THE ETHICAL USE OF IT: A STUDY OF TWO MODELS FOR EXPLAINING ONLINE FILE SHARING
BEHAVIOR

A Dissertation

Presented to

The Faculty of the C.T. Bauer College of Business

University of Houston

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

By

Kenneth Shemroske

May, 2011

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ACKNOWLEDGEMENTS

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ABSTRACT

The use of peer to peer (P2P) technology to download copyrighted digital material has grown substantially since its introduction to the masses with Napster in 1999. In spite of continued prosecution and law suits costing individuals totals in the millions of dollars, rather than diminish, illegal downloading behaviors continue to grow in popularity raising a question concerning the ethical use of information technology. Why do individuals participate in online file sharing activities in spite of its moral implications? This study investigates the use of two supported models of behavior (Hunt-Vitell General Theory of Ethics, Theory of Planned Behavior) to explain individuals downloading illegal media files. Specifically, the context used in this study is the downloading of illegal music. Given its nature, this context focuses on the ethical component of the use of technology. While the Theory of Planned Behavior (TPB) has been used to address ethical behaviors, the Hunt-Vitell (HV) model specifically addresses the moral component where it is only implied in the TPB. The two models are compared and contrasted as explanatory tools for illegal downloading behavior and subsequently, the ethical use of IT. A synthesized model based on components of the two is proposed and tested with significant results. The results of this study are beneficial to organizations attempting to deal with piracy in their retail business models, academic research in terms of validating current models and presenting a new model for investigating ethical use of IT, and extends to educational curricula and even the home regarding a need for expanding the focus of moral development to include an ever growing use of IT in the personal lives of young people.

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Chapter 1

INTRODUCTION

Within the context of online file sharing technology there is the greater issue of ethical or unethical use of information technology. This chapter introduces this as a topic of research, discusses the motivation for pursuing this topic, defines the research objectives of this study, and lays out a high level view of the research methodology used. It concludes with a description of the chapters in this dissertation.

MP3 audio compression currently allows music files to be compressed as much as 22:1 in relation to their original size (D, 2003). Since introduced in 1977, this compression technology has led to a flood of music files on the internet, exchanged under both legal and illegal contexts.

File sharing technology is the most popular method for exchanging music files, as well as many other types of digital files. File sharing technology was dramatically introduced to the music industry by the wildly popular Napster in 1999. Napster allowed individuals to share with like-minded strangers, and via the worldwide internet, music files which they had converted or "ripped" to MP3 files. While Napster was shut down less than a year after its inception due to violation of copyright law, file sharing technology lives on in new forms which seek to sidestep the litigation that was Napster's downfall.

File sharing presents a phenomenon of interest with regard to its potential to facilitate copyright infringement and therefore, the unethical use of information technology. While this study focuses on the exchange of music files, the phenomenon is not restricted to a single media type. Software, movies, and digital texts are also among the popular forms of digital media shared over the Internet, often illegally.

The issue is an important one for the organizations and individuals that profit through the sale of digital media as well as for researchers investigating the ethics of information technology use. While companies continue to cope with the transition from hard copy formats (e.g. vinyl records, tapes, CDs) to digital media, their efforts have largely fallen short. Forays into the use of digital rights management technology (DRM), technological counterstrikes against file sharing technologies and legal prosecution have all met with limited and inconsistent results.

A better understanding of what the individual file sharer goes through when making a decision to participate in the file sharing activity should provide valuable insight to the recording industry. This research identifies cognitive processes that an individual activates when considering the unethical use of technology to circumvent proper sales channels. Active pathways through these processes describe how risky decisions are weighed and specify which parts of the decision process might be amenable to change. Understanding these pathways and their malleable points should arm industry with a perspective for building appropriate business strategies to address the issues resulting from music piracy and by extension other digital media facing a similar threat. Additionally, a better understanding of ethical decision making tied to use of information technology may extend beyond the scope of this context into a broader

meaning tackling subjects like the ethical use of company IT resources, or uses of data gathered with technology intended for other purposes.

Extant research in the field of IS regarding social behavior is greatly lacking the inclusion of an ethical component. Largely these studies reference the Theory of Planned Behavior (TPB) (Ajzen 1991) as a base, if not as the main instrument, when explaining behaviors related to IT. While the TPB has proven to be a dependable model, it is lacking any construct which directly incorporates an ethical element. This study evaluates the Hunt-Vitell (HV) General Theory of Marketing Ethics as a tool for understanding the active pathways leading to intention to use file sharing technology and compares those with our understanding of the pathways to intention that are represented in the Fishbein and Ajzen theory of planned behavior (Hunt & Vitell 1986; Ajzen 1991). Ajzen suggests there is value in the inclusion of a moral component to the TPB (Ajzen 1991).   The HV model provides this moral component and a process that describes what an individual goes through when deciding to participate in an unethical behavior. Although the HV model was initially set in the context of marketing ethics, as some scholars have pointed out, Hunt and Vitell's theory is applicable to ethical decision making in general, not just to marketing or business (Thong & Yap 1998).

It is suggested that where an ethical dilemma is active, the HV model shows active pathways leading to intention that are not present in the TPB. When participating in illegal online file sharing, an individual makes a conscious effort to circumvent proper sales channels to procure a digital music file. This suggests the file sharing phenomenon incorporates an ethical dilemma, and thus a moral component. It is the inclusion of this moral component that makes the HV model an appropriate tool for researching the phenomenon.

This chapter further defines the research problem and provides an outline for this dissertation. Following are an explanation of the research motivation, the research objective, and the research design.

Research Motivation

The file sharing phenomenon has grown rapidly since Napster introduced the internet public to trading digital music files online. Current technologies (e.g., Bittorrent, Gnutella, MLDonkey) utilize a similar peer-to-peer (P2P) transaction though they eliminate the central indexing that took place on the Napster servers which lead to their eventual shutdown through legal prosecution. These current technologies utilize 'tracker sites' to set up connections with other individuals wishing to participate. In this manner there is nothing which violates copyright law on the web servers themselves, they merely serve as a starting point for the sharing process. Examination of one of the tracker sites reveals a multitude of file types and content types which individuals are interested in sharing.

There is nothing within the file sharing technology that limits sharing to copyrighted material. The technology may be used to share personal, non-copyrighted material such as family photos, folders of documents, or original music not yet (and maybe not ever) copyrighted. However, one investigation revealed only 1% of files being shared via popular tracker sites were non-copyright infringing (Moya 2010). The International Federation of the Phonographic Industry reports global music sales down more than 12% in 2009 in spite of increased revenues from digital music sales (Kennedy 2010). Much of this loss they attribute to an estimated 29.8 million frequent users of file sharing services in the top five EU markets alone. The Business Software Alliance (BSA) reported finding over $1 billion in software being illegally

shared via Bittorrent software, a popular file sharing technology, in the first half of 2009 (Moya 2009).

Furthermore, users of the technology are being hurt by participating in the file sharing activity, whether aware of the ramifications or not.   Deciding to fight litigations, one Minneapolis woman was fined $1.9 million for infringing on 24 songs, while another individual was fined $675,000 for infringing on 30 songs in 2009 (Reuters 2009). CNN reported the Recording Industry Association of America (RIAA) had sued over 30,000 entities over the 5 years prior to and including 2009 (Walsh 2008).

As individuals have become more aware of free file sharing technology and less reliant on expensive traditional methods of music distribution (e.g. buying a CD from a music store), use of the technology has mushroomed. For instance a report in the third quarter of 2009 showed the number of sites supporting illegal file sharing activities to be up three fold from the previous quarter (Moya 2009). As the behavior increases and becomes more transparent, it threatens to become more acceptable and perceived as less risky, particularly in the eyes of impressionable students.

File sharing technology continues to grow ever more sophisticated. As stakeholders in industry attempt to block or disable the technology, the developer community responds with updated clients which mask protocols and encrypt data streams. While pursuing these tactics may provide temporary deterrence, a better understanding of individual users could help build strategic plans which aid organizations that depend on the sale of media files. It is the search for a deeper understanding of the cognitive processes active in the minds of downloaders that motivates this study.

Rigorous research into user behaviors and attitudes regarding illegal file sharing technology and digital music piracy is still modest in scale. Studies have focused on the Theory of Planned Behavior (TPB) as a theoretical model of explanation (e.g. Kwong & Lee 2002), factors that directly affected attitude toward user behavior in terms of outcome beliefs, age, perceived importance, and norms (e.g. Al-Rafee & Cronan 2006), or factors that had an impact on the ethical decision making process, such as age, gender, cost/benefit, law, and technology (e.g. Gopal, et al. 2004). Where impact on sales has been studied, Digital Rights Management (DRM) has been shown to have some impact deterring pirating and lessening its impact on sales. (e.g. Jaisingh 2007). Alternately, general sales strategies were discussed and recommendations given for options like subscription services or low pricing schemes (e.g. Gopal, et al. 2006). Finally P2P technology has been researched in terms of incentives to participate and the inherent risks associated with participation (e.g. Johnson, et al. 2008; Ranganathan, et al. 2003).

The sharing of music files is a relatively new phenomenon. A precursor to this phenomenon started with studies on software piracy. Software piracy is as easy as the sharing of a set of floppy disks. While the content is different, much of the principle is the same. Software is created by a developer and the rights to that product belong to that person and/or any assisting organization that promotes or pays for such works. To the extent that this digital product may be shared without the consent of or remuneration to those parties, the actions are similar to that of online sharing of music files.

Software piracy literature, while more expansive, concentrates on many of the same topics including the implementation of DRM (e.g. Kwan, et al. 2008), TPB and explanation of piracy behaviors (e.g. Gan & Koh 2006), and factors with a direct impact on behavior, such as expense, sampling, temporary use, habit, environment, moral judgment, gender, age,

experience, moral intensity, and perceived risk (e.g. Tan 2002). Additional topics include economic factors, policy and law, and market forces (e.g. Gopal & Sanders 2000; Boldrin & Levine 2002; Chellappa & Shivendu 2005).

While much of this research investigates antecedents to behavior concerning the piracy of music or software, little has been done to identify and investigate the decision making process an individual goes through when determining whether or not to participate in the activity. It is that decision, either to participate or not in illegal file sharing, that is at center stage in this ever growing problem. For the purposes of this study, theory explaining ethical behavior has been proposed as a tool.

