Although I am stressed, I still use IT! Theorizing the decisive impact of strain and addiction of social network site users in post-acceptance theory

Research-in-Progress

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Abstract

This paper examines the decisive roles of strain and addiction in post-acceptance behavior of social networking sites' users. Therefore, we focus in a first step on the formation of discontinuous usage intentions by theorizing strain, addiction, and satisfaction as direct influencing factor that causes and/or inhibits them. In a second step, the influence of these variables on the intention-behavior relation is focused. We theorize that addiction as well as the ratio between satisfaction and strain moderate whether users transfer discontinuous usage intentions into non-usage behavior. To validate the subsequent research model we propose a longitudinal research setting and present initial results, whereupon satisfaction and strain – but not addiction – causes discontinuous usage intentions. We discuss our expected contributions by revealing that satisfaction, strain, and addiction influence whether a technology is used continuously; however, their influence on intentions and actual behaviors differs.

Keywords: Addiction, technostress, strain, satisfaction, longitudinal research, Facebook, social networking sites, discontinuous usage, non-usage behavior, moderating effect, structural equation modeling (SEM), user behavior

Introduction

The popularity of social networking sites (SNS) has generated a stream of research on the different effects that SNS might have on an individual user (Wilson et al. 2012). On the one hand, SNS are platforms that provide both pleasure (Turel and Serenko 2012) and benefits (Xu et al. 2012), thereby creating satisfied users (Maier et al. 2012a). On the other hand, we hear of increasing numbers of SNS-induced stress and feelings of strain (Gartner 2011), which is caused by technology characteristics, such as complexity, uncertainty (Maier et al. 2012a), and SNS-specific characteristics in terms of social overload (Maier et al. 2012c). Through a lens of post-acceptance theories (e.g., Lankton and McKnight 2012) usage strain should have a decisive impact on the discontinuous usage behavior of SNS users (Sun 2013) and make more users quit SNS. Moreover, we also hear of an increasing number of users being addicted to SNS (Turel and Serenko 2012; Xu and Tan 2012). Through a lens of post-acceptance theory, addiction should also have a decisive impact on SNS usage behavior by fostering the continuous usage behavior of addicted SNS users in particular. As strain and addiction are rescinding phenomena that influence post-acceptance behavior in opposed directions (Turel et al. 2011; Maier et al. 2012a), we need to understand their interplay. While research can offer increasingly mature insights into singular usage related SNS phenomena, their interplay has so far not been analyzed, and we hence lack a view of SNS usage that matches its importance. This paper thus scrutinizes how strain and addiction influence discontinuous usage intentions of SNS users and subsequently their quitting behavior.

As addiction can only be found amongst actual users, we draw on the post-acceptance research tradition (Kim 2009) which suggest that, first, a behavioral intention is developed and then, second, transferred into behavior. As both steps are influenced by several factors (Ajzen 2002; Allen et al. 2005; Li et al. 2013) we also model two stages to evaluate the role of strain and addiction in connection with the renowned post-acceptance variable satisfaction (1) in the formation of discontinuous usage intentions and (2) when transferring these intentions into (non-)usage behavior. When focusing on the formation of behavioral intentions, we follow recent research that shows how low satisfaction and high strain levels are the breeding ground for the formation of discontinuous usage intentions (Maier et al. 2012a). Our theoretical suggestion is that, despite strain, addiction might inhibit the formation of discontinuous usage intentions (Cenfetelli 2004b; Cenfetelli and Schwarz 2011) at various levels of satisfaction. Hence, our first research question is:

> *How do satisfaction, strain and addiction influence users' discontinuous usage intentions?*

Our knowledge gap can most clearly be seen through the precise nature of the second step of a post-acceptance theory perspective. When SNS users experience low levels of satisfaction (Sun 2013) and high levels of stress and strain (Maier et al. 2012a) and hence develop discontinuous usage intentions but still do not behave according to their intention – they do not stop using it – we observe a behavior that is, at first, inconsistent. So we theorize that there are SNS users who do not transfer discontinuous usage intentions into non-usage behavior either when their satisfaction level is higher than their strain level, or when they are addicted to SNS. Consequently, the second research question is:

