

December 2004

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## Recommended Citation

Lu, Yin; Tan, Bernard; and Hui, Kai-Lung, "Inducing Customers to Disclose Personal Information to Internet Businesses with Social Adjustment Benefits" (2004). *ICIS 2004 Proceedings*. 45.

<http://aisel.aisnet.org/icis2004/45>

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# INDUCING CUSTOMERS TO DISCLOSE PERSONAL INFORMATION TO INTERNET BUSINESSES WITH SOCIAL ADJUSTMENT BENEFITS

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## Abstract

*To effectively pursue a strategy of focused marketing, Internet businesses need to solicit personal information from consumers. Indeed, many Internet businesses have been offering consumers economic benefits (like monetary rewards) in exchange for their personal information. However, a more cost-effective way to solicit such personal information may be to use psychological benefits. This study investigates how social adjustment benefits (a type of psychological benefits based on human need for affiliation) can be used by Internet businesses to induce consumers to disclose their personal information. Drawing on psychology literature, this study focuses on the match between consumer characteristics (extraversion) and the media (electronic and traditional) used to offer social adjustment benefits. Results from a research experiment reveal that (1) consumers who are extraverts tend to be willing to disclose personal information when social adjustment benefits are offered via either traditional or electronic media and (2) consumers who are introverts tend to be willing to disclose personal information only when social adjustment benefits are offered via electronic media. Besides contributing to a theory on how Internet businesses can motivate consumers to disclose their personal information through psychological benefits, these results guide Internet businesses on how to more effectively induce consumers to disclose their personal information.*

**Keywords:** Information privacy, information disclosure, psychological benefits, social adjustment, media, extraversion, Internet businesses

## Introduction

In the past decade, we have seen many Internet businesses emerging in every industry. As the competition intensifies, Internet businesses have to continuously seek new consumers or retain existing consumers to remain profitable. One common strategy used by Internet businesses is to leverage personal information to target appropriate products and services at the right consumers (Nowak and Phelps 1997). Hence, a critical success factor for Internet businesses is the ability to induce consumers to disclose their personal information.

Soliciting useful personal information from consumers can sometimes be an arduous task. Due to privacy concerns, consumers are often unwilling to disclose their personal information (Culnan 1993; Goodwin 1991). Such concerns (e.g., unauthorized use of or improper access to personal information) have been aggravated by rapid advances in communications technology, which allow large volumes of personal information to be easily collected or transmitted (Smith et al. 1996). To address such concerns, recent research has examined the effectiveness of measures that protect consumer interests (e.g., fair information procedure or confidentiality assurance) (Culnan and Armstrong 1999).

Besides trying to protect consumer interests, Internet businesses can also induce consumers to disclose their personal information by offering benefits to them (Tam et al. 2002). Economic benefits (e.g., monetary rewards) have been reported to be effective in inducing consumers to disclose their personal information (Phelps et al. 2000; Westin 1999) and have been used by many Internet businesses for this purpose (Hagel and Rayport 1997). But more and more Internet businesses are now turning to psychological benefits as a means to elicit personal information from consumers because these benefits are less costly to provide compared to economic benefits. However, the effectiveness of psychological benefits (or the circumstances under which these benefits may be effective) is not well understood and has not been empirically investigated.

This study examines how social adjustment benefits, a type of psychological benefit, may be employed by Internet businesses to induce consumers to disclose their personal information. Social adjustment is the establishment of social identity by integrating into desired social groups (Baumeister and Leary 1995). For example, by registering as members of exclusive clubs, people can express their identity through claims to desirable social categories. By joining special interest groups, people can seek greater interaction with like-minded others. Based on human need for affiliation, such social adjustment benefits can be a powerful motivator of consumer behavior (Sweeney and Soutar 2001), including information disclosure. Indeed, some Internet businesses have offered social adjustment benefits in exchange for personal information from consumers. For example, America Online and Yahoo have solicited personal information from consumers through various forms of virtual communities, chat rooms, and bulletin boards that facilitate social interaction. By registering their personal information, eBay allows consumers to participate in online forums or face-to-face gatherings for focus-group discussions.