Within the business research domain the TPB has been used to investigate factors leading to intention. In addition to the factors of attitude, norms, and perceived behavioral control defined in the TPB, some researchers have sought to broaden our understanding of where ethical issues come into play (e.g. Banerjee, et al. 1998). However, while this type of study follows up on the suggestion of adding a moral component to the TPB, others have suggested an altogether different model is needed to incorporate all that happens prior to intention (e.g. Bommer, et al. 1987; Cavanagh 1981; Ferrell & Gresham 1985; Laczniak 1983; Hunt & Vitell 1986). A common basis for these studies is that the ethical decision making process incorporates elements of moral philosophy. These elements can be consolidated into two main categories: deontological or teleological (Tsalikis & Fritzche 1989). Deontological decisions rely on the individual's own sense of right or wrong, judging an act moral or not based on the nature of the act itself. Teleological decisions are made taking the consequences of the action into account and basing the right or wrong of the action on whom it affects and how it affects them.   Where most studies focus on one philosophical perspective or the other, the

Hunt- Vitell (HV) model addresses both (Hunt & Vitell 1986). It is this comprehensive view that appears to make the HV model a desirable tool for extrapolation into the domain of information technology.

Research Objectives

The research undertaken in this dissertation seeks to address the gap in the literature described previously. To this end the Hunt- Vitell Theory of Ethics and the Theory of Planned Behavior are used in a comparison to evaluate the explanatory power of each, where an ethical component exists, relevant to behaviors associated with an information technology. The comparison continues to evaluate the differences in the models where the ethical component is not present in the behavior. A priori conjecture suggests there would be pathways active in the HV model, where ethical behaviors are a concern, that are not represented in the TPB. Further, where there is no ethical component to the behavior, there could be pathways active in the HV model despite claims by the originators that this should not be the case (Hunt & Vitell 1986).

While the TPB has been used as a basis for research into the behaviors of individuals that participate in the unethical use of information technology, Icek Ajzen himself suggests "moral obligations would be expected to influence intentions, in parallel with attitudes, subjective (social) norms and perceptions of behavioral control" (Ajzen 1991). The ethical issues surrounding the use of certain information technologies suggest that there is an important moral component which should be evaluated and, if possible, quantified.

The HV model was constructed as a tool for marketing research; however, its value has been recognized in other areas suggesting this model's application is generalizable to other contexts (e.g. Thong & Yap 1998; Mayo & Marks 1990; Gopal, et al. 2004). Hunt and Vitell

presented the model as a framework for study but did not empirically test the entire model. Subsequently, other researchers using this model have tended to choose a portion of the model for study rather than the entire model. Thus, another objective of this research is to clarify measures for all constructs in this model, but within the context of information technology, specifically file sharing technology.

Additionally, clarification and development of measures, and empirical support in the context of information technology gives MIS research a tool for investigating unethical use of technologies. This tool includes pathways not previously described in research using the TPB and should add explanation.

Using the context of online file sharing, this research proposes the use of the HV model to show active pathways leading to intention that are not present in the TPB. The HV model describes the processes individuals go through when making ethical decisions. Better understanding of this process when considering the unethical use of an information technology should give stakeholders insight which enables the creation of business strategies to address factors early in the decision making process. For example, where it is shown that a deontological evaluation is strongest, a campaign which more clearly defines the act of downloading files as an illegal activity may prove more influential. Where a teleological evaluation is shown strongest, an appeal emphasizing impact on key stakeholders should be considered. This approach could yield more successful results than the purely reactive stance that has been exhibited previously.

Overview of the Research Design

This dissertation seeks to first clarify the HV Theory of Ethics for use within the information systems context (Hunt & Vitell 1986). This is done through the development of measures applicable to the investigation of the unethical use of online file sharing technology to download copyrighted music files.

On the front end of the HV model are two constructs: perceived alternatives and perceived consequences. These correspond to a perceived ethical problem. To assure that alternatives and consequences are those a majority of study participants would find salient, an elicitation study was performed using undergraduate students to identify a master list for each. These lists are then consolidated and subjected to a card sorting exercise (Moore & Benbasat 1991; Harper, et al. 2003). Hierarchical cluster analysis then reveals the levels of interpretation for developing alternatives and consequences representative of those presented by the elicitation participants (Chin, et al. 1992).

For all other measures, where possible, studies which incorporate the HV model were evaluated for the measures they developed or used (see Appendix 1.1). A synthesis of the literature was performed to find measures appropriate for use in the HV model given this context. Where validated measures could not be found, they were constructed as a part of this dissertational study.   The combination of developed measures and synthesized measures were used to construct the main study survey instrument. Responses to the survey provided data for analysis of pathways leading to intention within the context of unethical use of information technology. Two pilot studies were performed to confirm the survey instrument was working properly prior to use in the main study.

Organization of the Dissertation

This dissertation includes 7 chapters. Chapter 1 introduced the research topic and provided the research motivation, objectives, and an overview of the research design. Chapter 2 provides a review of the relevant literature and further identifies the research gap. Chapter 3 describes in detail both the HV model and the TPB and includes definitions of constructs. Chapter 4 discusses the research methodology in detail, including the elicitation surveys, card sort mechanisms, multidimensional scaling, hierarchical cluster analysis, development or synthesis of measures, construction of the main study survey, and implementation of the pilots. Chapter 5 is a thorough analysis and presentation of the results from the main study survey. Chapter 6 presents conclusions and contributions of this research and Chapter 7 discusses limitations and further research directions suggested by this dissertation.

Chapter 2

LITERATURE REVIEW

This chapter reviews literature relevant to the several related aspects of this study. To begin, the context of illegal online file sharing is discussed within its broader domain of digital media piracy. This initial discussion includes support for the motivation of this study as well as providing a review of extant literature. Software can be included in the definition of 'digital media', and as such justifies the next discussion of what can be considered the precursor to digital media piracy research, software piracy. The theoretical underpinnings of this dissertation are then introduced by a review of literature on the ethical use of information technology (IT). Finally, relevant literature on the two theoretical models of focus for this dissertation, the Hunt-Vitell General Theory of Ethics (HV model) and the Theory of Planned Behavior (TPB), is reviewed and some general theories of ethical behavior are presented.

Digital Media Piracy

Research specific to digital media piracy, the context this research is set in, is relatively sparse. This is understandable given two explanations. First, and as mentioned above, it is logical, though largely unsubstantiated, that much of what has been done in research on software piracy can be extended to digital media piracy and thus applies to the behaviors being carried out in online file sharing activities. The second explanation is that file sharing as a

phenomenon is relatively new. The technology was made generally known by Napster in 1999, however, Napster operated differently than later technology. More recent file sharing technologies have moved the bulk of the processing away from a central server (as was the case with Napster) and into the software client residing on the user's local machine. This move, as well as the public's growing understanding of the technology and how to use it has been more recent. As a fairly new IT artifact, file sharing phenomena have not been around long enough for a great deal of research to have surfaced, despite the many claims for its adverse economic impacts (Taylor, Ishida, & Wallace 2009; Ingram & Hinduja 2008; Khouja & Rajagopalan 2009; Wang, et al. 2009). This section will discuss the digital media piracy literature focusing on file sharing where possible.

Impact on Sales Volume: A controversial issue remains as to whether or not piracy has any real impact on sales of legitimate copies of digital media. Several studies sought to assess factors related to piracy and their effect on sales through various distribution channels.

It has been speculated that over the air broadcasts of media could reduce incentive for potential customers to own media. This concern is nothing new, starting in the early days of radio when recording companies were concerned for their continued record sales. Evaluating the impact of over the air broadcasts of movies found that both legitimate sales and piracy of a specific movie would increase as a result, however, availability of illegal copies of the movie would not appear on file sharing networks, indicating that the over the air broadcast was not a source of piracy content (Smith & Telang 2009).

Looking specifically at album sales over a period from 1998-2003, it was determined that music piracy led to a significant decrease (Liebowitz 2008). As a counter measure, digital rights management (DRM) was introduced into legitimate sales channels only to find the impact

of DRM on sales to be negative (Jaisingh 2007). In many instances the DRM interfered with use by legitimate owners of the content.

The media reports of sales, financial impact, and the overall reality of the situation paints a dramatic picture. A recent breakdown on files being downloaded from BitTorrent tracker sites showed 46% were movies, 14% games and software, and 10% music files (zeropaid.com 2/2/2010). In a UK study consumers were asked to identify by name various sources of downloaded music. One hundred percent of respondents could name illegal file sharing mechanisms while only 40% could name a legal online music service (zeropaid.com 3/10/2010). A McAfee report showed an increase in the number of sites hosting links for copyrighted material had gone up 300% from the third to the fourth quarter of 2009 (zeropaid.com 11/4/2009). The Recording Industry Association of America (RIAA) chairman and CEO Mitch Bainwol suggested that what was once a $15 billion music industry had been reduced to one of just $8 billion (zeropaid.com 3/23/2010). From the perspective of impact on sales, there appears to be significant evidence that this is a continuing real financial concern for the media industries, and a growing one.

Sales Strategies: Organizations that exist to produce/distribute digital media goods continue to be concerned about how to deal with piracy. Research on sales strategies has been presented in an attempt to identify methods for dealing with piracy.

A common discussion continues on two specific pricing strategies: pay per unit and subscription. The pay per unit being a strategy that popular e-tailer iTunes has adopted whereby an individual can purchase any number of songs, one at a time, in any volume. The subscription plan has been tried by a few large organizations (i.e. Rhapsody, Napster- post 2001) with varying degrees of success. Research indicates that a mix of these strategies might serve a

broader customer base (Bhattacharjee, et al. 2003). Another approach would be 'collective licensing' similar to that which has been used by radio stations for decades (von Lohman 2004). Under collective licensing a tax would be placed on internet usage to account for revenues which should go to music artists, production companies, and distributors. Still another view suggests that some music piracy is good for sales (Gopal, Bhattacharjee, & Sanders; Bhattacharjee, et. al. 2006). In these studies pre-purchase sampling was presented as an important mechanism for increasing sales. All of these studies pursued strategies at least partially motivated by the possibility of replacing or eliminating piracy in lieu of a desirable legitimate path to owing digital goods.

Behavioral Studies: Several studies focused more specifically on factors which led to specific behaviors associated with media piracy. In some cases these were direct antecedents to behavior while in others the relationship between factors and the aggregate behavior were analyzed.