> *How do satisfaction, strain and addiction influence the relation between discontinuous usage intentions and actual non-usage behavior?*

This paper develops the theoretical arguments to explain the interplay between these three variables (research questions 1 and 2), presents initial empirical results for research question 1, and proposes a longitudinal research setting to evaluate question 2. In the next section we develop the theoretical assumptions. Subsequently, we explain our research methodology and provide initial research results for the formation of discontinuous usage intentions before discussing the expected overall contributions.

Theory Development

In this section, we theorize the influence of strain and addiction through a lens of post-acceptance theory on discontinuous usage intention and eventual non-usage behavior. To do so, we base our research on post-acceptance research, which focuses on individuals who have already decided to use a technology (e.g., Bhattacherjee and Premkumar 2004; Lankton and McKnight 2012; Sun 2013) and hence are not

biased by first impressions (Lim et al. 2000). Therefore, we first focus on the direct influence of satisfaction, strain, and addiction on discontinuous usage intentions. Then, we theorize their moderating effect on the intention-behavior relation before the influence of control variables is discussed.

Discontinuous Usage Intentions

Recent IS research focuses on discontinuous usage intentions and with it on the evaluation of perceptions which cause users to reduce or stop using IT altogether (e.g., Maier et al. 2012c; Sun 2013). In order to theorize how satisfaction, strain and addiction cause or inhibit the development of discontinuous usage intentions, each will be discussed in detail in the following.

The Role of Satisfaction in the Development of Discontinuous Usage Intentions

Prior research emphasizes the importance of different perceptual beliefs and user satisfaction in continuance technology usage (Bhattacherjee and Premkumar 2004). Concerning the continuous usage of SNS, perceived usefulness and perceived enjoyment have been identified as the two most influential co-determining beliefs (Turel and Serenko 2012; Xu et al. 2012), in which their impact is mediated on behavioral intention through an individual's satisfaction (Maier et al. 2012a) that reflects an individual's overall negative or positive feelings about a technology (Bhattacherjee and Premkumar 2004). This means that an individual is satisfied with using SNS when perceiving its usage as useful (Xu et al. 2012) and when SNS provides pleasure (Turel and Serenko 2012). Consequently, we assume that:

> H1: The higher the perceptual beliefs in terms of a) perceived usefulness and b) perceived enjoyment, the higher the satisfaction.

Then, user satisfaction, as an enabling determinant of behavioral intention (Cenfetelli 2004b; Cenfetelli and Schwarz 2011), directly influences whether an individual uses a technology continuously (Lankton and McKnight 2012). While satisfied users have the intention to continue using SNS, dissatisfied users are instead inclined to stop using the technology (Alam and Wagner 2013; Sun 2013). In line with this we assume that individuals with high levels of user satisfaction have low intentions to discontinue using SNS and vice versa:

> H2: The higher the satisfaction, the lower the discontinuous usage intention.

The Role of Strain in the Development of Discontinuous Usage Intentions

Next to satisfaction, recent research has shown that technostress influences long-term continuance usage intentions (Maier et al. 2012a; 2012c). From a general point of view, technostress is defined as stress experienced by an individual using technologies (Ragu-Nathan et al. 2008). In more detail, related research in this field suggests studying stress on the three distinguishable levels (1) stressor, (2) strain, (3) outcome (Koeske and Koeske 1993). Stressors, which are stimuli or factors that are encountered by individuals, initiate the overall stress process (Ayyagari et al. 2011). Then, stressors cause strain, which is an aversive and unconsciously psychological reaction (Cooper et al. 2001; de Croon et al. 2004). Then individuals aim to minimize or reduce these adverse reactions, so that they react to strain in a behavioral manner (Ahuja et al. 2007) by developing discontinuous usage intentions (Maier et al. 2012c).

