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# STRESS FROM INTERNET FRAUD AND ONLINE SOCIAL SUPPORT

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## ABSTRACT

This exploratory research attempts to fill the literature gap by investigating ordinary user's response to Internet transaction fraud and examining the types of online social support. We adapt the stress process model from the psychology literature and apply it to the context of Internet fraud. Moreover, we propose a conceptual online social support model for Internet fraud. We argue that there are two types of support mechanisms – factual information exchange and emotional support. In addition to proposing the above two conceptual models, we conduct two preliminary qualitative case studies. First, we report a case of eBay fraud and perform in-depth analysis of the victims' belief, emotion and behavior response to a fraud in light of the stress process model. Second, we present a threaded discussion on eBay Community Answer Center, which is about money wire transfer fraud. We show that the reply sentences convey either information exchange or emotional support.

## Keywords

Internet fraud, stress process, online social support

## INTRODUCTION

E-commerce has the advantage of improving market efficiency and overcoming the limit of space and time. Selling and buying products online may also have benefits such as better price, convenience, broader choices of trade partners (Boyle and Ruppel, 2004). In many e-commerce transactions, parties involved are anonymous. Hence, the online environment is characterized with the impersonal nature, information asymmetry and uncertainty (Ba, 2001). Even so, it is a matter of fact that virtual community such as eBay or Amazon has the vast economic significance, where most transactions happen between strangers.

However, the lack of personal contact between parties of an online transaction does create opportunities for consumer abuse, deception and fraud. As for Internet fraud, the protections from the current law, commerce, and social systems have their limitations (Ba, 2001). Online frauds pose a serious problem for e-commerce transactions. For example, on eBay, online fraud offenders pretend to be legitimate parties to trick victims to pay out money for product never delivered. The total loss reported to the National Consumers League in 2005 was \$13,863,003. In 2007 the top Internet fraud was fake check scams with average loss of \$3,310.87. In fake check scams, innocent Internet users are instructed to wire money to the offender and the offender issues phony checks to pay for product or service sold (National Consumers League's Fraud Center, 2009). Victims undergo not only financial loss, but also ruined credit histories and even identity theft. Moreover, fraud victims suffer from substantial nonmonetary loss such as psychological and emotional stress (Lee and Soberon-Ferrer, 1997). Therefore, Internet fraud is an important research issue because of its negative impact on consumer confidence in online transactions. Although online auction fraud has been reported as a prevailing troublesome problem (Snyder, 2000) and the role of online trading community in managing auction fraud was examined (Chua, Wareham and Robey, 2007), it is relatively unknown for those non-auction Internet fraud targeting average online users. In this paper, we examine users' belief, affect, and behavior response to Internet fraud. Online community provides virtual forums and answer center, such as eBay Community's Answer Center. The online social support may mitigate certain risks associated with online frauds. It warns and cautions online consumers and facilitates trust building toward the online transaction community. Furthermore, online social support may also satisfy users' emotional and psychological needs. Therefore, we study online social support by investigating what types of online social support are provided to Internet fraud victims.

The paper is organized in the following manner. First, we review the literature on online community, stress process and Internet fraud, and social support. We also introduce two proposed conceptual models. Second, we describe the methodology employed in this research. Third, we report our first case study of users' response to stress from Internet fraud. Fourth, we present our second case study of online social support. Finally, we conclude the paper and outline future research directions.

## LITERATURE REVIEW AND THE PROPOSED CONCEPTUAL MODELS

### Online Community

One of the defining characters of Internet is the rise and adoption of online community. Online community is one of the most effective business models in the Internet era and it offers great opportunities for both buyers and sellers (Armstrong and Hagel, 1996). Loosely speaking, online community is the aggregation of people for a certain purpose. People are attracted to

a particular online community because it satisfies one or more of the following four basic needs: interests, relationship, fantasy, and transaction (Armstrong and Hagel, 1997). Online community of transaction provides a platform for members to share information and experiences of buying and selling products of common interest. In another conceptual framework, three types of fundamental needs of online community members are proposed, namely, functional needs, social needs, and psychological needs (Wang, Yu and Fesenmaier, 2002). Functional needs are satisfied when members conduct specific activities, such as transaction of buying and selling products. Desire of meaningful contact, interaction, communication, belonging and affiliating to a group are basic social needs. Online community helps members meet such social needs. Psychological needs concern about members' identification (who they are) and involvement (who they connect) (Wang et al., 2002).