In general, social adjustment benefits may be offered through traditional (e.g., social gatherings) or electronic (e.g., online chat-rooms) media. While traditional media provide rich settings for human networking and interactions, electronic media are cost-effective and transcend time and space barriers. Given such differences, the effectiveness of traditional or electronic media as vehicles to provide social adjustment benefits may be contingent upon consumer characteristics (Chandon et al. 2000). The personality trait of extraversion has been reported to affect human preference for interpersonal interactions and how people choose to meet their affiliation needs (Eysenck 1991; McCrae and Costa 1987). People higher on extraversion (extraverts) tend to have a higher level of social skills than people lower on extraversion (introverts). Thus, people higher and people lower on extraversion may differ in their preferences for media for social interactions (Goldberg 1982). This suggests that extraversion may moderate the effectiveness of traditional or electronic media as vehicles to provide social adjustment benefits.

Focusing on social adjustment benefits, this study seeks answers to two research questions: (1) Can traditional and electronic media be used by Internet businesses to effectively offer these benefits in exchange for personal information from consumers? (2) Does extraversion moderate the effectiveness of traditional and electronic media for such a purpose? From a theoretical perspective, the answers can contribute to a theory on information disclosure by consumers of Internet businesses. From a practical perspective, these answers can guide Internet businesses in terms of how to use social adjustment benefits to solicit personal information from consumers.

## Conceptual Foundation and Hypotheses

Prior research has examined motivational forces that shape consumer decisions. In economics, the utility theory posits that people maximize their total utility in making consumption choices (Becker 1993) and suggests that consumer decisions are driven by economic criteria (e.g., monetary rewards). To complement the economics perspective, the psychology literature posits that human needs can also impact consumer decisions (Katona 1953). Specifically, human needs pertaining to affiliation, achievement, and self-actualization have been found to dictate consumer decisions (Buss 1983; Hanna 1980). By meeting such human needs, Internet businesses can offer consumers psychological benefits that impact on their behavior. The resource exchange theory posits that consumers do trade personal information for such benefits (Brinberg and Wood 1983; Foa 1971). Thus, it is feasible for Internet businesses to provide psychological benefits in exchange for personal information from consumers.

### *Social Adjustment Benefits*

Social adjustment benefits are a type of psychological benefit valued by consumers (Baumeister and Leary 1995; Sweeney and Soutar 2001; Tam et al. 2002). These benefits are based on human need for affiliation, a key force driving human behavior (Maslow 1970). Affiliation has been conceptualized as a tendency “to form friendships and associations, to co-operate and converse sociably with others” (Murray 1938, p. 174), or a preference for “establishing, maintaining, or restoring a positive affective relationship” (Atkinson et al. 1954, p. 406). These conceptions suggest that people have an innate desire for social contact, particularly with others to whom they can relate.

People seek to fulfill their need for affiliation for three important reasons (Hill 1987). First, they receive gratification from harmonious relationships and a sense of communion, which gives rise to *positive stimulation* as a social reward (Murray 1938). For example, people can experience enjoyment and satisfaction just by being close to others and relating to them. Second, people get an enhanced feeling of self-worth when others focus on them and this gives rise to *attention* as a social reward (Atkinson et al. 1954). For example, people can feel a sense of importance just by being noticed by others around them. Third, people reduce ambiguity about their social context through comparison with reference groups (Moschis 1974) and this brings *social comparison* as a social reward (Bearden et al. 1989). For example, people seek normative information about themselves through comparison with others so as to ascertain how well they are doing and how they can do better. Social adjustment benefits that correspond to the three types of social rewards can meet the human need for affiliation. In exchange for such social adjustment benefits, consumers can be induced to disclose their personal information.

### **Media**

Social adjustment benefits can be delivered by Internet businesses to consumers via traditional media or electronic media. Traditional media refer to face-to-face communication channels that support proximate meetings (Rice 1987). Due to availability of various communication cues (e.g., visual, verbal, and contextual), traditional media offer rich settings for human networking and interactions (Daft and Lengel 1986). Examples of traditional media that can be used to deliver social adjustment benefits include social gatherings, networking events, and public talks. However, to fully derive social rewards (i.e., positive stimulation, attention, and social comparison) via such media, people need to have strong social skills (Reid 1991).