In the context of SNS usage, we posit that an individual might perceive technological characteristics as stressful stimuli causing strain (Ayyagari et al. 2011). Notably the stressors in the context of using SNS are different from stressful stimuli when using a utilitarian technology (Maier et al. 2012a). When using SNS, complexity, defined as the difficulty of using SNS, and uncertainty, defined as the frequency of updates or changes in applications or conditions of SNS, might be stressful stimuli (Maier et al. 2012a). Next to these technological characteristics, SNS-specific characteristics such as a user's perception of giving too much social support to virtual friends, which is defined as social overload, is revealed as a stressor causing strain (Maier et al. 2012c). Hence, we hypothesize that:

> H3: The higher the stressors in terms of a) complexity, b) uncertainty and c) social overload, the higher the feelings of being strained.

Then, when an individual feels strained due to using SNS, one intends to reduce these adverse feelings. One particular possibility for this is intending to change the behavioral patterns that are the source of this feeling, so that individuals intend to reduce usage intensity or stop using SNS altogether (Maier et al. 2012c). We hence hypothesize:

H4: The higher the feelings of being strained, the higher the discontinuous usage intention.

The Role of User Addiction in the Development of Discontinuous Usage Intentions

User addiction has recently been suggested as another factor influencing post-acceptance behavior (Turel et al. 2011). User addiction is defined as a user's "*maladaptive psychological state of dependency on the IT use which is manifested through an obsessive pattern of IT-seeking and IT-use behaviors that take place at the expense of other important activities and infringe normal functioning*" (Turel and Serenko 2012, p. 3). Recent IT-adoption research has revealed addiction as a source of distorted or augmented beliefs. This means that addicted users consider IT as more useful, easier to use and more enjoyable than non-addicted users (Turel et al. 2011).

Based on these research findings, we theorize that user addiction not only influences perceptual beliefs but also intentions about whether or not a technology should be used continuously. In more detail, addicted individuals develop inflated intentions of using the technology continuously (Turel et al. 2011). Hence, addicted IT-users have higher intentions than non-addicted ones. Reasons for this can be seen in the high psychological commitments of addicted individuals in continuing the present usage behavior, so that addicted users have low discontinuous usage intentions. In contrast to that, we argue that the absence of addiction has no influence on whether or not users intend to use IT continuously, because when not addicted, other factors determine continuous usage intentions:

H5: The higher the addiction, the lower the discontinuous usage intention.

In summary, we assume that strain, satisfaction and addiction influence discontinuous usage intentions (research question 1). Based on that we subsequently focus on whether or not this intention is transferred into action (research question 2).

Intention-Behavior Relation

In addition to the proposed hypotheses whereupon addiction, strain and satisfaction influence the level of discontinuous usage intention, we theorize that these factors also have an effect on whether behavioral intentions are transferred into actual (non-)usage behaviors.

A shared feature of existing technology usage models is that they are intention-based and assume that individuals develop behavioral intentions which are subsequently transferred into behaviors (Davis 1989; Venkatesh et al. 2003; Williams et al. 2009). The rationale for this is that an individual's intention to use reflects one's interest in using IT in the future. This intention is transferred into actual behavior at a later point of time, which is reflected in one's usage behavior. From a general point of view, this means that individuals with high behavioral intentions to use a particular IT will use this IT at a later time with a greater probability than individuals with low intentions.

Applying this to discontinuous usage intentions in a SNS context, we theorize that users with high discontinuous usage intentions reduce usage intensity or even stop using SNS altogether, which is called non usage behavior. Hence, this means that individuals with high discontinuous usage intentions do not use SNS more frequently than users with low discontinuous usage intentions. Based on that we hypothesize that:

H6: The higher the discontinuous usage intention, the higher the non-usage behavior.