### Stress Process

Stress happens to an individual in situations where one's well-being is perceived to be threatened and stress takes a toll on one's coping capabilities (Weiten, 2001). Stress may damage one's peace of mind and self-esteem. One principal type of stress is frustration, where one's pursuit of a goal is upset (Weiten, 2001). In the case of Internet fraud, victims obviously experience stress because his/her normal goal of fair market exchange is frustrated. In the case of attempted Internet fraud, the potential victims were targeted by offenders. The attempted victims lose their peace of mind and their self-esteem may be hurt. According to (Weiten, 2001), the stress process follows the pattern described below. First, a potential stressful objective event happens. For example, an Internet user was being perpetrated by Internet fraud offender. Second, an individual in the stressful situation thinks and evaluates about the state and forms subjective belief. For example, an Internet user examines the condition and realizes that he/she is a potential victim of Internet fraud. Third, an individual reacts emotionally towards the stress, usually with unpleasant emotions such as anger, anxiety, fear, sadness and grief (Lazarus, 1993). For example, the attempted Internet fraud victim may experience emotion of anger and shame. Finally, an individual exhibits behavioral response such as blaming oneself, reaching out for help, resolving the problem, and relieving emotions (Weiten, 2001). For example, after the potential Internet fraud victim blames himself/herself, he/she seeks help and social support from the online community. Then, he/she implements a solution to the problem. Finally, he/she regains the peace of mind after releasing the emotions. Based on the psychology literature on stress, we adapt it for the Internet fraud scenario and propose the following model.

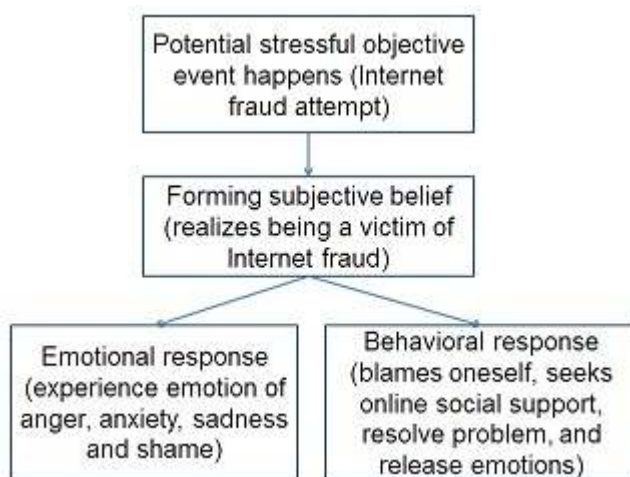
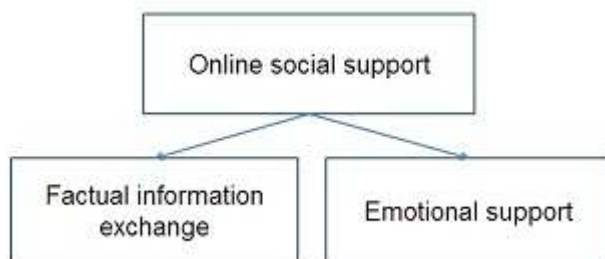


Figure 1. Conceptual Internet Fraud Stress Process Model

### Social Support

Social support refers to many types of help and aid offered by members of one's social network (Weiten, 2001). As a vital coping resource, social support promotes one's physical and mental health and buffers adverse effect of stress (Spiegel, 1993). In an empirical study, social support was found to have significant main effects on information systems professionals' psychological well-being (health and job satisfaction) (Love, Irani, Standing and Themistocleous, 2007). Perceived psychological aloneness was found as an important influencing factor for consumer vulnerability to fraud (Lee and Soberon-Ferrer, 1997). People in the state of perceived social isolation feel lack of sources of information and support as well as less connected to friends. Therefore, these people are more vulnerable to consumer abuse and fraud. Two social support mechanisms may help socially isolated consumers. First, important consumer information or facts and knowledge of products and commerce can be learned through one's social network. Second, moral and emotional support may provide

companionship and comfort to fraud victims (Lee and Soberon-Ferrer, 1997). Similarly, in the context of online cancer patient community, information exchange and emotional support were found to help patients to better cope with their illness (Leimeister, Schweizer, Leimeister and Krmar, 2008). In a study of older adults' perceptions and experiences of online social support, seven different aspects of support were examined, namely, self-disclosure, deep support, light support, community building, information/facts, off topic, and technical issues (Pfeil, Zaphiris and Wilson, 2009). For our purpose of investigating online social support for Internet fraud, we concentrate on only two salient aspects: factual information exchange and emotional support. Therefore, we propose the following conceptual online social support model for Internet fraud.