The price of music and the availability of bandwidth have been tied to levels of music piracy (Bhattacharjee, Gopal, & Sanders 2003). Another study investigated behavior of individuals where configuration of software could be done to circumvent regulatory measures (Mlcakova & Whitely 2004). It was found that users would configure software based on their technical skill and opportunity to do so regardless of regulatory features. Neutralization techniques were tested as a framework for understanding online music piracy (Ingram & Hinduja 2008). This study found that techniques associated with denial of responsibility, denial of injury, denial of victim, and appeal to higher loyalties all give insight into the problem of dealing with digital piracy. A qualitative analysis of small groups given a case study to discuss showed a general consensus that although individuals agreed that the behavior of file sharing

was wrong, there was a group mentality that the behavior was acceptable (Khouja &

Rajagopalan 2009). Finally, a detailed description of the music industry highlighted factors

associated with piracy including legislation, litigation, mergers, and technology (McCourt &

Burkart 2003).

An ethical index was used as an indicator of attitude while testing age, gender, belief in

laws, and money savings as predictors finding only substantial evidence for age (Gopal, et al.

2004). Another study considered idolization, attribute satisfaction, perceived prosecution,

perceived magnitude of risk, perceived social consensus, and perceived proximity as direct

antecedents to attitude toward music piracy finding support for all these factors (Chiou, Huang,

& Lee 2005). Moral judgment was incorporated into one study along with individual attributes,

affective beliefs, cognitive beliefs, perceived importance, and subjective norms (Al-Rafee &

Cronan 2006). This study found significance only for beliefs in outcome, age, perceived

importance, subjective norms, and Machiavellianism. Moral obligation and past piracy behavior

were evaluated and past piracy behavior was found to be a significant predictor in the model,

while moral obligation also had a high correlation (Cronan & Al-rafee 2008). A model of goal

directed behavior was presented which provided a construct of motivations/desires leading

directly to intentions to perform unethical behavior (Shang, Chen, & Chen 2008). Frequency of

past behavior, perceived control, and perceived difficulty were found to be partial mediators of

this relationship. Antecedents to motivations/desires were identified as positive and negative

anticipated emotions, utilitarian attitudes, hedonic attitudes, and subjective norms.

Consumption value, moral reasoning and fashion involvement were evaluated to determine any

effects on music downloading as an ethical issue (Chen, Shang, & Lin 2008). Music consumers

were identified as value maximizers who would use piracy when it was perceived as a positive

value behavior. Fashion involvement was related to downloading behavior with the possible

explanation that downloading could be seen as a 'fashionable' behavior among peer groups. Contrary to other studies, moral reasoning was not supported as an antecedent to piracy.

Software Piracy

There is a substantial base of literature on software piracy to draw from. Four categories of software piracy research (software piracy prevention, global piracy, policies, and factors leading to piracy) are discussed here with particular attention to the final category as it the most relevant to this research. The first three categories are discussed to gain a more rounded understanding of the software piracy phenomenon and for completeness.

Software Piracy Prevention: Several studies took the approach that software piracy could be assumed as an activity with negative consequences. Based on this assumption the research was intended to provide direction for developing strategies which prevent piracy from happening or at least prevent it from growing, or the research sought to lessen software piracy.

Digital Rights Management (DRM) is a broad category for technology which is builds preventative measures into the software to deter creation or use of illegal copies. Several studies initiated research on the effects of DRM. There was a general consensus that where network externalities existed the implementation of DRM was detrimental to both consumers and creators of software (Sundararajan 2004; Shy & Thisse 1999; Kwan & Tam 2008; Conner & Rumelt 1991). The concept was that whether users get the software illegally or through legitimate channels, the expanded base of users interacting with each other would increase demand which would also be fulfilled through both illegal and legitimate channels. Two of these studies suggested that protection should only be considered if implementation costs were low and the market was vertically differentiated (Kwan & Tam 2008; Sundararajan 2004).

Another approach investigated the strategy of taxing hardware and transferring proceeds to software manufacturers (Gayer & shy 2003). The researchers found that taxation tended to reduce both illegal consumption and legal purchases. Another approach suggested appeals made to the public would have to take into account the individual's cognitive state of development (Siponen & Vartiainen 2004). The implication was that age was a factor when considering how to market a prevention campaign. A look at educational and legal campaigns and their effects on piracy showed that while preventative controls tended to reduce profits, deterrence campaigns could increase profits as long as costs were kept low (Gopal & Sanders 1997). In lieu of DRM, versioning of software was suggested as a method for piracy control (Wu & Chen 2008). By creating varying levels of quality of the product in the market place, the expectation was that there would be a segment of the market that was more willing to pay for higher quality versions.

Global Piracy: Global piracy is an area of research for investigating how national factors affect software piracy and how these may differ among nations. Nations with less corruption and weak collectivism were found to have lower levels of piracy, while other national factors included strong economic growth, low trade regulations, low internet usage, and better ICT laws (Bagchi, Kirs, & Cerveny 2006). In some areas, piracy rates were directly related to the size of the domestic software industry regardless of the country's level of income (Gopal & Sanders 1998). From another perspective, in lower income countries stricter copyright laws mixed with high software prices restricted usage, adding to the countries levels of computer illiteracy (Gopal & Sanders 2000). These countries would find little governmental support for such actions as computer use was seen coupled with productivity and profit. A series of three factors was seen to vary across nations and directly impacted piracy in the respect that high availability

of pirated software, low censure of software purchases, and high cost of legal software

combined to create an environment prime for software piracy (Moores & Dhillon 2000).

Policies: One strategy for dealing with software piracy was to adopt policies which gave

direction to the public on acceptable behaviors. Some of the software piracy literature took this

focus, evaluating the effect of different types of policies in different contexts. The government's

role in prevention was stressed through the use of education and awareness campaigns which

informed buyers of the hazards and hidden costs of piracy (Banerjee 2003). The 'Fair Use'

doctrine was visited and interpreted in terms of digital goods and found to do a poor job of

defining a fair use (Klein, Lerner, & Murphy 2002). Piracy and security measures in education

were evaluated and the overall effect of policy on piracy in this environment was found to have

little effect unless school policies were associated with hard consequences (Im & Van Epps

1992).

Factors Leading to Piracy: This final section of software piracy focuses on models which

provided understanding of the behavior through evaluation of antecedent factors. Males were

found to be more prone to piracy than females and computer experience was directly related to

piracy behaviors (Sims, Chang, & Teegen 1996). As in the national case, individuals were found

to perceive high availability of pirated software, high cost of legal software, and perceived lack

of censure of purchasing as optimal conditions for pirating (Moores & Dhaliwal 2004). A similar

study found the three most important reasons to pirate for undergraduates to be: software was

too expensive, can't afford the software, and wanted to try the software (Cheng, Sims, & Teegen

1991).

Moral judgment was anticipated in one study as an important construct leading to

intention to pirate, but results were inconclusive demonstrating instead a high tolerance for

piracy in the sample (Logsdon, Thompson, & Reid 1994). In contrast other studies found support for a moral judgment construct. Tan found support for moral judgment, moral intensity, and perceived risks leading to intentions to pirate software (Tan 2002). Moral judgment was found to have a direct relationship with intention to pirate while age moderated this relationship (Moores & Chang 2006). In a more complex study moral obligation, perceived usefulness, and awareness of the law were related to formation of attitude toward piracy (Goles, et al. 2008). In that same study past behaviors were found to be directly related to intention to pirate.

Equity theory has been used as an approach to identifying factors which lead to software piracy. Equity, translated to a 'fairness' construct, led to a relationship between reciprocal and procedural fairness as indicators of equity and piracy behaviors (Douglas, Cronan, & Behal 2007). Another interpretation of equity showed that piracy was influenced by the perceived ratio of inputs to outcomes associated with the behavior (Glass & Wood 1996).

Age was found to have an inverse relationship with piracy behaviors (Gan & Koh 2006). A more complex model found social factors and belief in consequences to influence piracy intentions while habits and facilitating conditions directly affected piracy behaviors (Limayem, Khalifa, & Chin 2004).

Ethical Use of Information Technology

Wide spread use of personal computers, advancement of networking technology, and growing skills and awareness all add up to a society taking great advantage of the capabilities of information technology. But along with great capability comes great responsibility. As increasing amounts of personal information and consumer goods alike become digital in format,

new vulnerabilities emerge and grow. This presents an interesting topic for research where

doing what is advantageous may not align with doing what is right, and how IT is an enabler of

such actions.

Many of the studies reviewed here advance toward a common theme, suggesting there

is something about ethical behaviors which differentiates them from other behaviors. This line

of research searches for those factors which contribute to this uniqueness. For example,

McMahon & Cohen tested Machiavellianism and gender on ethical judgment and behavioral

intention using a Mach IV test score as an indicator of the former (McMahon & Cohen 2009).

They found no support for Machiavellianism but did find that women showed less intention

toward unethical behavior than men. Another study considered individual attributes, decision

attributes, and perceived value of outcomes , testing for their influence on perceptions of an

issue as being ethical or unethical (Raghunathan & Saftner 1995). This study demonstrated that

above all factors tested, perceptions of ethical behavior are determined by the perceived

outcomes from the behavior. Gattiker & Kelly (1999) used 'Domains of morality' as an approach

to determine how users felt about computer related behaviors. They tested the three domains

of personal, conventional knowledge, and moral as well as age and gender. Important findings

from their study suggest that older computer users had a less permissive sense of right and

wrong, men were much more lenient in their ethical evaluations than women and differed in

their ethical evaluations, and both men and women demonstrated more concern for violation of

social norms than for civil liberties. Another study, this time by Vitell & Davis (1990), addressed

a gap in the literature concerning the formation of ethical evaluations in MIS professionals.

Their qualitative study employed five questions to probe MIS professionals' perceptions of the

ethical environment of their workplace and the ethical nature of management. Their results

suggest that MIS professionals perceived many opportunities for unethical behaviors in their

profession; however, successful managers were viewed as being highly ethical. Also, top

management support or formal codes of ethics had little impact on perceptions of ethical

actions in the organization.

Theories of Ethical Behavior

Theories of ethical behavior are discussed in this section. Of primary interest are the

two models used in this study, the Hunt-Vitell General Theory of Ethics (Hunt-Vitell 1986, 2006)

and the Theory of Planned Behavior (Ajzen 1991). Accordingly the next two subsections are

dedicated to these two models. Another subsection then describes several other significant

models of ethical behavior found in the literature.