Despite the fact that intention-based models are widely used and accepted, previous research struggles with inconsistencies between behavioral intentions and actual usage behaviors. The influence of hypothetical intentions on actual behaviors is indeed significantly lower than expected (Sheeran 2002; Bhattacherjee and Sanford 2009). The rationale here is that some individuals have high behavioral intentions to perform a certain behavior but do not transfer these into actual usage behavior, because behavioral intentions tend to overestimate intended behaviors by ignoring costs and risks that are

associated with the behavior (Ajzen 1991). It appears that individuals have individually different intention thresholds that need to be reached before an intention turns into an action (Ajzen 2002; Allen et al. 2005; Maier et al. 2012b). Analogously, only at certain threshold levels will discontinuous usage intentions turn into non-usage behavior. This means that some individuals will have to develop higher discontinuous usage intentions than others to reduce usage intensity or stop using a technology and hence show non-usage behavior. We assume that addiction, satisfaction and strain have an influence on the level of this threshold, which will be theorized in detail subsequently.

The Role of Addiction as Moderator of the Intention-Behavior Relation

We posit that user addiction is one particular influencing factor for whether or not SNS users transfer discontinuous usage intentions into actual non-usage behavior. The underlying argument is that addicted users only transfer very high discontinuous usage intentions into non-usage behaviors because addicted IT-users have the compulsive and pathological need to use IT continuously (Turel et al. 2011; Turel and Serenko 2012). Hence, the thoughts of addicted IT users are always focusing on the usage of IT (Turel et al. 2011) so that it is difficult to escape from this deeply-rooted behavior. Thus, addicted IT users will have high thresholds to overcome compulsive behavior and stop using IT. In contrast, non-addicted IT-users who do not have this kind of pathological behavior (Turel and Serenko 2012) have no need to behave differently from their behavioral intentions. With respect to the threshold discussed above, we expect that addicted users have significantly higher thresholds than non-addicted users.

For SNS usage addiction, this means that addicted users have developed pathological usage behavior patterns (Turel and Serenko 2012; Xu and Tan 2012) by compulsively integrating SNS into their daily life (Maier et al. 2012a) for establishing long-term digital relationships or in order to escape from real life problems (Schwarz et al. 2011; Xu et al. 2011). Thus, addicted users have a higher threshold above which discontinuous usage intentions are transferred into non-usage behavior than non-addicted users (Turel and Serenko 2012). Consequently, we assume that less addicted SNS users transfer discontinuous usage intentions into non-usage behavior even when these intentions are lower than the discontinuous usage intentions of addicted SNS users. Consistently, we hypothesize that:

> H7: User addiction moderates the influence of discontinuous usage intention on usage behavior to the extent that addicted individuals will more seldomly transfer discontinuous usage intentions into non-usage behavior.

The Role of Satisfaction and Strain as Moderator of the Intention-Behavior Relation

In addition to user addiction, we also theorize that strain and satisfaction have a combined impact on whether SNS users transfer discontinuous usage intentions into non-usage behavior. Both strain and satisfaction represent emotional and psychological reactions to technological characteristics (e.g., Tarafdar et al. 2010; Ayyagari et al. 2011; Maier et al. 2013) and are opposite sides of the spectrum of *primary appraisal* (Beaudry and Pinsonneault 2010). So we argue that the ratio between satisfaction and strain influences the threshold above which discontinuous usage intentions are transferred into non-usage behavior. More precisely, the level of threshold from which discontinuous intentions are transferred into non-usage behavior is higher when the satisfaction-strain ratio is in favor of satisfaction. In other words, a fixed level of discontinuous usage intention is transferred in non-usage behavior with a higher probability when the satisfaction-strain ratio is in favor of strain. This means that the ratio between satisfaction and strain moderates the effect of discontinuous usage intention to non-usage behavior, so that we hypothesize that:

> H8: The ratio between satisfaction and strain moderates the influence of discontinuous usage intention on usage behavior to the extent that individuals with higher satisfaction levels more seldomly transfer discontinuous usage intentions into non-usage behavior.