Electronic media refer to virtual communication channels that support dispersed meetings (Rice 1987). Due to a lack of various communication cues, electronic media offer lean and impersonal settings for human networking and interactions (Daft and Lengel 1986; Sproull and Kiesler 1986). However, electronic media are cost-effective to use, and transcend time and space barriers (Hagel and Armstrong 1997). Examples of electronic media that can be used to deliver social adjustment benefits include virtual clubs, electronic chat rooms, electronic discussion forums, and electronic bulletin boards. To fully derive social rewards via such media, people need not have strong social skills because they can communicate in a less threatening context (Reid 1991).

### **Extraversion**

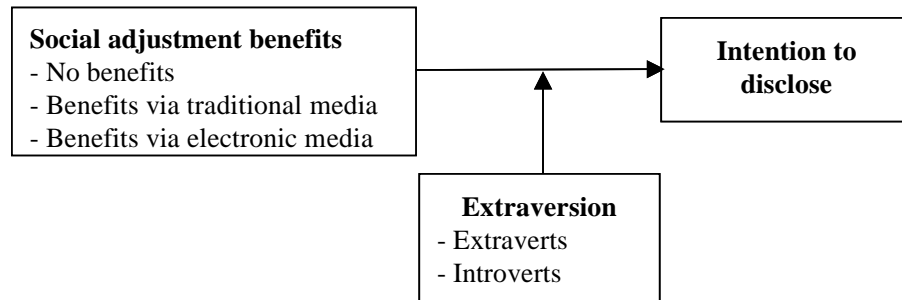
Extraversion is defined as “a trait characterizing a keen interest in other people and venturing forth with confidence into the unknown” (Ewen 1988, p. 108). It is related to interpersonal interactions and sociability (Eysenck 1991; Goldberg 1990). People higher on extraversion (extraverts) tend to be sociable, talkative, warm, and active. In contrast, people lower on extraversion (introverts) tend to be retiring, quiet, reserved, and passive.

Extraversion has been linked to human preferences for media for social interactions (Goldberg 1982; McCrae and Costa 1987). Based on arousal theory (Eysenck 1991), extraverts actively search for social interaction opportunities and usually initiate conversations to seek stimulation that brings them to their desired arousal level. They tend to have stronger social skills that they can apply during social interactions in rich or lean contexts. While introverts also actively search for social interaction opportunities, they usually require less stimulation to bring them to their desired arousal level. They also tend to have weaker social skills that can restrict social interactions in rich contexts.

### **Research Hypotheses**

Figure 1 depicts the research model. The independent variable is social adjustment benefits (no benefits versus benefits via traditional media versus benefits via electronic media). The moderator is extraversion (extraverts versus introverts). The dependent variable is intention to disclose personal information. Two sets of hypotheses (one pertaining to extraverts and another pertaining to introverts) relating the independent and the dependent variables are formulated.

Extraverts have stronger social skills that allow them to take advantage of a wide range of media for social interactions (Reid 1991). During social gatherings, networking events, and public talks, extraverts should have little difficulty networking and interacting with others because their social skills allow them to communicate effectively in such rich settings. When Internet businesses offer social adjustment benefits via such traditional media, extraverts should be able to gain from such benefits. For example, they should be able to easily relate to others to enjoy the social reward of positive stimulation. They should have little



**Figure 1. The Research Model**

difficulty attracting the notice of others to enjoy the social reward of attention. They should also be able to easily get normative information to compare themselves with others to enjoy the social reward of social comparison. Hence, extraverts are likely to disclose their personal information in exchange for social adjustment benefits provided via traditional media.

Extraverts should have little difficulty networking and interacting with others through virtual clubs, electronic chat rooms, electronic discussion forums, and electronic bulletin boards. Although their stronger social skills do not confer them an advantage when communicating in such lean settings, such settings allow extraverts to transcend time and space barriers in search of people for social interactions. Hence, when Internet businesses offer social adjustment benefits via such electronic media, extraverts should be able to gain from such benefits. As with traditional media, with electronic media, extraverts should have little difficulty enjoying the social rewards of positive stimulation, attention, and social comparison. Thus, extraverts are likely to disclose their personal information in exchange for social adjustment benefits provided via electronic media.

*Hypothesis 1a:* Consumers who are extraverts would be more willing to disclose personal information when they are offered social adjustment benefits via traditional media than when they are offered no benefits.

