected in our remuneration scheme as only respondents from Belarus and RF had a 50% chance of receiving an equivalent of EUR3 in a respective currency. As a result, out of 212 Russian-speaking respondents 37.3% claimed to come from RF and 54.7% from Belarus. Taking into account our approach to respondents' recruitment, we have strong reasons to believe that the rest 8%, who did not specify their origin, came from either RF or Belarus. T-tests conducted for all variables across both groups did not reveal any significant differences, supporting strong similarities between both countries. Considering that both countries are practically indistinguishable in their mentality, all usable observations were pooled together. For practical reasons we will refer to this sample as *Russian* in the rest of the paper.

German and Russian samples respectively contained 40.6%/45.5% female and 57.2%/52.5% male respondents; 85.5%/82.6% were between 20 and 29 years old. Students - an important group of SNS audience - dominated both samples. Considering that both samples exhibit only marginal differences in terms of demographics, we hold them to be comparable.

5.2 Research methodology and model evaluation

Considering the non-normal character of our data in both German and Russian samples, the Partial Least Squares (PLS) approach was chosen to estimate two identical research models: one for each country. SmartPLS 2.0.M3 (Ringle et al., 2005) software was used for estimation.

The evaluation of each model involved two stages: first both *Measurement Models (MMs)* and then both *Structural Models (SMs)* were assessed. Estimation of the MMs involved evaluation of Convergent and Discriminant validity for the measured constructs. Convergent validity was evaluated via Composite Reliability (CR), Average Variance Extracted (AVE) as well as Indicator Reliability (IR) parameters. Criterion for IR was met, as all factor loadings in both models were higher than a required threshold of 0.7 (Hulland, 1999). In addition, Cronbach's Alpha – a measure of Internal Consistency of the items in the scale - was higher than a cut-off criterion of 0.7 for all constructs in our study (Nunnally, 1978). The CR values for all constructs were higher than the required level of 0.6 (Ringle, 2004). Finally, the AVE values for all measured constructs surpassed the required level of 0.5 (Ringle, 2004). Summing up, Convergent validity was ensured for both MMs. Similarly, Discriminant validity was verified as the AVE for any particular latent variable was higher than the squared correlation between this variable and any other latent variable included in the model (Fornell and Larcker, 1981). All tables are available from authors upon request due to space limitations. Next, the SM for each country was evaluated separately. We find that our fairness dimensions together explain R^2= 31.9% / 32.0% of the variance in the *Trust in SNS Provider* and 17.7% / 4.7% of the variance in *Privacy Concerns* for Germany and Russia respectively. Even though R^2 for *Privacy Concerns* in the Russian sample is rather low, both models show an adequate explanatory power considering an explorative character of this study.

In the next step, the value and the significance of the path coefficients were assessed. Significant path coefficients are selected in bold in Table 2. In some cases this information was already sufficient to evaluate the hypotheses formulated above. In particular: (1) when a path coefficient was significant for one country but insignificant for the other, we assumed the relationship to be stronger in the former country; (2) when a path coefficient was insignificant for both countries, we assumed no difference

between both countries. Whenever *both* path coefficients were significant, the spreadsheet implementation of the multi-group analysis procedure (PLS-MGA), specifically developed to tackle the particularities of the non-normal data, was used to estimate the differences between them on the basis of p-values (Ho: path coefficients in both groups do not differ) as recommended by Henseler et al. (2009).

We find that while *DJ* exerts a significant influence on *trusting beliefs (at 10% level)* and *privacy concerns* of Russian SNS users, it has no influence for their German counterparts (H1a and H1b are supported). Second, *PJ* is found to be equally important in enhancing *trust in SNS provider* in both Russia and Germany (MGA p-value=0.233, H2a rejected). At the same time, this type of justice appears effective in mitigating *privacy concerns* of only German SNS users (H2b supported). Third, we find that perceptions regarding *InfJ* are equally important in predicting *trust in SNS provider* in both countries (MGA p-value=0.432, H3a rejected). At the same time, we find no link between *InfJ* and *privacy concerns* in both Germany and Russia (H3b rejected). Finally, *IntJ* appears to motivate the building of *trust in SNS provider* for Russian but not for German SNS users (H4a supported). This dimension of justice is, however, insignificant in predicting the magnitude of *privacy concerns* in both countries (H4b rejected).