Control Variables

In addition to the hypothesized effects of satisfaction, strain and addiction we also take into account other factors that might influence our results, so we also consider the influence of control variables (Jeyaraj et al. 2006; Dwivedi et al. 2008; Williams et al. 2009). Consequently, individual differences, such as user personality (Maier 2012), age and gender (Venkatesh and Morris 2000), herding behavior (Sun 2013), social influence (Cheung and Lee 2010), social presence (Schwarz et al. 2011), and SNS-specific usage characteristics such as extent of usage or number of friends (Hinz et al. 2010; Gottschlich et al. 2013; Krasnova et al. 2013; Laumer et al. 2013) are included within our research model because recent research in the field of SNS or (dis-) continuous usage research identifies these as significant contributing factors.

The resulting research model is included in Figure 1 and the methodology to validate the model is presented in the following section.

Research Methodology

This research aims to examine how stressors, strain, perceptual beliefs, satisfaction and addiction influence user's discontinuous usage intention as well as how some of these factors influence whether or not these discontinuous usage intentions are transferred into (non-) usage behavior. In order to evaluate these effects, a longitudinal research setting is necessary, which captures behavioral intentions and actual behavior separately in two distinct surveys.

As a consequence, two online surveys were set up in order to reach a large quantity of SNS users. Participants were invited based on surveys we had conducted in the past which had focused on different topics, such as human resource management of IS professionals. For these surveys, participants were invited using customer databases of different industry partners. At the end of each survey, participants were asked whether we could contact them again in subsequent surveys. One particular advantage of this is that we had different information about the individuals in this data pool, such as age, gender and whether individuals use SNS, so that we could identify SNS users and send out e-mail invitations to a large number of individuals to ask them to take part in our new research project.

Based on this pool of individuals, we sent out 1,548 e-mails to a large quantity of SNS users. The first survey began on January 15th and participants could take part within a period of two weeks. This survey covered perceptual beliefs, stressors, strain, satisfaction, addiction, discontinuous usage intention, prior usage behavior and all the control variables required for evaluating the proposed research model. Currently, 719 individuals have filled out the first survey without any missing values. However, about five percent are non-users of SNS and hence cannot evaluate feelings of being satisfied with, strained by, or addicted to SNS, so we have had to remove these from our final data sample.

The remaining part of the data sample will be invited to take part in our second survey to be conducted six months after the first one to analyze the intention behavior relation. We intend to start sending out invitations on July 15th using the same items as in the first survey and also including a variable of *usage behavior* that captures individuals (non-)usage behavior at a later point in time. To motivate participants to fill out our surveys, a Google Nexus 7 is to be raffled amongst the participants in each survey round.

The items included in both surveys are all based on items that have been used in other recent research articles.[1] In more detail, the technological-based stressors complexity and uncertainty are measured with three items based on Ayyagari et al. (2011) and Maier et al. (2012a). An example for complexity is "I often find it too complex for me to use Facebook" and for uncertainty, we use items such as "Overall, there are constant changes in Facebook". For measuring the SNS-specific stressor social overload we use five items, such as "I take too much care of my friends' wellbeing on Facebook", which is based on Maier et al. (2012c). The perceptual beliefs perceived usefulness (e.g., "Using Facebook is useful to stay in contact with friends", Venkatesh and Brown 2001) and perceived enjoyment (e.g., "Using this social networking website is enjoyable", Turel and Serenko 2012) are measured with three and five items respectively. In addition, we use robust items of prior research to measure the three antecedents of behavioral intention

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[1] Due to space limitations, specific items were not included. Items are available upon request.

satisfaction (e.g., "Overall, I am satisfied with using Facebook", Bhattacherjee 2001), strain (e.g., "I feel drained from activities that require me to use Facebook", Maier et al. 2012c), and addiction (e.g., "I sometimes neglect important things because of my interest in Facebook", Turel and Serenko 2012). To capture discontinuous usage intention, we use three items such as "In the future, I will use Facebook far less than today" and based on Maier et al. (2012c) and Sun (2013). The ratio between satisfaction and strain is either calculated based on the subtraction or the ratio method suggested by Schwarz and Schwarz (2009) and Dabholkar (1994). This would mean that we mathematically understand satisfaction and strain as independent variables and then either calculate the difference between both in order to obtain a new score or to create a quotient of satisfaction over strain. Eventually, non-usage behavior will be captured in the second survey by using the item "Currently I use Facebook" to determine whether the participant is an adopter or non-adopter of Facebook (Hsieh et al. 2011). In addition to that we also intend to capture participants' usage behavior in a richer manner (Burton-Jones and Straub 2006) by capturing the number of features of SNS that are used.