*Hypothesis 1b:* Consumers who are extraverts would be more willing to disclose personal information when they are offered social adjustment benefits via electronic media than when they are offered no benefits.

Introverts are less sociable and have weaker social skills that can restrict their ability for social interactions in rich contexts (Reid 1991). During social gatherings, networking events, and public talks, introverts are likely to have difficulty networking and interacting with others. Their weaker social skills do not allow them to communicate effectively in such rich settings. When Internet businesses offer social adjustment benefits via such traditional media, introverts may not be able to gain from such benefits. For example, they may have too much difficulty relating to others to enjoy the social reward of positive stimulation. They may have too much difficulty attracting the notice of others to enjoy the social reward of attention. They may also find it more challenging to get normative information against which to compare themselves with others to enjoy the social reward of social comparison. Hence, introverts are unlikely to disclose their personal information in exchange for social adjustment benefits provided via traditional media.

Introverts should have little difficulty networking and interacting with others through virtual clubs, electronic chat rooms, electronic discussion forums, and electronic bulletin boards. Within such less threatening settings, communication does not require strong social skills (Sproull and Kiesler 1986). Such settings suit introverts, allowing them to participate in social interactions beyond the confines of time and space. Unlike with traditional media, in electronic media, introverts can relate to others to enjoy the social reward of positive stimulation. They are more able to attract the notice of others to enjoy the social reward of attention. They are also more able to get normative information to compare themselves with others to enjoy the social reward of social comparison. Therefore, introverts are likely to disclose their personal information in exchange for social adjustment benefits provided via electronic media.

*Hypothesis 2a:* Consumers who are introverts would not be more willing to disclose personal information when they are offered social adjustment benefits via traditional media than when they are offered no benefits.

*Hypothesis 2b:* Consumers who are introverts would be more willing to disclose personal information when they are offered social adjustment benefits via electronic media than when they are offered no benefits.

## Methodology

A laboratory experiment was conducted to test the hypothesized relationships. The independent variable was social adjustment benefits (no benefits versus benefits via traditional media versus benefits via electronic media). Extraversion (extraverts versus introverts) was included as a moderator to examine the differential impact of the social adjustment benefits. The dependent variable was the intention to disclose personal information.

### *Experimental Scenarios and Procedure*

Two experimental scenarios (one involving a service-based and another involving a product-based Internet business) were created to enhance generalizability of results. In the first scenario, *TourMatters* was described as an Internet-based travel agency offering a variety of tour packages to various destinations for leisure and work. Through its Internet storefront, *TourMatters* served consumers by helping them with travel consultation, planning, and booking. In the second scenario, *Xynergy* was described as an Internet-based consumer electronics retail store offering a variety of merchandise of various brands for home and office use. Through its Internet storefront, *Xynergy* served consumers by helping them with product consultation, evaluation, and purchase.

In each scenario, the subjects were told that while browsing the respective Internet storefront, they were asked to provide their personal information so that the Internet business could serve them better in the future. The subjects were requested specifically to provide their name, address, gender, contact number, e-mail, interests, and profession to the Internet storefront. Such personal information corresponded with that typically collected by (Internet and other) businesses and had been commonly used in prior privacy research (Nowak and Phelps 1995). Depending on the experimental treatment, the Internet business would offer the subjects different types of social adjustment benefits in exchange for their personal information. The subjects were then asked to indicate their inclination to provide the personal information requested on a seven-point scale, ranging from strongly disagree (1) to strongly agree (7). This measure of disclosure intention was used as the dependent variable, with a higher score indicating a greater willingness to disclose personal information. Next, the subjects responded to 10 questions that measured their degree of extraversion. These questions were subsequently used to classify them as either extraverts or introverts. Finally, the subjects were asked to answer several questions for manipulation and demographic checks.

### *Manipulation of Social Adjustment Benefits*

The manipulation of social adjustment benefits captured the three social rewards underlying human need for affiliation (see Table 1). For the “no benefits” (or *control*) treatment, none of the social adjustment benefits outlined in Table 1 were given. For the “benefits via traditional media” (or *traditional media*) treatment, all the social adjustment benefits were provided in a face-to-face context (see Table 1). For the “benefits via electronic media” (or *electronic media*) treatment, all the social adjustment benefits were provided in a virtual context (see Table 1).