The Hunt-Vitell General Theory of Ethics

Shelby Hunt and Scott Vitell first proposed their model as a general theory of marketing

ethics in 1986 (Hunt & Vitell 1986). While Hunt & Vitell intended the model to shape research in

the ethical behaviors of marketers, the model was subsequently used in other areas, thus

demonstrating its generalizability to other contexts (e.g. Thong & Yap 1998; Mayo & Marks

1990; Gopal, et al. 2004). Since the model is created in terms that are not specific to marketing

and it is descriptive of behaviors in general, its broader application is not surprising. In a follow

up to their earlier paper, Hunt and Vitell acknowledged this widening use of the model and

changed the name of the theory to the 'Hunt-Vitell Theory of Ethics' (Hunt & Vitell 2006).

The HV model was proposed to describe the thought processes an individual goes

through when faced with an ethical dilemma. There are two main processes described in the

model, one deontological and the other teleological. The outcome of each of these processes is

a cognitive evaluation of a specific action which is then used in developing an intention to act.

The model's purpose is to more fully explain how ethical actions are considered and how that

consideration impacts eventual behaviors. The HV model can be seen in Figure 2a – Hunt &

Vitell Theory of Ethics. The HV Theory of Ethics will be discussed in detail in chapter 3.
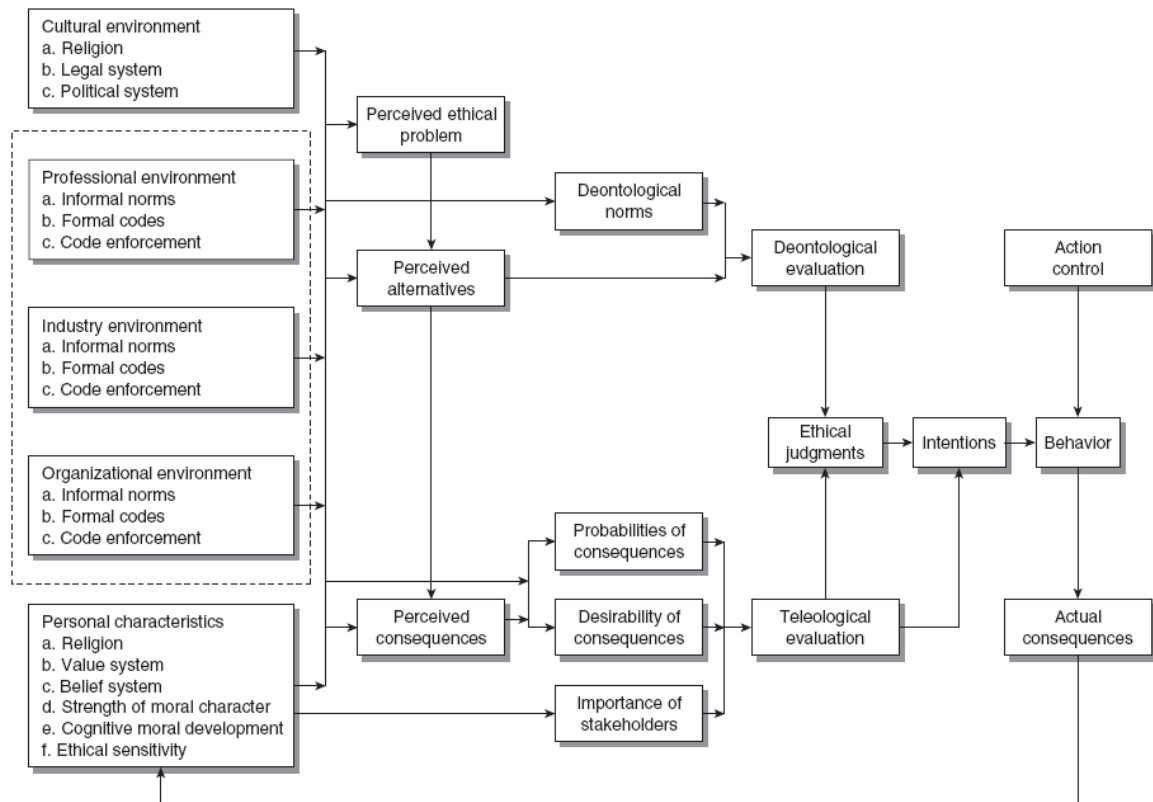
Figure 2a – Hunt & Vitell Theory of Ethics

The literature discussed here is related to the use of the HV model as a basis for testing

ethical behaviors. A complete explanation of the HV model and constructs can also be found in

two key papers (Hunt & Vitell, 1986, 2006). The first paper introduced the HV model as a basis

for testing the ethical decision making processes of marketers (Hunt & Vitell 1986). The

extended use of this model in other contexts and the feedback the authors received led to a

follow up paper with minor modifications to the model and a new name: the HV General Theory

of Ethics (Hunt & Vitell 2006).

Several studies focus on the tail end of this model, specifically the deontological judgment, teleological judgment, ethical judgment and intention. Empirical support was found for both deontological and teleological judgments being components of ethical judgment and ethical judgment leading to intention (Mayo & Marks 1990; Hansen 1992). A study in the managerial context found when managers were evaluating the ethical/unethical behaviors of their employees; deontological evaluations were used to decide whether disciplinary action or rewards were appropriate. Teleological evaluations only became active when deciding the extent of the discipline or reward (Hunt & Vasquez-Parraga 1993). Thong & Yap (1998) tested the HV model in the IT context to explain software piracy and found deontological norms do contribute to deontological evaluations. Additionally, consequences and stakeholders are used in teleological evaluations and teleological and deontological evaluations relate to ethical judgments which in turn are related to intention to pirate software.

In contrast, are studies which chose to identify antecedents and test the front end of the HV model. Environmental individualism, power distance, uncertainty avoidance and masculinity considered as cultural dimensions were proposed, but left untested, in one model (Vitell, Nwachukwu, & Barnes 1993). Another study found support for a link between ethical perceptions and culture (Armstrong 1996). The researchers interpreted this as further support for the HV model front end where perception of ethical problem and perceived alternatives can be the expressed as ethical perceptions. Individual personal experiences and organizational environment were tested for their relationship to importance of stakeholders and support was found for both (Vitell & Singhapakdi 1991).

One study in the IT context modeled four aspects of deontological norms and found that while a norm of anti-piracy was not significant, a norm of ideology of consumer rights was found

to be most important when testing deontological evaluation of digital piracy (Shang, Chen, & Chen 2008). Support was found testing the deontological portion of the model in a managerial setting along with locus of control and Machiavellianism (Singhapakdi & Vitell 1991). Finally, an alternate model was developed using the HV model as a basis, to test ethical intentions of audio piracy (Gopal, et al. 2004). This study provides evidence of a relationship between an ethical index and intention to pirate, suggesting support for the relationship between ethical judgment and intention in the HV model.

The Theory of Planned Behavior

There is extensive support for the Theory of Planned Behavior (TPB) in research literature[1] (Ajzen 1991). The TPB posits three main constructs: attitude, subjective norm, and perceived behavioral control, all of which impact intention which leads to behavior (see figure 2b – Theory of Planned Behavior, for a model of the TPB). An alternate path may form from perceived behavioral control to behavior directly whereby the restrictions perceived by an individual might prevent a behavior even though the intention is there to act. A more in depth discussion of the TPB and its constructs will be presented in chapter 3. To keep this review relevant to the work done in this dissertation, literature on the TPB being used as a model for predicting ethical behaviors will be the focus.

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[1] For a good review of the uses of TPB see Conner & Armitage 1998.

A number of studies have compared the explanatory power of the TRA and TPB for

ethical behaviors. For instance, the TRA and TPB were used to predict the use/misuse of alcohol

(Marcoux & Shope 1997). The TPB was found to have better predictive power. The TPB has

been separately tested and generally validated. For instance, in one study driving violations:

drinking and driving, speeding, following too closely, and risky passing, were used as ethical

behaviors (dependent variables)(Parker, et al. 1992). Support was found for all constructs and

relationships in the TPB. Similar support was found when testing drivers' intention to comply

with speed limits (Elliott, Armitage, & Baughan 2003).

Several researchers have sought to extend the TPB.   Ajzen suggested there may be a

need to investigate "personal feelings of moral obligation or responsibility to perform" though it

was not specifically incorporated into the TPB (Ajzen 1991, p.199). Cheating on an exam, lying,

and shoplifting were used as behaviors of interest to test the TPB with moral obligation as an

additional construct and support was found for all, which demonstrated the increased predictive

power of the enhanced model over the TPB alone (Beck & Ajzen 1991). The TPB with moral

obligation was again tested to evaluate intentions for consuming milk with lower fat content as

a behavior for health concerns (Raats, Shepherd, & Sparks 1995). Again support was found for

the extended model. Another study compared the predictive abilities of TRA, TPB, and the

extended TPB with moral obligation using ethical behaviors of insurance agents (Kurland 1995).

The strongest support was found for the extended model.

In a different approach to extending the TPB one study proposed but did not test for the

inclusion of moral norms as a fourth construct in the model (Conner & Armitage 1998). Yet

another approach incorporated self efficacy as a predictor of intention and behavior when

evaluating the use of legal (alcohol) and illegal (cannabis) drugs (Armitage, et al. 1999).

The TPB has been used to research phenomena specific to the field of information

systems. One study provided research on music piracy by adding antecedents to attitude in the

TPB (d'Astous, Colbert, & Montpetit 2005). The study found support for past behavior as an

antecedent as well as support for the rest of the TPB in predicting music piracy. Another study

on music piracy added and found support for idolatry as a moderator of the relationship

between intention and behavior (Wang, et al. 2009). Teens were primarily used in this study to

observe the effect of idolatry, an influence which manifests as an appreciation of the artist, and

its relationship to downloading behaviors. Software piracy, piracy outcomes, and evaluations

were proposed as antecedents of attitude but were not supported (Christensen & Eining 1991).

In contrast, punishment severity, punishment certainty, and software costs all gained support as

antecedents to attitude toward software piracy and punishment certainty correlated with

perceived behavioral control (Peace, Galleta, & Thong 2003). Finally, a model of music exchange

was proposed, based on the TPB, which found support for the addition of deterrence effect of

legislation, perceived equitable relationship, and computer deindividuation as extensions of the

model (Kwong & Lee 2002).