First Research Results and Next Steps

719 individuals took part in the first survey, but 36 of these are not Facebook users anymore and were thus removed from the sample because they could not indicate the degree of being addicted, strained, or satisfied with Facebook (Maier et al. 2012a; Turel and Serenko 2012). Based on the remaining data sample of 683 SNS users, we can evaluate the research model except the hypotheses H6, H7, and H8 that require longitudinal data from the second survey. We use the partial least squares (PLS) method and SmartPLS 2.0 M3 (Ringle et al. 2005). This method is selected because the research model includes negative variables, such as strain, addiction and discontinuous usage intention that produce skewed distributions for which PLS is more suitable than other methods requiring normally distributed data (Turel et al. 2011).

Figure 1. Research Model and Initial Results
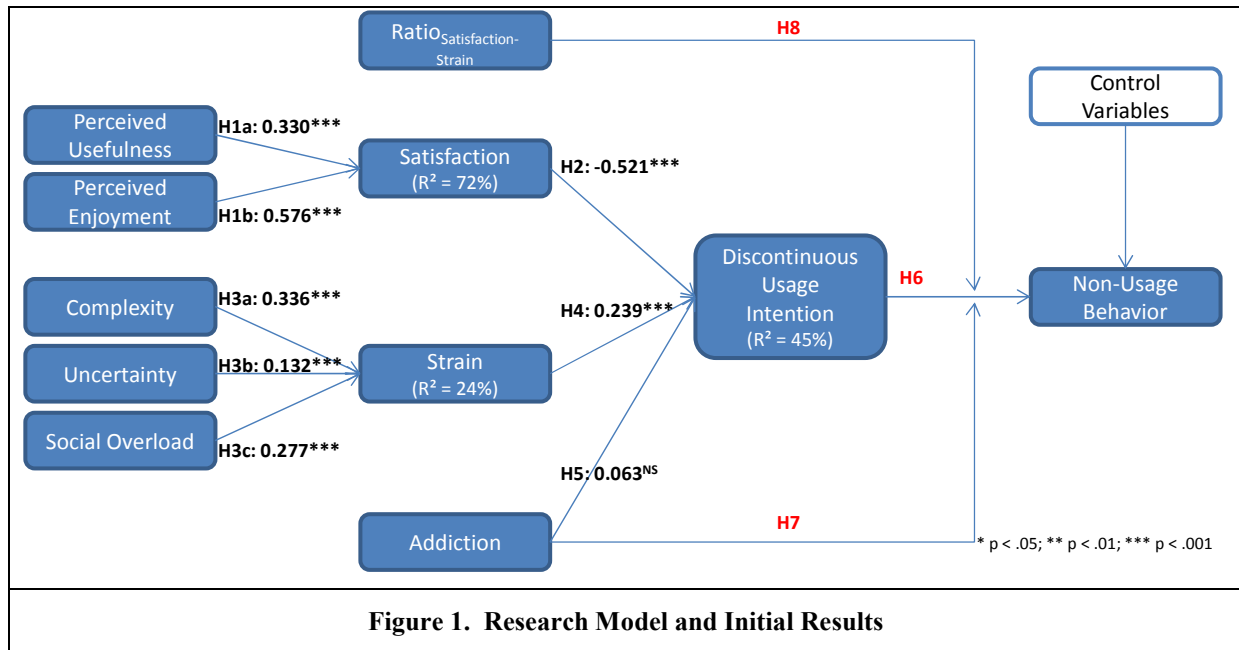
Findings from an initial structural model test are presented in Figure 1. In general, eight out of eleven hypotheses were tested. In this context, seven of the eight hypotheses can be validated using the data; only the effect of addiction on discontinuous usage intentions remains insignificant. The stressors complexity, uncertainty and social overload are significant contributing factors for strain, and perceived usefulness and enjoyment are contributing factors for satisfaction. Moreover, strain and satisfaction have significant effects on discontinuous usage intention. Concerning the coefficient of determination (R^2), we can state that the stressors explain 24% of the variance of strain, the two perceptual beliefs explain 72% of