### *Measurement of Extraversion*

Extraversion was measured using an instrument taken from the International Personality Item Pool (see <http://ipip.ori.org/ipip>). This is a repository that contains an extensive collection of personality measures that had been widely used in past research (e.g., Judge et al. 2002; Saucier 2000). All the 10 questions measuring extraversion were anchored on a 7-point scale, ranging from strongly disagree (1) to strongly agree (7).

### *Subjects*

A total of 95 working professionals completed this study (with 51 subjects completing the *TourMatters* scenario and 44 subjects completing the *Xynergy* scenario). Participation was voluntary but the subjects were given a token payment for completing the study. On average, the subjects were 28 years of age. About 58 percent of them were males and 42 percent were females. Their average work experience was 5.4 years. All of the subjects were regular Internet users. Most of them had online shopping experience (82 percent), online information disclosure experience (96 percent), and online social interaction experience (79 percent).

**Table 1. Operationalization of Social Adjustment Benefits**

<b>Social Adjustment Benefit</b>	<b>Operationalization</b>	<b>Social Reward</b>
Via traditional media	Opportunity to meet and talk with people having similar interests via traditional media (e.g., face-to-face gatherings)	Positive stimulation Social comparison
	Exclusive membership to the downtown clubs of the Internet business	Attention Social comparison
	Ticket to participate in face-to-face forums featuring focus-group discussions	Positive stimulation Attention
Via electronic media	Opportunity to locate and communicate with people having similar interests via electronic media (e.g., online chat-rooms)	Positive stimulation Social comparison
	Exclusive membership to the online clubs of the Internet business	Attention Social comparison
	Password to participate in online forums featuring focus-group discussions	Positive stimulation Attention

The subjects were randomly assigned to the three treatments for social adjustment benefits, one at a time (no benefits treatment, then benefits via traditional media treatment, then benefits via electronic media treatment), to ensure roughly equal number of subjects in the treatments. This alleviates confounding effects due to individual differences. Demographic checks were carried out to assess the effectiveness of the random assignment of subjects to treatment conditions. Each subject participated in only one scenario and one treatment condition.

## Data Analyses

All data analyses were carried out at a 5 percent level of significance.

### *Manipulation and Demographic Checks*

The manipulation of social adjustment benefits was checked using two statements: (1) After providing my personal information, I will be given opportunities to interact with other people via traditional media. (2) After providing my personal information, I will be given opportunities to interact with other people via electronic media. Both statements were anchored on a seven-point scale, ranging from strongly disagree (1) to strongly agree (7). For the first statement, an F-test showed that there were significant differences across the three treatment conditions for social adjustment benefits ( $F = 14.49, p < 0.01$ ). A Scheffe test revealed that subjects in the *traditional media* treatment (mean = 4.44) agreed to this statement significantly more than subjects in the *electronic media* treatment (mean = 3.09) and *control* treatment (mean = 3.00). For the second statement, another F-test showed that there were significant differences across the three treatment conditions for social adjustment benefits ( $F = 13.81, p < 0.01$ ). A Scheffe test revealed that subjects in the *electronic media* treatment (mean = 4.59) agreed to this statement significantly more than subjects in the *traditional media* treatment (mean = 3.66) and the *control* treatment (mean = 3.03). Thus, the manipulation of social adjustment benefits appeared to be successful.

A Kruskal-Wallis test revealed no significant differences in the gender ratio of subjects across the three treatments for social adjustment benefits. F-tests showed that age, work experience, online shopping experience, online information disclosure experience, and online social interaction experience of the subjects did not differ significantly across the three treatments for social adjustment benefits. Hence, the random assignment of subjects to treatment conditions appeared to be effective.

### *Validity and Reliability*

The 10 questions measuring extraversion were subjected to a principle component analysis with varimax rotation. This analysis yielded a single component, with eigenvalue above 1, which accounted for 72.63 percent of the variance in the data (the first

eigenvalue was 7.26 and the second eigenvalue was 0.60). All questions had loadings of above 0.59 on this single component. Thus, these 10 questions appeared to have convergent validity. These 10 questions had a Cronbach's alpha of 0.96, indicating adequate reliability.