Several studies used the TPB or the TRA as a base for constructing more complex models or alternate sets of factors for explaining ethical use of IT. There are proposed models which used the TPB without changes, but introduce antecedents to its three main constructs of subjective norm, perceived behavioral control, and attitude. Alternately there were those that used the TPB as a base, but created a significantly different model by adding and/or removing main constructs.

One proposed model change added factors leading to attitude by introducing ego strength, affective beliefs, cognitive beliefs, cost, importance, individual attributes, Machiavellianism, moral judgment, and punishment (Cronan & Douglas 2006). Along with these, the model proposed other direct antecedents of intention representing equity, environment, moral obligation, and locus of control. Another complex model, both proposed and tested, added 15 constructs to the original TPB (Leonard, Cronan, & Kreie). These constructs represented personal beliefs and environmental impacts as well as some of those identified by other studies (e.g., Cronan & Douglas 2006). The study found significance for all the additional constructs. A third study used moral judgment as an antecedent to attitude and included ego strength, locus of control, and organizational climate, but in this case these last three were situation dependent variables which affected the entire TPB based portion of the model (Banerjee, Cronan, & Jones 1998). The study found the most important variables were those situation dependent variables. One less complex model evaluated the TRA directly for its ability to predict behaviors in an ethical situation and found it did not perform well (Loch & Conger 1996). An alternate model was then proposed which incorporated self-image, deindividuation, and computer literacy as antecedents to ethical attitude. This improved the significance of the model although the authors pointed out support for it was still weak.

Other Theories of Ethical Behavior

Some other theories deserve mention here even though they are not further employed in this study. These are theories that take prominence in the literature where the study of ethical behaviors in the business context is of concern.

One model suggested there are several environments: work, professional, personal, government/legal, and social, which have a direct impact on a complex construct labeled 'decision process' (Bommer, et al. 1987). In addition to these environments there are many individual attributes which influence the decision process. The outcome of the decision process in this model is either an ethical or an unethical behavior.

Another model divided the decision to behave ethically into a macro and micro environment (Fritzsche 1985). At the micro level this model supported net social benefits as a main influence. At the macro level individual freedoms were first evaluated and, if satisfied, a behavior becomes a question of individual distribution.

An analytical scheme was presented to describe how a particular judgment on behavior corresponded to facts about the behavior (Stassen 1977). In this schema there was an empirical definition of the situation which was compared to a center of values or loyalties. A separate line of reasoning initiated at the 'ground of meaning' or theology (e.g. justification and sanctification) and moved through a mode of moral reasoning. These two paths led to a judgment about the behavior.

Ferrell and Gresham proposed a more complex model, which like the Bommer, et al. model described above, considered several contributing factors all leading to an individual decision making process (Ferrell & Gresham 1985). The contributing factors were: the ethical

issue or dilemma, individual factors, significant others, and opportunity. In this model there is a feedback mechanism which takes the evaluation of the eventual behavior and affects individual factors and significant other constructs.

Summary

The purpose of this chapter was to lay out the literature which serves as a basis and reason for the development of this study. Online file sharing is an IT related behavior which incorporates a moral component. When an individual chooses to download copyrighted material through a file sharing program, they are choosing to perform an unethical behavior. Literature related directly to the context of this study and its precursor of software piracy was first reviewed. The theoretical underpinnings were then discussed in terms of literature on the ethical use of IT. Finally, behavioral models for ethical behavior were reviewed with a special focus on the two models being used in this dissertation, the HV General Theory of Ethics and the Theory of Planned Behavior.

Chapter 3

RESEARCH THEORY

The primary research objective of this study is an investigation of the Hunt-Vitell (HV) Theory of Ethics and identification of pathways that are significant when an ethical dilemma is faced. This is compared with the use of the Theory of Planned Behavior for the same data. The specific context is online file sharing which represents both a current use of information technology and an ethical dilemma, salient especially among a target population which frequently uses this technology to download copyrighted digital media. The active pathways in the HV model are predicted to be non active or substantially diminished when a situation does not present an ethical dilemma. It is proposed that the HV model provides some level of explanation that is not present when an alternative formulation, the Theory of Planned Behavior (TPB), is used to explain behaviors or intentions associated with the ethical use of information technology. Furthermore, contrary to Hunt and Vitell's proposition, it is suggested that there are pathways through the HV model that remain active even when there is no ethical component of the behavior to be explained (Hunt & Vitell 2006). This chapter describes in detail both the HV model and the TPB, including definitions of constructs and expectations of the models.

The Hunt-Vitell Theory of Ethics

As chapter 2 discussed, the business application of ethical decision making theory is common place in the marketing discipline. While Hunt & Vitell intended the model to shape research in the ethical behaviors of marketers, the model was subsequently used in other areas, thus demonstrating its generalizability to other contexts (e.g. Thong & Yap 1998; Mayo & Marks 1990; Gopal, et al. 2004).

The HV model was proposed to describe the thought processes an individual goes through when faced with an ethical dilemma. There are two main processes described in the model, one deontological and the other teleological. The outcome of each of these processes is a cognitive evaluation of a specific action which is then used in developing an intention to act. In this last portion of the model, Hunt and Vitell defer to Ajzen and Fishbein suggesting intentions lead to behavior (Ajzen & Fishbein 1980). The model's purpose is to more fully explain how ethical actions are considered and how that consideration impacts eventual behaviors. A depiction of the model can be seen in Figure 3a – Hunt & Vitell Theory of Ethics.
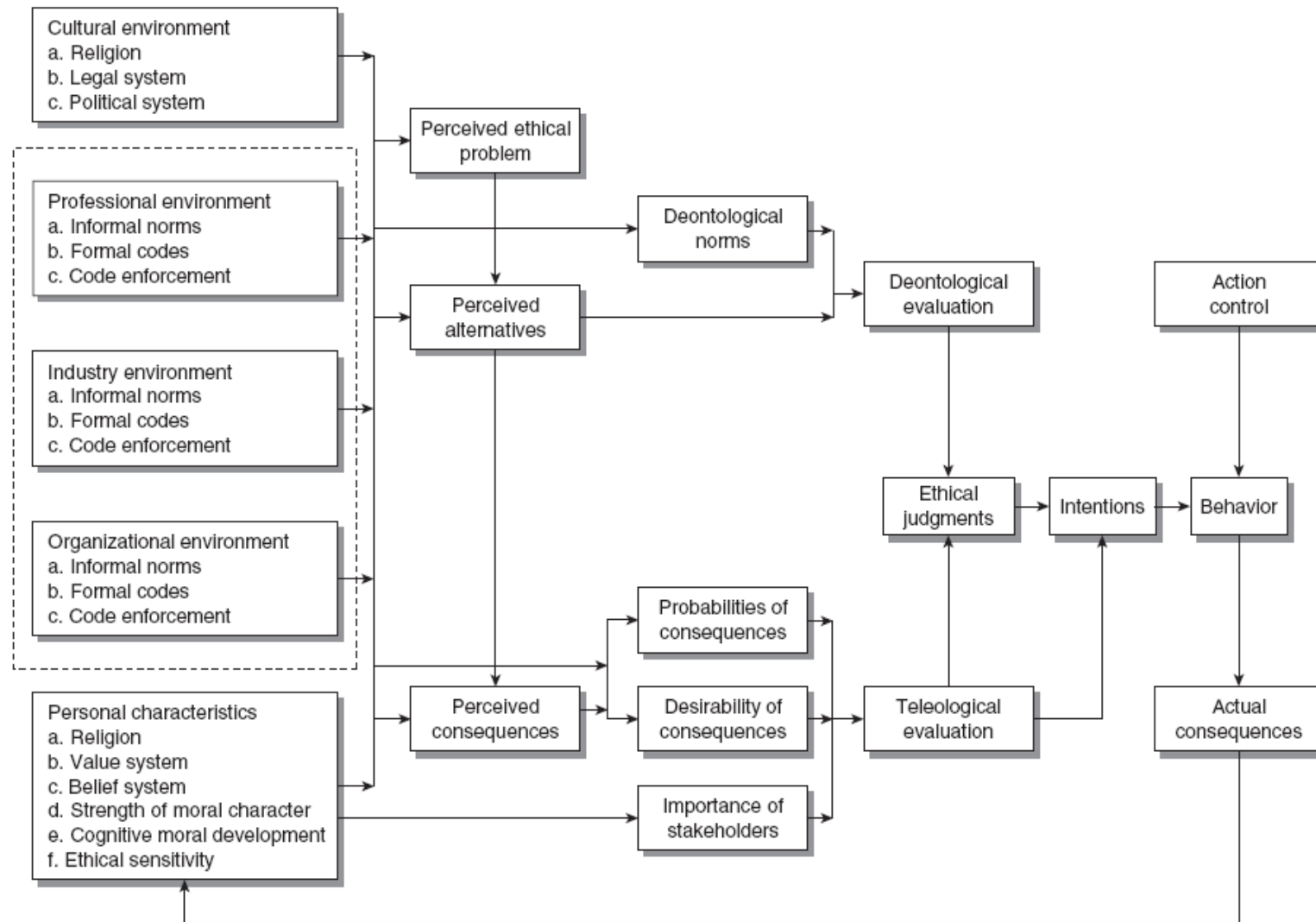
Figure 3a - Hunt-Vitell Theory of Ethics

Deontology and Teleology

Distinguishing the HV model from most others in the research stream of ethical decision making is the model's incorporation of both the deontological and teleological aspects of moral philosophy. Deontological theory has been interpreted as single-rule non-consequential theory (Tsalikis & Fritzsche 1989). The meaning comes from a rule based philosophy that is independent of any consequences of an action. The act is right or wrong based on characteristics of the act itself. One famous rule often associated with deontology is 'the golden rule' or 'do unto others as you would have them do unto you'. Another theory comes from Immanuel Kant's 'categorical imperative' (Kant 1959). In Kant's theory our actions would be driven by an imperative that the principal of our actions should represent a universal law.

Teleological theory differs in that its focus is on the consequences of our actions. Right or wrong depends on what the consequences mean to a set of stakeholders. For this reason, teleology is sometimes referred to as consequential theory (Tsalikis & Fritzsche 1989). There are two main perspectives on the teleological approach: egoism and utilitarianism. Egoism judges the ethical nature of the act based on what the consequences mean to one self. Utilitarianism on the other hand suggests weighing the consequences in terms of what they mean for the greater good or everyone. While individuals may differ on their perspective, it is likely that no one is purely egoist or utilitarian but some combination of the two (Hunt & Vitell 1986).