Hypothesis	Construct A → Construct B	Path Coef. GER	t-value GER	Path Coef. RUS	t-value RUS	Hypothesis
H 1a	Distr. Justice → Trust in SNS Prov.	0.101	1.411	**0.114**	**1.865**	supported
H 1b	Distr. Justice → Privacy Concerns	-0.110	0.932	**-0.189**	**2.151**	supported
H 2a	Proced.l Justice → Trust in SNS Prov.	**0.249**	**2.573**	**0.165**	**2.959**	rejected
H 2b	Proced. Justice → Privacy Concerns	**-0.293**	**2.759**	0.084	0.940	supported
H 3a	Inform. Justice → Trust in SNS Prov.	**0.335**	**3.149**	**0.363**	**5.635**	rejected
H 3b	Inform. Justice → Privacy Concerns	-0.184	1.416	-0.091	0.830	rejected
H 4a	Interpers. Justice → Trust in SNS Prov.	0.100	0.974	**0.158**	**2.357**	supported
H 4b	Interpers. Justice → Privacy Concerns	0.007	0.052	0.134	1.208	rejected

Table 2. Standardized path coefficients, t-values and hypothesis evaluation.

6 Theoretical and Managerial Implications

Before we discuss the theoretical and practical implications of our study, we would like to note that considering that IDV is the only dimension for which differences between Germany and Russia are particularly strong, we can cautiously generalize our results to *individualistic* and *collectivistic* societies in general. As IDV is deemed to be the most significant factor in explaining intercultural differences (Sia et al., 2009), the insights of our study provide a particularly relevant contribution to the theory.

A quick look at the results of our structural models reveals that on a *basic* level a provider should concentrate on *procedural* and *informational* types of justice. Indeed, these two measures appear to be effective in ensuring *trust in SNS provider* in *both* countries. Additionally, perceptions of *PJ*, expressed in the degree of *control* perceived by the users, are shown to mitigate *privacy concerns* of users in *individualistic* countries like Germany. Overall, *informing users about the procedures* and giving them *control* over their privacy is a path to follow *independent* of the culture SNS provider operates in. On the *PJ* side these measures could be reflected in transparent privacy settings, clear escalation procedures as well as effective mechanisms of user involvement into decision-making. Readability of the privacy policies should be improved to enhance perceptions of InfJ. In the PR campaigns a particular emphasis should be made on ensuring the image of an SNS provider as an open company interested in placing a user at the driver's seat when it comes to privacy. In fact, some SNSs already place control-related slogans and transparency promises on the front pages of their web-sites (Bonneau and Preibusch, 2009).

We find that *collectivistic* cultures, like Russia are more responsive to the perceptions of justice. Hence, *additional* means could be made use of, if resources allow. In particular, we show that perceptions of DJ are a relevant factor in building *trust* and mitigating *privacy concerns* of Russian users. Considering the structural changes taking place in their society, Russian users were expected to be particularly sensitive to the issues of income redistribution. In fact, a closer look at the overall model reveals that DJ is the *only* significant determinant of *privacy concerns* for our Russian sample. Hence, whenever a provider is judged to over-engage in the commercial use of member data, the privacy concerns of Russian users soar. In contrast, German users appear to be oblivious to this type of (in)justice when evaluating *privacy risks* or forming their *trusting attitudes*. Strong *legal framework* backing up privacy needs of German SNS users may be a reason for this phenomenon. Even when German users find provider to "over-exploit" their information, they may still rely on existing laws to guarantee them a certain level of privacy. In support of this argument, Krasnova and Veltri (2011) show that *confidence in legal assurance* plays a significant role in mitigating *privacy concerns* of German SNS users. On a more general level our results speak for a *higher importance of DJ* in ensuring desired organizational results in *collectivistic* cultures. To enhance perceptions of DJ in practice, we recommend SNS providers to: (1) verbalize (and advertise) the subtle benefits users obtain from using the SNS; (2) underscore the costs of supporting the network; (3) clearly place the limits on the use of member information by the provider. Finally, measures of IntJ, reflected in the *pro-active warnings about existing privacy threats*, could be used as another measure when expanding to a *collectivistic* country. As our data shows, by directly warning users about the implications of her actions, *trust in SNS provider* can be enhanced. From the theoretical perspective, this result contributes to the on-going discussion about the impact of *privacy priming* on user *privacy concerns*. Considering high privacy-consciousness present in Germany, it is particularly noteworthy that no effect has been registered for both *InfJ* and *IntJ*.

The theoretical contribution of this paper is three-fold. First, we extend cross-cultural research of justice by applying it to a new setting of SNSs. Our study shows that the way users react to (in)justice on a SNS is contingent on culture. Second, we deepen the understanding of the unique dynamics taking place on SNSs in Germany and Russia. In fact, even though Germany has been frequently in the focus of justice and SNS scholars in the past (Morris and Leung, 2000; Krasnova and Veltri, 2011), the studies of Russia are largely missing. Finally, since the differences identified in our study can be largely attributed to the effects of *individualism*, our findings are likely to provide considerable help to cross-cultural researchers in disentangling the complex effects of various cultural dimensions in other cultural settings. On the practical side, our findings provide SNS providers with an action plan contingent on the degree of individualism present in the country they decide to enter.