Given the good psychometric properties of all 10 questions, the extraversion score for each subject was computed by averaging his or her responses to the 10 questions. As in prior studies (e.g., Carson et al. 2003), the median score for all of the 95 subjects was used to divide the subjects into two groups: extraverts and introverts. The group of extraverts (mean = 5.22) and the group of introverts (mean = 3.39) differed significantly on the extraversion score ( $t = 13.81$ ,  $p < 0.01$ ).

### Hypotheses Tests

Table 2 summarizes the descriptive statistics for the dependent variable. An ANOVA with two independent variables (social adjustment benefits and extraversion) and the dependent variable was carried out. The dependent variable could meet the homogeneity and normality requirements of the ANOVA test. Table 3 reports the results. There were significant main effects for social adjustment benefits ( $F = 34.57$ ,  $p < 0.01$ ) and extraversion ( $F = 9.23$ ,  $p < 0.01$ ) as well as an interaction involving both independent variables ( $F = 6.12$ ,  $p < 0.01$ ). Given that interpretation of an interaction should precede that of significant main effects, the interaction was investigated using simple effects analyses (Keppel 1991).

The data for extraverts and introverts were analyzed separately. For extraverts, an F-test revealed that social adjustment benefits had a significant impact on the intention to disclose personal information ( $F = 30.05$ ,  $p < 0.01$ ). A Kruskal-Wallis test confirmed this result ( $\chi^2 = 40.54$ ,  $p < 0.01$ ). A Scheffe test showed that subjects in the *traditional media* (mean = 4.62) and the *electronic media* (mean = 4.80) treatments were significantly more willing to disclose their personal information compared to subjects in the *control* treatment (mean = 2.25). Hypotheses 1a and 1b were supported. For introverts, another F-test showed that social adjustment benefits had a significant impact on the intention to disclose personal information ( $F = 16.39$ ,  $p < 0.01$ ). A Kruskal-Wallis test confirmed this result ( $\chi^2 = 26.81$ ,  $p < 0.01$ ). A Scheffe test showed that subjects in the *electronic media* treatment (mean = 4.59) were significantly more willing to disclose their personal information compared to subjects in the *traditional media* (mean = 2.68) and the *control* (mean = 2.18) treatments. Hypotheses 2a and 2b were supported.<sup>1</sup>

**Table 2. Descriptive Statistics for the Dependent Variable**

Extraversion	Social Adjustment Benefits	Pooled Sample			Tour Matters	Xynergy
		Mean	Std. Dev.	Sample	Mean	Mean
Extraverts	Control	2.25	0.85	20	2.20	2.30
	Traditional media	4.62	1.56	13	4.71	4.50
	Electronic media	4.80	0.86	15	4.60	5.20
Introverts	Control	2.18	0.98	11	2.29	2.00
	Traditional media	2.68	1.00	19	2.60	2.78
	Electronic media	4.59	1.54	17	4.43	4.70

**Table 3. Results of ANOVA Test for the Dependent Variable (Pooled Sample)**

	DF	SS	F	p
Social adjustment benefits	2	46.26	34.57	0.01**
Extraversion	1	12.35	9.23	0.01**
Social adjustment benefits x Extraversion	2	8.19	6.12	0.01**

\*\* $p < 0.01$ ; \* $p < 0.05$

<sup>1</sup>Separate analyses of the data for both scenarios yielded similar results. A t-test comparing both scenarios also did not yield significant results ( $t = 0.40$ ,  $p = 0.69$ ), suggesting that the data could be pooled for analyses.



## Discussion and Implications

This study extends prior efforts in exploring motivators that can induce consumers to disclose their personal information (e.g., Goodwin 1992; Milne and Gordon 1993; Phelps et al. 2000). But unlike previous studies which focused mainly on economic benefits as motivators, this study investigates how social adjustment benefits (an important type of psychological benefit) can be used as motivators for the same purpose. Based on a strong conceptual foundation, this research identifies three important types of social rewards (i.e., positive stimulation, attention, and social comparison) as bases for social adjustment benefits, distinguishes the media (traditional and electronic) that can be used to deliver such benefits, and unravels the relationships among media, extraversion, and intention of consumers to disclose their personal information. By showing how extraversion can moderate the effectiveness of various media (as vehicles for delivering social adjustment benefits) in inducing information disclosure from consumers, this study extends prior research involving personality effects on information sharing (e.g., Cothrel and Williams 1999) as well as prior research linking personality traits to electronic commerce success (e.g., Brown et al. 2004).