Model Constructs

The HV model supplies several environmental and personal characteristic antecedents which may relate to the main decision making processes. These antecedents are outside the scope of this study. Instead, this research focused on the decision making components as the

objects of interest and therefore, starts there. The following describes each of the constructs in the HV model, working from left to right, and starting with 'perceived ethical problem'. The definitions used in this study follow each description. Definitions of some constructs were straight forward and are stated as such in the description. Others were left vague or not defined at all by Hunt and Vitell. In the case of vague or non-existent construct definitions a survey of extant literature was used to find suitable definitions or to enable a synthesis of definitions to create one appropriate for this study. A table showing the studies used in this process can be found in Appendix 1.1.

Perceived Ethical Problem: Hunt and Vitell state that the first construct in the model depicts a necessary condition for the model to become active, 'if the individual does not perceive some ethical content in a problem situation, subsequent elements of the model do not come into play' (Hunt & Vitell 1986,2006). This defines the first construct as 'perceived ethical problem'. While the authors reiterate this point in the more recent paper, it is an objective of this study to show that even when an ethical problem is not perceived, a path through the model will be active. Given this perspective, the construct may be better defined as 'the extent to which a problem is perceived as being ethical in nature'. Where an ethical dilemma is perceived as being high on the continuum, the path through the model should differ from that which occurs when the problem is perceived as having no or little ethical content.

Perceived Alternatives: From the initial point of perception as an ethical dilemma, the model then states there are perceived alternatives for resolving the ethical dilemma. This encompasses the set of options an individual may consider and will differ from person to person. As each person perceives the situation differently, most will not consider the complete universe of alternatives but a subset of those that remain salient for the individual. For an

individual faced with an online file sharing dilemma, one alternative may be to report someone that is participating in the practice; another may be to ignore that person's actions.

Deontological Norms: Deontological norms are used to evaluate each of the perceived alternatives. Deontological norms represent personal values or rules of behavior. While Hunt and Vitell suggest environmental and personal characteristic variables that may account for the development of these norms, other studies have tested various factors like church affiliation, citizenship, race, Machiavellianism, locus of control, and gender (Pressley & Blevins 1984; Singhapakdi & Vitell, Jr. 1991). These norms are specific to the individual and provide an internal barometer or right or wrong based on the activity itself. Hunt & Vitell do not give an explicit definition of deontological norms in their studies. A definition was therefore synthesized to adhere to the meaning expressed in the HV model while borrowing from Reidenbach and Robin and extrapolating from their measures (Reidenbach & Robin 1988). Deontological norms are defined for this study as 'General or issue specific beliefs that are internalized and relevant to the nature of an action without regard for its consequences in the sense of its acceptability, morality, or ethicality'.

Deontological Evaluation: The combination of the two prior constructs, perceived alternatives and deontological norms, results in a deontological evaluation. This process simply weighs each alternative against the internal barometer of deontological norms and ranks the alternative on a continuum of being right or wrong. This path through the model represents the deontological aspect of moral philosophy. The definition for this construct is taken directly from Hunt and Vitell, 'The individual evaluation of the inherent rightness or wrongness of the behaviors implied by each alternative based only on the act itself, not considering the possible outcomes'.

The following five constructs represent the teleological aspect of moral philosophy. This is the lower branch of the HV model dealing with consequences of actions and requires the recognition or perception of these consequences.

Perceived Consequences: For each perceived alternative there is a set of perceived consequences. Consequences are those activities brought about as a result of the action on a particular alternative. If the alternative acted on is to report an individual that is participating in online file sharing, a possible consequence would be that the individual could face legal prosecution. Another possible consequence might be that the individual chooses to no longer associate with you. A set of consequences is perceived for each alternative. Like the alternatives, it is likely that most individuals will not perceive the entire possible universe of consequences but will hold some subset salient and that subset may differ between individuals.

Probabilities of Consequences: For each possible consequence that results from a possible alternative, the individual perceives a likelihood of occurrence for each stakeholder or entity that the individual perceives is somehow involved. These stakeholders include the individual and thus a probability of the consequence occurring for him or her. This probability is assigned based on the individual's thought processes; thus, the person's experience or knowledge of others' experience come into play. This probability may be quantifiably accurate or may be unrealistic. For the sake of the model, it is only important that the individual assign a probability and believe that it is accurate. An amended version of the Hunt and Vitell definition is used here as 'the likelihood that any consequence will occur for any stakeholder associated with the action'.

Desirability of Consequences: As was the case for probability of consequences, desirability is assigned to each consequence in terms of how much the individual would want a

specific consequence to happen to a specific stakeholder. Desirability is a personal evaluation

and thus will differ among individuals. For the sake of the model it is only important that the

individual make a mental assignment of desirability to each consequence for each stakeholder.

Here again, the individual is himself a stakeholder, thus the desirability of this consequence

occurring to oneself is a factor. Here again the Hunt and Vitell definition is used, 'the desirability

or undesirability of each consequence'.

Importance of stakeholders: A value is placed on each stakeholder that the individual

perceives is involved with a particular consequence. Using the file sharing example, the

consequence of one's friend facing legal prosecution might elicit three stakeholders in the

individual's perception: self, friend, and legal prosecutors. He might rank the level of

importance of these: self (highest) to prosecutor (lowest). Another individual may consider

herself to be less important since she is not facing the prosecution in this consequence and thus

put the order: friend (highest)to self (lowest). The number of stakeholders may change based

on the individual. In the example above some would realize that prosecutors represent a

stakeholder, while there are those that would not take such a group into consideration.

Regardless of the number of stakeholders, the individual will assign a level of importance for

each. Hunt & Vitell were not specific on a definition for this construct. Meaning was

ascertained from context given the utility driven path of the model in which this construct is

housed and synthesis of supporting research (Taylor & Todd 1995). Importance of stakeholders

is defined as 'the degree to which one considers the positive or negative consequences of an

action to be meaningful for all those affected by the action'.

Teleological Evaluation: The teleological evaluation supports the teleology aspect of

moral philosophy in this model. It is the evaluation based on the consequences of the action

rather than the action itself. It is an assessment of the right or wrong of an alternative arrived at

through a mental calculation which incorporates the probability, desirability and the importance

of each stakeholder for the set of consequences a specific alternative might produce.

Continuing the example, an alternative of reporting an individual for illegal activity could

produce several consequences from losing a friendship to saving recording company money.

For each of these consequences one would make the calculation described above including

desirability and probability of this happening for each stakeholder and giving that a weight

according to each stakeholder's importance to the individual. The first part of Hunt and Vitell's

definition holds but it was felt more clarification was needed to specify that this construct

differs from the deontological path through its utility. Thus, using the meaning gathered from

extant research and expressing clarification for utility the definition became 'evaluating the sum

total of goodness versus badness likely to be produced by each alternative when considering

that evaluation based on possible outcomes of the alternative and not one's moral evaluation of

the action' (Hunt & Vitell 1986; Mayo & Marks 1990; Reidenbach & Robin 1988).

Ethical Judgments: Hunt and Vitell propose a point at which the deontological and

teleological evaluations are combined to form an overall evaluation. Specifically they state that

an ethical judgment is "the belief that a particular alternative is the most ethical alternative"

(Hunt & Vitell 1986). This indicates the judgment is an overall evaluation of all perceived

possible alternatives and a selection of one. While this addresses the origins of the model it

does not fully take into account the deontological and teleological portions of the model which

lead to this evaluation. Direction is taken from Rallapalli, et al. and our previous definitions for

the two leading constructs to define ethical judgment in terms which more specifically identify

this as the 'overall judgment' it proposes: 'the degree to which one thinks a given alternative is

an appropriate alternative to act on considering all other things, moral and utility based'

(Rallapalli, et al. 1998).

Intentions: Hunt and Vitell draw on the TPB and Fishbein and Ajzen's Theory of

Reasoned Action, for the remainder of their model. Intention leading to behavior is accepted as

solid theory based on the many works supporting that model, thus, the meaning of intention

should remain congruous. However, they also cite Reibstein and propose an interpretation

which suggests intention in this model is the likelihood that a particular alternative will be

adopted (Hunt & Vitell 1986; Reibstein 1978). Hunt and Vitell suggest the use of scenarios as a

basis for testing their model. While the traditional operationalization for behavior is intention,

the scenario based approach suggests something more aligned with expectation (Warshaw &

Davis 1985). Thus, this definition has two parts, 'the likelihood that any particular alternative

will be chosen' and 'one's estimated likelihood of performing the action, whether or not a

commitment has been made'.

Intention is affected directly by ethical judgment but also possibly directly by

teleological evaluation. The HV model states that while the ethical judgment might select a

particular alternative as the most ethical, the evaluation of consequences might override any

decision about what is most ethical for sake of desirability of a particular consequence. For

example, while the most ethical thing to do in our example might be to report your friend, the

desire to maintain your friendship might overrule any decision to do the most ethical thing. In

this case, the teleological evaluation yields a result which directly influences intention and thus

bypasses the ethical judgment.

Behavior: Behavior is the ultimate outcome of this model. Hunt and Vitell stop at

intention using the accepted research behind the TPB as justification for the relationship

between intention and behavior. The behavior is assumed as the enactment of one of the

alternatives identified earlier in the model. This final triad then serves as the choice (ethical

judgment), the likelihood of following through with the choice (intention), and the actual activity

performed (behavior).

Action Control and Actual Consequences: The HV model posits two more constructs, one

which has an outside influence on behavior (action control) and another which is the result of

the behavior (actual consequences). The action control suggests there are influences beyond

those described in the model which may prevent or encourage certain behaviors. In other

words, how much control does one have over their action? There may be environmental

variables that prohibit a particular action, like physical inaccessibility to an agency, or inability to

communicate with your friend. Actual consequences would be those consequences that can be

observed as resulting from the action. It is suggested that these would provide feedback to

factors that serve as antecedents to the model. Since this study does not go to the point of

measuring behavior, these two constructs are not addressed but are included here for

completeness.