satisfaction and strain, satisfaction and user addiction explain 45% of discontinuous usage intention as illustrated by Figure 1.

In addition to the evaluation of the structural model, our measurement model has to be valid. As our model only includes reflective indicators, we have to focus on content validity, indicator reliability, construct reliability and discriminant validity (Bagozzi 1979). To ensure content validity, we only used items which have been used in recent research. To validate indicator reliability, all loadings have to be greater than 0.707 (Carmines and Zeller 2008), which is fulfilled. To ensure construct reliability, we focus on composite reliability (CR) and average variance extracted (AVE), whereby CR should be higher than 0.7 and AVE above 0.5 (Fornell and Larcker 1981). Eventually, discriminant validity is given when the square root of AVE is greater than the corresponding construct correlations (Fornell and Larcker 1981; Hulland 1999). Since all this is fulfilled, the entire measurement model can be considered valid (Table 1). Eventually, we also consider that self-reported data might imply common method bias (CMB). However, we tested the effect of CMB by adding a CMB factor into our PLS-model that contains every indicator of the origin model (Podsakoff et al. 2003; Williams et al. 2003). The remaining factors were transformed into single-item constructs to compare the ratio of R^2 with CMB factor to R^2 without the CMB factor. Since we achieved a ratio of 1:258, we can state that we observe no signs of CMB influence when comparing this ratio with ratios from prior research (Liang et al. 2007).

	Construct	**# Items**	**Loadings**	**AVE**	**CR**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
	Table 1. Measurement model validation and bivariate correlation coefficients													
1	complexity	3	0.861-0.880	0.76	0.91	0.873								
2	uncertainty	3	0.870-0.936	0.81	0.93	0.14	0.900							
3	social overload	5	0.806-0.882	0.70	0.92	0.11	-0.04	0.839						
4	strain	4	0.833-0.898	0.78	0.94	0.39	0.17	0.31	0.886					
5	p. usefulness	3	0.906-0.918	0.83	0.94	-0.31	-0.01	0.17	-0.33	0.913				
6	p. enjoyment	5	0.892-0.944	0.85	0.97	-0.29	-0.05	0.16	-0.41	0.62	0.920			
7	satisfaction	5	0.833-0.900	0.76	0.94	-0.30	-0.16	0.14	-0.45	0.65	0.71	0.873		
8	addiction	4	0.789-0.842	0.71	0.91	0.10	0.05	0.51	0.37	0.12	0.12	0.09	0.843	
9	discont. usage intention	3	0.845-0.809	0.70	0.88	0.24	0.15	0.05	0.50	-0.47	-0.52	-0.58	0.11	0.839
	square root of AVE is listed on the diagonal of bivariate correlations													

Based on these initial results, we intend to set up the second survey and evaluate the proposed research model. We will focus on the moderating effect of addiction and the ratio of satisfaction and strain on the relation between discontinuous usage intention and non-usage behavior. Due to the fact that (non-)usage behavior is a binary coded variable, we intend to run a hierarchical binary logistic regression analysis and convert this for an easier interpretation into a probability scale and plot the results (Maier et al. 2012b). Consequently we are able to plot whether individuals transfer discontinuous usage intentions into non-usage behavior depending on their level of addiction and their satisfaction-strain-ratio.