The findings of this study answer the two research questions. First, can traditional and electronic media be used by Internet businesses to effectively offer social adjustment benefits in exchange for personal information from consumers? The results of this study suggest that this is possible. Both traditional and electronic media can be used to offer social adjustment benefits to induce consumers to disclose their personal information (although the effectiveness of the media may be contingent on consumer personality traits). This study differs from previous research in an interesting way. Most prior studies on information privacy have focused on mitigating consumer concerns through fair information practices (e.g., Culnan and Armstrong 1999). Given that these practices assure consumers the protection of their personal information, the objective of prior research was to examine how to reduce the psychological costs (e.g., anxiety) associated with information disclosure. In contrast, this study demonstrates that consumers also seek psychological benefits. By showing the impact of social adjustment benefits (a type of psychological benefit), the results of this study suggest that the privacy calculus (Laufer and Wolfe 1977) is a more complex concept than currently understood. While the privacy calculus is known to include economic costs and benefits (Milne and Gordon 1993), it can also be shaped by psychological costs and benefits. Researchers can examine various components of the privacy calculus to devise normative decision models to explain consumer behavior on the Internet.

Second, does extraversion moderate the effectiveness of traditional and electronic media as vehicles for delivering social adjustment benefits? The results of this study suggest that this is likely to be the case. Consumers who are extraverts tend to be willing to disclose their personal information in exchange for social adjustment benefits provided via traditional or electronic media. But consumers who are introverts tend to be willing to disclose their personal information only in exchange for social adjustment benefits provided via electronic media. Beyond showing how extraversion can moderate the effectiveness of media as vehicles for delivering social adjustment benefits, this finding underscores the importance of personality traits in information privacy research. Given that personality traits can shape the preferences of consumers, these traits may affect how consumers assess the economic and psychological costs and benefits of information disclosure. Beyond information privacy, electronic commerce research on consumer selection of media for making purchases may take into account the effects of personality traits.

### *Implications for Practice*

This study shows that consumers are more willing to disclose their personal information to Internet businesses when they are offered social adjustment benefits through appropriate media. In particular, social adjustment benefits offered via electronic media are desired by many consumers (i.e., extraverts and introverts). As the design and development of computer software become more cost-effective, it may be feasible for Internet businesses to rely on electronic media to deliver social adjustment benefits to consumers. Anecdotal evidence has suggested that this may lead to improved performance. For example, some Internet businesses (e.g., eBay and CNET) have been successful in inducing voluntary information disclosure from consumers by allowing them to participate in exclusive online forums featuring focus-group discussions. Some established companies (e.g., Cisco, Sony, and Apple) have also organized virtual communities to facilitate social interactions among their consumers.<sup>2</sup>

Indeed, the notion of *community* has been pervasive on the Internet since its inception. For many years, academics have been using the Internet to exchange messages, share research ideas and data, and publicize new findings. However, the idea of enticing consumers through online communities has not received much attention from Internet businesses. Currently, most Internet

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<sup>2</sup>See <http://www.computerweekly.com/Article21645.htm>, <http://www.station.sony.com/en/community.jsp> and <http://www.apple.com/usergroups/find/answers/#register>.

businesses use economic benefits (e.g., discount vouchers and free gifts) to induce consumers to disclose their personal information. While this practice may be effective, it can be very costly to provide economic benefits to a large population of consumers over time. In contrast, it may be more cost-effective for Internet businesses to use psychological benefits to achieve the same goal. This can be done via electronic media, such as organizing regular social events (e.g., chat rooms and focus-group discussion) for consumers. When the population of consumers increases over time, the costs of organizing such events are unlikely to increase proportionately. Yet, such events are effective in inducing consumers to disclose their personal information.

While it was found that providing social adjustment benefits via electronic media can motivate both extraverts and introverts to disclose their personal information, there may be situations when Internet businesses cannot feasibly administer these benefits electronically (e.g., when the Internet businesses also want to promote or demonstrate their products during the social events). In such situations, Internet businesses can only provide social adjustment benefits via traditional media. Based on the findings of this study, it would be more effective for Internet businesses to administer the benefits only to consumers who are extraverts. Obviously, it is not feasible to always ask every consumer to answer the extraversion questions before deciding whether or not to offer them the benefits. Hence, Internet businesses may need to rely on other means or indicators to gauge the personality traits of consumers.