**Figure 2. Conceptual Online Social Support Model for Internet Fraud**

## METHODOLOGY

One research objective is to produce an understanding of the socially constructed context (Walsham, 1993), in this case, online fraud and social support from online community. In the first case study, we take a unique longitudinal interpretive in-depth case study approach (Walsham, 1995) to demonstrate the full complexity of human sense making as the circumstances emerges and evolves (Kaplan and Maxwell, 1994). We interview a small business who sells certain merchandises on eBay. The unique firsthand empirical experiences described by the interviewees offer rich information for the phenomenon under investigation. We document and interpret their response, belief and emotion as the online fraud happened and unfolded. Moreover, we trace their interaction with other members of the virtual community. We follow their online journey to collect relevant data. In addition to recall from their memory, we also gather some of their documents such as emails, online transaction records, and online forum postings. Integrating these information together lead us to a relatively complete and rich image of the behavior, belief and emotion toward the unfortunate online fraud and events followed. In the second case study, we study the types of online social support for Internet fraud with an informal content analysis of messages posted on eBay community answer center. According to (Myers, 1997, 2012), with the case study approach researchers usually concentrate on one or at most a handful cases. We subscribe to the tenet of (Hempel, 1950) that the central belief of modern empiricism is the view that all non-analytic knowledge is based on experience. Thus, this research work is clearly grounded on the empirical experience, although from only a few cases. We acknowledge the potential bias and the generalizability of the findings. However, the purpose of this exploratory study is to provide the initial understanding of the problem and serve as a stepping stone for further theoretical development. The scenario that we examine – learning from infrequent events and rare experience (online fraud) from fragments of history, is similar to many realistic organization settings (March, Sproull and Tamuz, 1991). Our research could provide insights on how the interpretation of rare history events can help organizational learning and improvement.

## CASE STUDY ONE – AN INTERVIEW OF EBAY FRAUD AND COMMUNITY SUPPORT

In this section, we describe the case of an Internet fraud that we learned from the interview. We pay special attention to victims' belief, emotion and behavior relating to the proposed Internet fraud stress process model. Hereafter, we refer the interviewees, Internet fraud victims, as "they" in the following text.

As they only engaged in non-auction online transactions (Buy it now) with other eBay members, before their first encounter of online fraud, they had no expectation of online fraud in their normal online transaction context. They regarded online fraud as remote and irrelevant to them.

One day they put a new line of product, a used laptop, on eBay with the "Buy it now" model. Within a few hours, they received a message saying "you made a sale". Initially their moods were surprising and overjoy. They were amazed by the efficiency of the online marketplace created by eBay.

After the heat of the moment passed, they examined the detailed content of the email order. The buyer asked them to ship their computer to a place in Nigeria, because the computer is meant as a gift to the buyer's son who happened to travel to

Nigeria at the moment. Moreover, the buyer requested them to send a money order to pay the excessive amount that the buyer is planning to overpay them. They were planning to follow the requests of the online buyer to complete the transaction. However, one of them cautioned themselves about this unusual case. They never encountered such request to ship their merchandise to a foreign country and send a small money order in anticipation for a larger payment refund. Disagreement between them was raised, as one of them might have more predisposed trust. For one of them, he never thought that online fraud would happen to them. Putting the argument aside, they conducted online research in the eBay member discussion forum.

After some reading and online communication with other members of the virtual community, they were beginning to accept the reality – online fraud did happen to them. After both of them were convinced and reconciled, their mood changed to angry toward the perpetrated online buyer and frustrated toward eBay, because eBay already wrongfully charged them for the transaction fee. Next, they reacted to the event by closing the online account to avoid the fees imposed by the eBay. From the incident, they updated their belief to recognize that online fraud is real and does happen. They experienced emotional roller-coaster, with the initial joy of making a sale to doubting the suspicious transaction, and next angry and frustrated toward the buyer and the situation because of the online fraud, and finally overact by escaping the situation with the closure of the online account on eBay.

A few days later, they realized that by closing the account they might let go the accumulated online identity on eBay which may be valuable to convey the trustworthiness to other potential buyers on eBay. While regretting the overreaction of closing the eBay account, they rationally opened a new eBay account to restart the online journey from scratch. Then, within weeks, they found their online business continued on, although it was slow in the beginning. Over the time, more and more online buyers made online transactions with them, because they priced the merchandises with the lowest price on eBay. Hence, their attitude changed from regretting the closure to being indifferent, because the closure seemed not significantly affected their online business. After all, many online buyers made the transaction because they had the lowest price for the commodity and their online identity grew again as time passes by. Finally, they recognized that although a good online identity is helpful, one can manage to do well online without it, because after all those having good online identity must also start from none a while ago.

From this unique case, we find that under adverse situation such as online fraud, victims undergo the stress process. Internet fraud victims’ belief, emotion and behavior evolve in the dynamic process. Moreover, we find that in the stressful condition of Internet fraud, victims are subject to bounded rationality (Simon, 1955, 1991) – suboptimal overreaction. Moreover, even out of such unpleasant event of online fraud, people can bring out the good part of human nature – peer social support from online community. Furthermore, our study reveals the widely recognized role of online reputation and identity mechanism (Ba and Pavlou, 2002) might be over-rated.