Conclusion and Expected Contributions

This paper aims to theorize and evaluate the influence of strain and addition as well as the post-acceptance variable satisfaction of both discontinuous usage intention as well as (non-) usage behavior. Although longitudinal data are required in order to evaluate all theoretical assumptions, we can present and discuss initial results that respond to the first research question. Findings of the first round of our longitudinal research project (N=683) reveal that satisfaction and strain are two influencing factors of discontinuous usage intentions, whereas addiction has no direct effect. Hence, we can so far establish a research contribution that although findings of prior research reveal that addiction has a mediating impact of perceptual beliefs on behavioral intentions (Turel et al. 2011), our results do not reveal a direct, significant impact of addiction on behavioral intentions. Focusing on the discussed rescinding effects of

strain, satisfaction and addiction on discontinuous usage intentions we can conclude that addiction does not inhibit the development of discontinuous usage intentions which are mostly influenced by strain and satisfaction.[2]

Even though initial results show that addiction does not influence the formation of discontinuous usage intentions, we expect that addiction moderates whether or not users transfer intentions into (non-)usage behavior. The rationale here is that the pathological inclinations of addicted users will be more important when confronted with far-reaching (non-)usage behavior instead of when forming harmless and hypothetical discontinuous usage intentions. This is because addicted users can overcome their pathological inclinations briefly when developing hypothetical intentions; but they do not when transferring these into far-reaching non-usage behavior which would mean that users have to behave against their pathological inclinations to use IT continuously.

With our proposed research, we intend to extend recent IS research and respond to recent research calls through our findings. First, we aim to contribute to technostress research (e.g., Tarafdar et al. 2007; 2010; Ragu-Nathan et al. 2008; Ayyagari et al. 2011; Eckhardt et al. 2012) by forwarding theoretical arguments and empirical evaluations that show that addiction and the ratio of satisfaction and strain are two central factors to explain why individuals might consider the usage of a technology as a source of stress but nevertheless use it continuously. To validate this empirically, we intend to use PLS and regression analyses, whereby we make use of longitudinal data. Consequently we respond to the request of Ayyagari et al. (2011) that future research in the field of technostress should use longitudinal data to overcome the shortcomings found in most recent research that just uses data collected at one specific date.

Second, we will contribute to the field of continuous usage research (e.g., Lankton and McKnight 2012), by arguing that both inhibitors such as strain and enablers such as satisfaction (Cenfetelli 2004a; 2004b) are essential to understand individuals' (non-)usage behavior over time. Closely related to that, we focus on moderators of the intention-behavior relation. By identifying that addiction and/or the ratio of satisfaction and strain moderate the relation between discontinuous usage intention and (non-)usage behavior, we respond to the call of Benbasat and Barki (2007) to show that longitudinal research is a promising procedure for revealing dynamic interplays between intentions and behavior over time. Moreover, such findings will address identified limitations in recent research articles (Kim 2009) that assume that intentions and behavior have linear relationships. In more detail, research findings might reveal, among other aspects, that addicted individuals behave differently from non-addicted individuals. Hence, focusing on moderators of the relation between discontinuous usage intention and (non-)usage behavior might be a first step in order to close the intention-behavior gap (Bhattacherjee and Sanford 2009), because the inclusion or moderator variables increase the explanatory power within research models and are thus of great value (Sun and Zhang 2006).

In summary, we theoretically and empirically find that strain and satisfaction are contributing factors for discontinuous usage intentions, whereas addiction has no influence. However, we have theorized, and expect to validate empirically that addiction has a more important role in the relation between intention and behavior, because it changes the level of the threshold from which discontinuous usage intentions are transferred into non-usage behavior.

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[2] As prior research has focused on the mediation effect only (Turel et al. 2011) we controlled for this effect in a post-hoc analysis. Findings reveal, that we can confirm a mediated effect of addiction on discontinuous usage intention through perceived enjoyment and usefulness. In detail, the bootstrapping mediation analysis (Preacher and Hayes 2004) reveals an indirect effect of -0.85 with an associated 95%-bias-corrected confidence interval between -0.127 and -0.048.

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