It is possible for Internet businesses to infer the degree of extraversion based on consumer demographics. For instance, empirical research has found that people in China tend to be lower in extraversion whereas the people in the United States tend to be higher in extraversion (Lynn and Martin 1997). Extraversion may be related to job vocation. For example, people who have enterprising and social occupations tend to be higher in extraversion (Barrick et al. 2003). Based on these findings, Internet businesses can selectively administer social adjustment benefits via traditional media. For Internet businesses that are targeting consumers in the United States or consumers whose jobs involve entrepreneurship or socializing, social adjustment benefits delivered via traditional media may be effective in inducing consumers to disclose their personal information.

### ***Implications for Further Research***

The results of this study should be interpreted in the context of its limitations. While the laboratory experiment allowed for the precise manipulation of variables in a highly controlled manner, the experimental setting was artificial in that the subjects were dealing with hypothetical scenarios and their responses may reflect their true behavior. These issues might threaten the external validity of the results. A field experiment that involves consumers visiting real Websites and providing their personal information can be used to overcome these limitations, provided the purpose of the experiment can be disguised to prevent any demand artifact. Another limitation of the study is that the independent variable (i.e., social adjustment benefits) was operationalized with a three-part treatment. With such an operationalization, the effects due to a particular part of the treatment cannot be distinguished.

Several avenues for further research can be pursued. First, it is worthwhile to consider whether contextual characteristics, such as the industry nature of Internet businesses or the proposed use of the solicited consumer information, may influence the efficacy of social adjustment benefits. For example, consumers may respond more readily to social adjustment benefits from Internet businesses if they have also been explicitly told how the solicited personal information would be used in ways that may benefit them in the future. Second, we can further classify the media for delivering social adjustment benefits into finer categories (e.g., discussion forums and exclusive memberships) and examine if these categories have an equal impact on consumer tendency to disclose personal information. It is plausible that some categories may be more effective for some situations. For example, Internet businesses dealing with complex products and services may have a population of consumers who are keen to share their views through discussion forums and so respond more readily to social adjustment benefits in the form of discussion forums. With rapid advances in Web technologies, it is useful for Internet businesses to continually develop new avenues to offer social adjustment benefits.

Third, the amount of social adjustment benefits that is needed to entice consumers to disclose their personal information may be dependent on how much the consumers trust the Internet business. For example, if consumers do not have faith in the way that the Internet business handles its personal information or administers the social adjustment benefits, they may perceive the social adjustment benefits as being less attractive. Thus, more benefits would be needed to induce such consumers to disclose their personal information. In short, the findings of this study should be assessed for sensitivity across different levels of consumer trust. Finally, although this study demonstrates that social adjustment benefits can be used to induce information disclosure by consumers, other types of psychological benefits (e.g., pleasure, novelty, and altruism) (Tam et al. 2002) can be examined in future research to understand how these benefits may also impact information disclosure by consumers.

## Conclusion

With a focus on social adjustment benefits, this study demonstrates how the human need for affiliation can be used to induce consumers to disclose their personal information to Internet businesses. Specifically, the results of this study reveal that (1) consumers who are extraverts tend to be willing to disclose their personal information when social adjustment benefits are offered via either traditional or electronic media and (2) consumers who are introverts tend to be willing to disclose their personal information only when social adjustment benefits are offered via electronic media. By forming a basis for subsequent empirical research, these results can contribute to the development of a theory on how Internet businesses can motivate consumers to disclose their personal information (e.g., through various psychological benefits). By illustrating how consumer characteristics (e.g., extraversion) may moderate the effectiveness of the media used to offer social adjustment benefits, these results also guide Internet businesses in terms of how to more effectively solicit personal information from consumers.

Competition among Internet businesses in every industry will continue to intensify in the future. Focused marketing (i.e., targeting appropriate products and services at the right consumers) will remain a dominant strategy for Internet businesses (Nowak and Phelps 1997). Useful personal information from consumers will remain a valuable asset for Internet businesses. To thrive amidst intense competition, Internet businesses will have to pursue increasingly creative and cost-effective means (e.g., through the provision of a combination of psychological benefits) to solicit personal information from consumers.

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