**CASE STUDY TWO – A CONTENT ANALYSIS OF EBAY COMMUNITY SUPPORT MESSAGES**

In this section, we examine the types of social support present in the online community in response to Internet fraud. We collected real world data of members’ posts on eBay Community Answer Center (<http://answercenter.ebay.com/support-forum/Escrow-Insurance/10>). In this paper, due to the limit of space, we present only a sample of a recent thread (started on Nov 21, 2012) related to Internet fraud. We manually categorize each sentence of the posted reply into factual information exchange or emotional support. In the following table we display the text along with our classification of social support type. From an informal content analysis of the messages, we find that some sentences of reply focus on sharing the factual information regarding eBay policy, the nature of wire transfer and relation to Internet fraud. Other sentences clearly convey online community members’ personal concern and sympathy to the victim as indicated by the words and capitalized letters.

	Text	Online Social Support Category
Original Post	is western union valid for buyer protection	NA
Reply 1	NO, in fact it is specifically banned from use un the US. Only scammers want you to use western union.	Factual information exchange
Reply 2	ABSOLUTELY NOT!	Emotional support
	Only scammers demand payment through Western Union, since it's untraceable and irretrievable.	Factual information exchange
	eBay has warnings all over its website telling members NEVER to pay with Western Union.	Factual information exchange

Reply 3	Western union is against ebay policy and should NEVER be considered.	Factual information exchange
Reply 4	You might benefit from reading here:	Emotional support
	Is someone attempting to convince you to pay be wire?	
	Don't do it.	
	<a href="http://cgi3.ebay.com/ws/eBayISAPI.dll?ViewUserPage&amp;userid=red-flags">http://cgi3.ebay.com/ws/eBayISAPI.dll?ViewUserPage&amp;userid=red-flags</a>	Factual information exchange
	<a href="http://www.pirsquare.notlong.com/">http://www.pirsquare.notlong.com/</a>	
	<a href="http://forums.ebay.com/db1/topic/Ebay-Motors/Craigslist-Scams-And/520091495">http://forums.ebay.com/db1/topic/Ebay-Motors/Craigslist-Scams-And/520091495</a>	
	eBay's warning:	
	<a href="http://pages.motors.ebay.com/buy/security/index.html">http://pages.motors.ebay.com/buy/security/index.html</a>	
	Directly from eBay:	
	Emails claiming to be from eBay Motors about handling transactions. Some members have reported receiving emails claiming to be from eBay Motors about vehicle transactions. The emails contain similar characteristics which include: requests for buyers to make payments to an eBay Motors bank account (and eBay will hold the payment until the vehicle is received and inspected), claims that eBay will contact buyers with details regarding the transaction, fake invoice numbers (VPP#) or transaction numbers, and forged email addresses that include "eBay" in the address, such as eBay@safe-harbor.com. eBay Motors is never directly involved in transactions and does not provide any kind of insurance or escrow coverage for sellers.	
<a href="http://pages.ebay.com/help/policies/rfe-spam-non-ebay-sale.html">http://pages.ebay.com/help/policies/rfe-spam-non-ebay-sale.html</a>		
Reply 5	All previous answers were correct.	Factual information exchange
	Please return to this thread, and tell us you avoided being scammed!	Emotional support
	Also, if you can, tell us if the request for a Western Union instant payment was made by a seller ON eBay ... what was the Item Number?	
	Remember, if the item is not listed ON eBay, and if you do not buy the item ON eBay with an approved payment method, you do not have full eBay or PayPal buyer protection!	Factual information exchange
Reply 6	I am afraid the OP might have been convinced by the scammer ... and sent money via Western Union.	Emotional support

Table 1. An Example of Online Social Support Messages in Response to Internet Fraud

**CONCLUSION**

This research makes several potential contributions to the literature. First, we propose a conceptual Internet fraud stress process model and a conceptual online social support model for Internet fraud. Second, this study provides insight of the development of Internet fraud victims’ belief, emotion, and behavior response. The observed facts are consistent with the theoretical modeling of stress process, social supports, and bounded rationality. The longitudinal empirical case study not only presents interesting evidence, but also serves as a starting point for further theoretical investigation of online fraud and social support from online community. Third, from the content analysis of support messages, we demonstrate that support mechanisms can be understood from the perspective of factual information exchange and emotional support. We treat this study as **research-in-progress** and intend to extend the research with more empirical evidences to generalize and validate our findings. First, we plan to expand the sample size to make the case stronger. Second, to maintain the research rigor and enhance objectivity, we plan to examine inter-rater agreement on coding of the data. Third, we plan to elaborate on our analysis and incorporate additional empirical evidences from other sources. Given the importance of Internet fraud and online social support, we call for more empirical research to add to the body of knowledge on this topic.

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