Theoretical Proposition

This study suggests the role of ethical judgment may require some alternate

interpretation or it may not be necessary in the model. It may be difficult to determine whether

a selection among alternatives is in fact made. Hunt and Vitell point to the possibility of

teleological evaluation bypassing ethical judgment and directly influencing intention (Hunt &

Vitell 1986). It seems logical that the reasoning of a person with a strong deontological bias

might take a similar path. In this case deontological evaluation would directly influence

intention regardless of teleological evaluation or judgment. The earlier teleological example

suggested a person might value the continuation of a friendship over 'doing the right thing'. It is

likely there are individuals who might put 'doing the right' thing above all else. It has been

shown that those high in 'religiosity' might be prone to this path of reasoning (Clark & Dawson

1996). The role of ethical judgment now comes into question. As the TPB shows, there can be

many factors which influence intention. It is the combination and strength of those influences

which ultimately shape the intention. It seems likely a similar approach would be beneficial in

this model.

Thus, Our main proposition: The ethical factors which influence intention do so directly rather

than going through an intermediate. For the HV model this means teleological evaluation and

deontological evaluation directly influence intentions without ethical judgment as a mediator.

The Theory of Planned Behavior (TPB)

The TPB has been used extensively in MIS research including the investigation of the

ethical us of IT (e.g. Goles, et al. 2008; Kwong & Lee 2002; d'Astous, Colbert, & Montpetit 2005;

Taylor & Todd 1995). TPB is generally considered a good basis for explaining behaviors but

ethical considerations are an issue. Other researchers have sought to add something to the TPB,

for example, ethical predispositions (d'Astous, et al. 2005), deterrence effects (Kwong & Lee

2002), moral obligation and aspects of the law (Goles, et al. 2008), or a synthesis of the TPB with

other models (Taylor & Todd 1995).

Since it was the goal of this research study to validate the HV model's use and show

where it has explanatory elements that extend beyond those of the TPB, it is necessary to

discuss the composition of the TPB.

The TPB posits three main constructs: attitude, subjective norm, and perceived

behavioral control, all of which impact intention which then leads to behavior (Ajzen 1991)(see

figure 3b – Theory of Planned Behavior). An alternate path may form from perceived behavioral

control to behavior directly whereby the restrictions perceived by an individual might prevent a

behavior even though the intention is there to act.

The TPB is an extension of the Theory of Reasoned Action (TRA) first posited by Fishbein

and Ajzen (Fishbein & Ajzen 1975). The TRA was criticized for its lack of predictability where

specific behaviors were considered and was suggested as a better theory for describing

aggregated behavior (Epstein 1983). To that end, an additional construct (perceived behavioral

control) was added in the TPB.

Where construct definitions for the HV model were sometimes vague or non-existent,

definitions for constructs in the TPB are straightforward and taken directly from Azjen (Ajzen

1991). The exception to this rule is our use of subjective norm.

Model Constructs

Attitude toward the behavior: Attitude is one of the two initial constructs from the TRA

considered to be of a personal nature. The attitude toward the behavior is the individual's

positive or negative evaluation of performing the behavior (Ajzen & Fishbein 1980). Ajzen and

Fishbein also restate this as an individual's judgment that performing the behavior is good or

bad. In this sense, like the HV model there appears to be a component of moral evaluation to

this construct, though it is not clearly stated. The definition of attitude is restated for the

purposes of this study as 'the degree to which a person has a favorable or unfavorable

evaluation or appraisal of the behavior in question'.
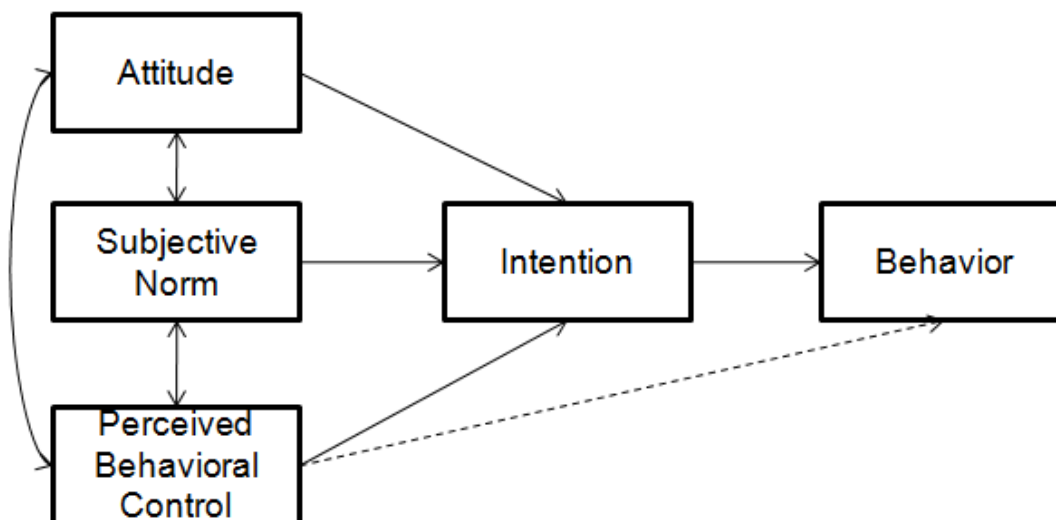
As with all three determinants of intention in the TPB, attitude is said to be influenced by a set of beliefs. These beliefs may be a result of direct observation, input from outside sources, or self-generated through inference (Ajzen & Fishbein 1980). While an individual might hold many relevant beliefs about a particular behavior object, it is suggested that it is only those beliefs that are salient at the time of performing the behavior (or not) that are considered in the development of an attitude toward the behavior (Ajzen & Fishbein 1980). Beliefs are typically not measured in the use of the TPB but measures are constructed for attitude with an underlying assumption that it is the beliefs that go into its makeup. An example of a measure of online file sharing behavior might be:

Rate the action: report an individual for illegally downloading music files through online file sharing software.

Good   1   2   3   4   5   6   7   Bad

Subjective Norm: Subjective norms are expressed as the individual's perceptions of the social pressures placed on them to perform or not perform the action (Ajzen & Fishbein 1980). It is the individual's perception of this pressure that makes the construct 'subjective' as this will vary from person to person. Additionally the social groups may differ among individuals. Some consider their immediate family, others include the extended family, still others may primarily only consider their current group of friends. As with attitude, it is assumed that subjective norms are driven by a set of beliefs, in this case normative beliefs.

An example of a measure for subjective norm would be:

Rate the following statement: Most people who are important to me think I should report an individual when I find them using file sharing software to illegally download music.

Likely   **1   2   3   4   5   6   7**   *Unlikely*

Ajzen and Fishbein define a perception of social pressure as an influence on behavior, yet do not go so far as to address pressure felt directly from others. For this reason, and further, to keep this normative construct aligned with the HV model, multiple additional definitions were created for subjective norms as the following: subjective norm – pressure, 'direct pressure felt from others concerning a particular action'; subjective norm – moral, 'perceived social pressure to perform or not perform a behavior based exclusively on the nature of the behavior as being the right or wrong thing to do'; subjective norm – utility, 'perceived social pressure to perform or not perform a behavior, disregarding the morality of the action but considering the costs vs. benefits evaluation of the action'. These definitions were included to give an all encompassing view of possible normative influences and investigate whether some of these may be stronger where an ethical dilemma drives the behavior.

Perceived Behavioral Control (PBC):   Attitude and subjective norm both require the individual to be in complete control of their environment in order to have unhindered impact on behavior through intention. This is where the TPB makes explicit the fact that this is not always the case. The TPB adds perceived behavioral control to the TRA in order to account for situations which introduce factors outside of the individual's control. Perceived behavioral control refers to an individual's view of the ease or difficulty of performing a specific action (Ajzen 1991). The construct in the TPB is based generally on the work of Bandura and his concept of 'self efficacy' which entails judgments about expectations one has for executing courses of action required to deal with a situation (Bandura 1982). Where an individual feels more confident in their chances to perform a certain task, it is more likely they will follow through with the behavior compared to one who is less confident. This confidence level comes from the individual's perception of their locus of control. If they are fully in control of their environment then PBC is only composed of internal motivation. When the locus of control extends beyond internal motivation, confidence incorporates non-motivational factors, such as availability of resources or required opportunity (Beck & Ajzen 1991). An example of a measure for PBC might be:

Please respond to the following statement: For me to report someone who is illegally downloading music with file sharing software is :

Easy   **1   2   3   4   5   6   7**   *Difficult*

Intention: As mentioned earlier, intention represents the intention to perform a specific behavior. In our study the behaviors relate to the act of illegally downloading music files using file sharing technology. As the TPB points out, intention refers to the subjective probability of an individual's engagement in any behavior (Fishbein & Ajzen 1975). In the context of this study

one's own judgment about how likely it is that they will, in fact, perform a behavior associated

with online file sharing could represent their intention to do so.   The definition used in this

study consists of the two parts given in the HV model description. These were created not only

to adhere to the meaning of the HV model but to align with the TPB, given the scenario based

nature of the study. An example of a measure of intention is:

Please rate your agreement with the following: I intend to illegally download music using file

sharing software in the near future (next three months).

Strongly Agree   **1   2   3   4   5   6   7**   *Strongly Disagree*

Comparing the Models

It is apparent that both these models have explanatory value where ethical behaviors

concerning the use of IT are evaluated. The TPB takes into account an internal judgment of

good or bad through its construct of attitude toward the belief; however, there are many factors

which could contribute to attitude and the construct does not make an ethical component

explicit.   The HV model does make the ethical component of behavior explicit by defining

thought processes that an individual goes through when faced with an ethical dilemma. Both

models ultimately agree that there are determinants of intention to perform a behavior which

then lead to the behavior itself through that intention. The TPB suggests that PBC might

preempt intention in cases where the control has the ability to circumvent the individual's locus

of control. The HV model suggests a similar situation whereby an 'action control' may override

intention to affect behavior.

While there are similarities in these models there is a main difference in the explication

of an ethical component. The next chapter describes the design of the study intended to

measure the pathways present in both models and to perform a quantitative analysis of the

resulting data. It is proposed that pathways through the HV model will provide a better

explanation than will the TPB of the determinants of behavior where an ethical dilemma is

concerned. Where a behavior in question has no ethical dilemma involved, the TPB may provide

better explanation or there will be little difference between the two models.

Summary

Two theoretical models are used in this study to evaluate ethical behavior and the use

of IT, specifically illegal online file sharing. The two models, the HV model and the TPB, are

explained in detail in this chapter and constructs of the models are defined. Where clear

definitions for constructs could not be found in literature, a definition was created and the

process for this was detailed. Finally the chapter is concluded with a brief comparison of the

models.