7 Conclusion

Studies from organizational science and social psychology provide a number of insights on the role of culture in individual reactions to (in)justice. Despite their value, the applicability of these studies is limited to the employer-employee relationship. Against this background, this study is a pioneering attempt to step outside the boundaries of organizational relationships and apply an inter-cultural lens to study the robustness of justice-based measures in a new setting of SNSs. We find that perceptions regarding PJ and InfJ are universally important and hence should be addressed as part of the basic strategy of the SNS provider. When expanding to collectivistic countries like Russia, measures enhancing perceptions of DJ and IntJ can be additionally used to mitigate privacy concerns and enhance trust.

Our study is subject to several limitations, which, however, provide thrilling venues for future research. First, we relied on Naumov and Puffer (2000) scores to evaluate cultural dimensions of the Russian culture. Even though the scores presented in this study appear credible and realistic, more research is needed to validate their results. Second, responses of participants from Belarus and Russian Federation were merged together as "Russian". Even though this step might have caused slight

deviations in the final results, we believe the differences between both countries to be marginal or non-existent. Third, as German and Russian respondents in our study were users of Facebook and vkontakte.ru respectively, the possibility of the platform-dependent moderation effect cannot be excluded. However, as both platforms have significant interface similarities, we expect this effect to be limited. Finally, in both samples the share of students was significant. Kruglanski (1975) argues that results obtained via student samples demonstrate sufficient validity when the research question is "universalistic" in nature and involves psychological constructs. Nevertheless, we strongly encourage validation of our findings with other population segments.

References

Aryee, S., Budhwar P.S. and Chen Z.X. (2002). Trust as a mediator of the relationship between organizational justice and work outcomes: test of a social exchange model. Journal of Organizational Behavior, 23 (3), 267-285.

Bonneau, J. and Preibusch, S. (2009). The privacy jungle: On the market for data protection in social networks. In the Proceedings of the Eighth Workshop on the Economics of Information Security (WEIS 2009), London, United Kingdom.

Boyd D. and Heer J. (2006). Profiles as Conversation: Networked Identity Performance on Friendster. In Proceedings of the HICSS. IEEE Computer Society. USA.

Bradley, T. L. (1999). Cultural dimensions of Russia: Implications for international companies in a changing economy. Thunderbird International Business Review, 41(1), 49–67.

Brockner, J., Ackerman, G., Greenberg, J., Gelfand, M. J., Francesco, A. M., Chen, Z. X., Leung, K., Bierbrauer, G., Gomez, C., Kirkman, B. L. And Shapiro, D. (2001). Cultural and procedural justice: The influence of power distance on reactions to voice. Journal of Experimental Social Psychology, 37 (4), 300-315.

Burant, S. R. (1995). Foreign Policy and National Identity: A Comparison of Ukraine and Belarus. Europe-Asia Studies, 47 (7), 1125-1144.

Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. Journal of Applied Psychology, 86 (3), 386-400.

comScore (2009). Russia has World's Most Engaged Social Networking Audience. http://www.comscore.com/layout/set/popup/Press_Events/Press_Releases/2009/7/Russia_has_World_s_Most_Engaged_Social_Networking_Audience, last access on 6.12.2010.

Culnan, M. J. and Bies, R.J. (2003). Consumer privacy: Balancing economic and justice considerations. Journal of Social Issues, 59 (2), 323-342.

Dinev, T., Goo, J., Hu, Q. and Nam, K. (2009). User behaviour towards protective information technologies: the role of national cultural differences. Information Systems Journal, 19 (4), 391-412.

Doney, P. M., Cannon, J. P. and Mullen, M. R. (1998). Understanding the Influence of National Culture on the Development of Trust. Academy of Management Review, 23 (3), 601-620.

Fornell C. and Larcker D.F. (1981) Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. Journal of Marketing Research, 18(3), 39-50

Giacobbe-Miller, J., Miller, D.J. and Victorov, V. (1998). A Comparison of Russian and US Pay Allocation Decisions, Distributive Justice Judgments and Productivity under Different Payment Conditions. Personnel Psychology, 51(1), 137–63.

Henseler, J., Ringle, C. M. And R.R. Sinkovics (2009). The use of partial least squares path modeling in international marketing. In Advances in International Marketing (Sinkovics, R. R. and Ghauri, P. N. Eds), p. 277-320, Emerald, Bingley.

Hofstede, G. (2001). Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations. Sage Publications, Thousand Oaks.

Hofstede, G. (1980). Culture's consequences: International differences in work-related values. Sage, Newbury Park, CA.

Hulland, J. (1999). Use of Partial Least Squares (PLS) in Strategic Management Research: A Review of Four Recent Studies. Strategic Management Journal, 20 (2), 195-204.
Kaufmann, P. J., Welsh, R. H. B. and Bushmarin, N. V. (1996). Locus of Control and Entrepreneurship in the Russian Republic. Entrepreneurship: Theory and Practice, 20 (3), 43-56.
Konovsky, M. (2000). Understanding Procedural Justice and Its Impact on Business Organizations. Journal of Management, 26 (3), 489-511.
Krasnova H. and N. Veltri (2010). Privacy Calculus on Social Networking Sites: Explorative Evidence from Germany and USA. In Proceedings of the 43rd Hawaii International Conference on System Sciences (HICSS-43), CD-ROM, IEEE Computer Society
Krasnova H., Spiekermann S., Koroleva K. and Hildebrand T. (2010a). Online Social Networks: Why We Disclose. Journal of Information Technology, 25 (2), 109-125.
Krasnova, H., Kolesnikova, E. and Günther, O. (2010b). Leveraging Trust and Privacy Concerns in Online Social Networks: an Empirical Study. In Proceedings of 18th ECIS 2010, Pretoria, South Africa.
Krasnova, H. and Veltri, N. (2011). Behind the Curtains of Privacy Calculus on Social Networking Sites: The Study of Germany and the USA. In Proceedings of the 10th International Conference on Wirtschaftsinformatik (WI 2011) (Bernstein, A. and Schwabe, G. Eds), Zürich, Switzerland.
Kruglanski, A. W. (1975). The human subject in the psychology experiment: Fact and artifact. In Advances in experimental social psychology (Berkowitz, L. Ed.), p. 101-147, Academic Press, New York.
Lim, K. H., Leung, K., Sia, C. L. and Lee, M. K. O. (2004). Is eCommerce Boundary-Less? Effects of Individualism- Collectivism and Uncertainty Avoidance on Internet Shopping. Journal of International Business Studies, 35(6), 545-559.
Malhotra, N.K, Kim, S.S. and Agarwal J. (2004). Internet Users' Information Privacy Concerns (IUIPC): The Construct, the Scale, and a Causal Model. Information Systems Research, 15 (4), 336-355.
McKnight, D.H., Choudhury, V. and Kacmar, C. (2002). Developing and Validating Trust Measures for E-commerce: An integrative typology. Information Systems Research, 13 (3), 334–359.
Morris, M. W. and Leung, K. (2000). Justice for All? Progress in Research on Cultural Variation in the Psychology of Distributive and Procedural Justice. Applied Psychology, 49 (1), 100-132.
Naumov, A. and Puffer, S. (2000). Measuring Russian Culture using Hofstede's Dimensions. Applied Psychology, 49 (4), 709–718.
Nunnally, J.C. (1978). Psychometric Theory. 2nd Edition. McGraw-Hill, New York.
Pillai, R., Williams, E. and Tan, J. (2001). Are the scales tipped in favor of procedural or distributive justice? an investigation of the US, India, Germany, and Hong Kong (China). International Journal of Conflict Management. 12 (4), 312-332.
Pravda.Ru (2002). Russian Mentality: Uncertainty and Fatalism. http://english.Pravda.RU/news/russia/26-03-2002/36195-0/, last access on 6.12.2010
Ringle, C. M. (2004). Gütemaße für den Partial Least Squares-Ansatz zur Bestimmung von Kausalmodellen. Working paper 16. Institute of Industrial Management, University of Hamburg.
Ringle, C. M., Wende, S. and Will, A. (2005). SmartPLS 2.0, Release 2.0.M3. Hamburg, Germany.
Rosen, P. and Sherman, P. (2006). Hedonic Information Systems: Acceptance of social networking websites. In the Proceedings of the 12th AMCIS 2006, Acapulco, Mexico.
Sia, C., Lim, K., Leung, K., Lee, M., Huang, W. and Benbasat, I. (2009). Web Strategies to Promote Internet Shopping: Is Cultural-Customization Needed? MIS Quarterly, 33(3), 491-512.
Sledgianowski, D. and Kulviwat S. (2008). Social Network Sites: Antecedents of User Adoption and Usage, In Proceedings of AMCIS, Toronto, Canada.
Son, J.-Y. and Kim, S. S. (2008). Internet Users' Information Privacy-Protective Responses: A Taxonomy and a Nomological Model. MIS Quarterly, 32 (3), 503-529.
vkontakte.ru (2011). About VK. http://vkontakte.ru/help.php?page=about, last access on 6.12.2010.
Xu, H., Dinev, T., Smith, H. J. and Hart, P. (2008). Examining the Formation of Individual's Privacy Concerns: Toward an Integrative View. In Proceedings of ICIS 2008, Paris, France.