Chapter 4

METHODOLOGY

This study used a multi-phased approach to data gathering and analysis. While the study is based on two specific models, the general topic required exploratory data gathering on possible behaviors and consequences of those behaviors unique to each of two IT scenarios presented to participants. Thus, in the first phase a procedure was used to elicit the key behavioral actions from the target subject population. The second phase further refined the behaviors and sought out consequences for those behaviors. These two elicitations were then followed by two pilot studies and the main survey. These phases are discussed in detail in this chapter (a flow of the processes can be seen in Figure 4a – Study Process Flow). The samples used are described and justified. The data analysis techniques used in the initial phases to develop the final questionnaire are then discussed.
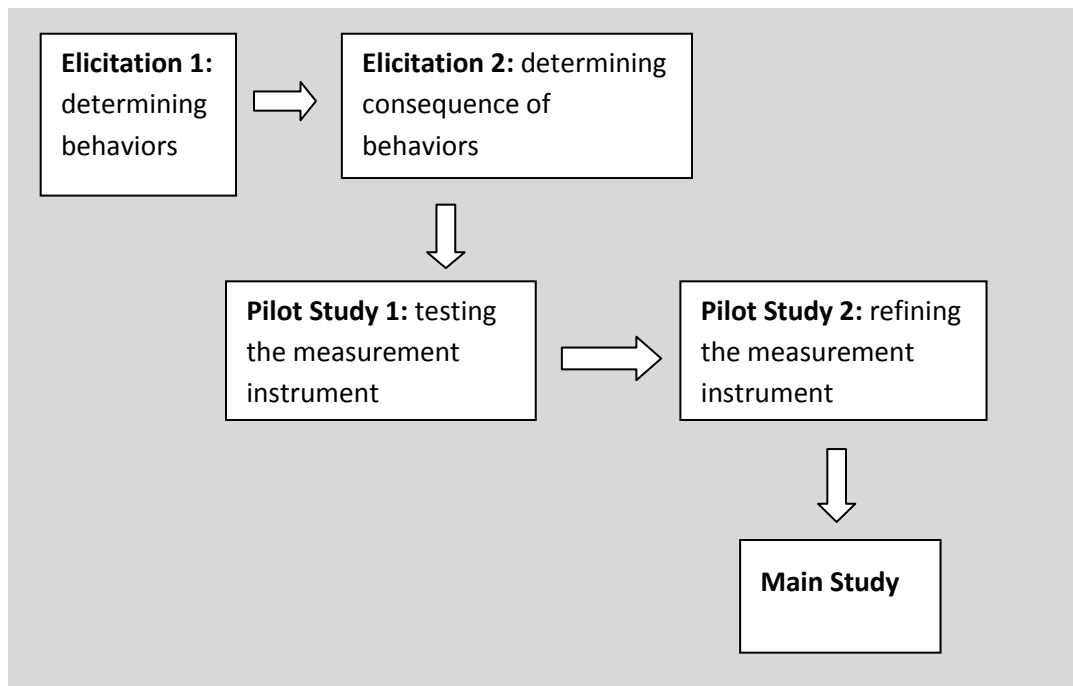
Figure 4a – Study Process Flow

Item Generation and Elicitations

This study evaluated two separate models, the Hunt-Vitell Theory of Ethics and the Theory of Planned Behavior (TPB). Where possible, constructs were operationalized using validated measures and methods from the literature. There is substantial support for the TPB, not only from Ajzen and Fishbein and their initial studies (Ajzen 1991), but also from a vast body of subsequent research. The base of support for the HV model is less substantial. As pointed out in chapter 2, studies investigating the use of the HV model tend to test only a portion of the model. One contribution of this study is a complete test of the model. This however requires adapting operationalizations from several studies for some measures and developing measures for other constructs. The following paragraphs describe how elicitation studies were used to develop measures for use in testing each of the models.

Elicitation 1

The initial two constructs of the HV model were undertaken in part 1 of the elicitation study. These are 'perceived ethical problem' and 'perceived alternatives'.   Hunt and Vitell suggest that in order for subsequent portions of their model to become active, an ethical dilemma must be perceived (Hunt & Vitell 1986). This initial elicitation was designed for two purposes, first for developing a scenario that would be perceived by the target population as an ethical dilemma, and second to elicit behaviors that would be perceived as responses to the scenarios.   The goal was to include behaviors that would be considered salient to the survey sample (Azjen & Fishbein, 1990).

<u>The Sample</u>

Undergraduate students in a business school were chosen as the target population. This population represents an age group which falls well within the expected range of those that currently make up the majority of people practicing online file sharing (Al-Rafee & Cronan 2006). Additionally, undergraduate students have access to both computer and network resources which give rise to the types of behaviors investigated in this study. Further, familiarity with computing technologies is required to participate in online file sharing. Undergraduates in the business school are required to take at least one course in information systems technology, suggesting they are at least minimally familiar with computing technology.

A convenience sample was comprised of students enrolled in two MIS courses. A total of greater than 85 students were asked to participate in part 1 of the elicitation study and 72 responses were collected. All of these responses were used to evaluate the ethical nature of a scenario.

<u>The Survey</u>

Participants were given a survey with 3 scenarios. One scenario was the target scenario expected to be used for purposes of the main study which incorporates an ethical dilemma. A second scenario was included which was designed to present no (or very little) ethical dilemma. A third scenario described a situation which was anticipated as having an even stronger ethical dilemma than the first (a copy of the survey is presented in Appendix 4.1). The third ethical scenario was given as a safe measure in case the first scenario was not interpreted as having an ethical dilemma. The objective of this part of the study was to come away with usable scenarios for the main study.

Participants were asked to rate each of these scenarios based on whether they presented an ethical problem. Responses were given on a 7 point likert-type scale anchored at each end by 'strongly agree' or 'strongly disagree'. In case the individual felt they had a unique self-perception with respect to their evaluation, they were also asked to rate the scenarios based on how they thought the average college student would respond.

Descriptive statistics supported the proposition of the intended scenario as containing an ethical dilemma. The average score was 2.86 while the mode of the responses was 1. With 1 representing 'strongly agree' that the scenario presented an ethical problem. For the scenario which contained no ethical dilemma the average score was a 6.24 and the mode was a 7, indicating that the sample did not perceive an ethical dilemma and the more strongly presented scenario average score was a 2.16 with a mode of 1, again suggesting that the sample perceived this to have an ethical dilemma. Given the strength of the ethical dilemma in the first scenario, the third scenario was not considered further.

The second element of the first elicitation study utilizes qualitative data. Participants were asked to list up to five actions the individual in the scenario facing the dilemma might take. This was done for both scenarios. To further extricate responses relevant to the study, and as a manipulation check, participants were asked to then rate each response as being an ethical or unethical action. They were then asked if there were any other ethical or unethical actions they wanted to add to the list. Participants were asked to do the same for the scenario that did not contain an ethical dilemma, although they were not asked the follow up for additional responses or to identify the actions as ethical or unethical.

The 72 participants produced a total of 350 responses for the ethical dilemma and a total of 99 responses for the non-ethical scenario. These lists were consolidated to a list of unique responses by grouping those with exact or near exact wording together into a single statement. The result was 79 unique responses for the ethical dilemma and 22 unique responses for the non-ethical dilemma scenario. These responses were then sent to 3 expert reviewers, all familiar with the study. These reviewers were asked to identify any responses that were considered to be ambivalent, very similar, or that simply did not make sense. Where 2 of the 3 reviewers agreed an item fit one of these criteria, the item was removed from the list or items were combined. This reduced the ethical dilemma responses by 6 for a total of 72 items; there was no change in the items from the non-ethical dilemma responses leaving the total at 22 (a full list of items can be seen in Appendix 4.2).

Analysis

Card Sorting: Card sorting is an exercise useful in consolidating qualitative data into clusters. By identifying a cluster it can then be used to represent the larger subsets of data. This technique allows for testing a moderate number of elements, while still retaining validity of the

data (Moore & Benbasat 1991; Harper, et al. 2003; Chin, Hayne, & Licker 1992; Daniels, et al. 1995).

The card sorting process was used in this study to further consolidate the responses to a usable number which could be included in the main study. Since questions would be asked about each construct in both the HV model and the TPB, and elements in the HV model branch out, the number of questions grew exponentially with each behavior presented at the beginning of the model. It was therefore important to minimize the initial behaviors being tested where possible while maintaining the integrity of the study.

To perform the card sort, index cards were used, one for each unique behavior identified in the previous steps. This was done for the two scenarios. A total of 20 individuals participated in the card sort. This group was a convenience sample of undergraduate students, graduate students, faculty, and administrative personnel. The sorters were given instructions and both decks of index cards and then asked to separately sort the two decks in any way they felt suitable. This could be based on some logical thought process or simply individual intuition. No reasoning had to be presented (full instruction sheet is presented in Appendix 4.3).

The sorts were collected and put into a spreadsheet. To facilitate this process the behaviors were labeled with a code that could easily be typed. The code was then used in the spreadsheet and for data analysis. A program written by Wynne Chin (personal correspondence) and previously used in (Chin, Hayne, and Licker 1992) was utilized to perform the first part of the data analysis. This program is used to produce a subject distance matrix which can then be used in a statistical analysis package (SPSS) to analyze differences between individual participants. This allows for the removal of outlier data from the sort routines if any are found. Another output of the software is a co-occurrence matrix which can be put into a

statistical package (SPSS) to create the hierarchical clusters. The cluster analysis allowed the

experts in this study to decide on a minimal set of behaviors to be used for the main study.

Multidimensional Scaling: The first step in determining the clusters, the removal of

outliers, was achieved by using multidimensional scaling (MDS). MDS is used to present

combinations of data in multidimensional space such that pairs of elements frequently judged

similar appear closer together (Tan & Hunter, 2002). This mapping of the data represents the

closeness of fit among those that performed sortings of the behaviors. By feeding a subject

distance matrix into SPSS, running MDS, and selecting three dimensional graphical plots, a

graphical representation of 'space' between data points could be observed. This three

dimensional graph could be rotated along any axis to make a visual determination of any points

that did not cluster closely with the overall grouping. Points that did not cluster with the others

represented an individual card sorter that had a considerably different view of the data from all

others.   Figure 4b – MDS 3D Plot shows one depiction where the three dimensional view

suggests that subject VAR08 is a possible outlier of the overall group of sorters.

Derived Stimulus Configuration

Euclidean distance model
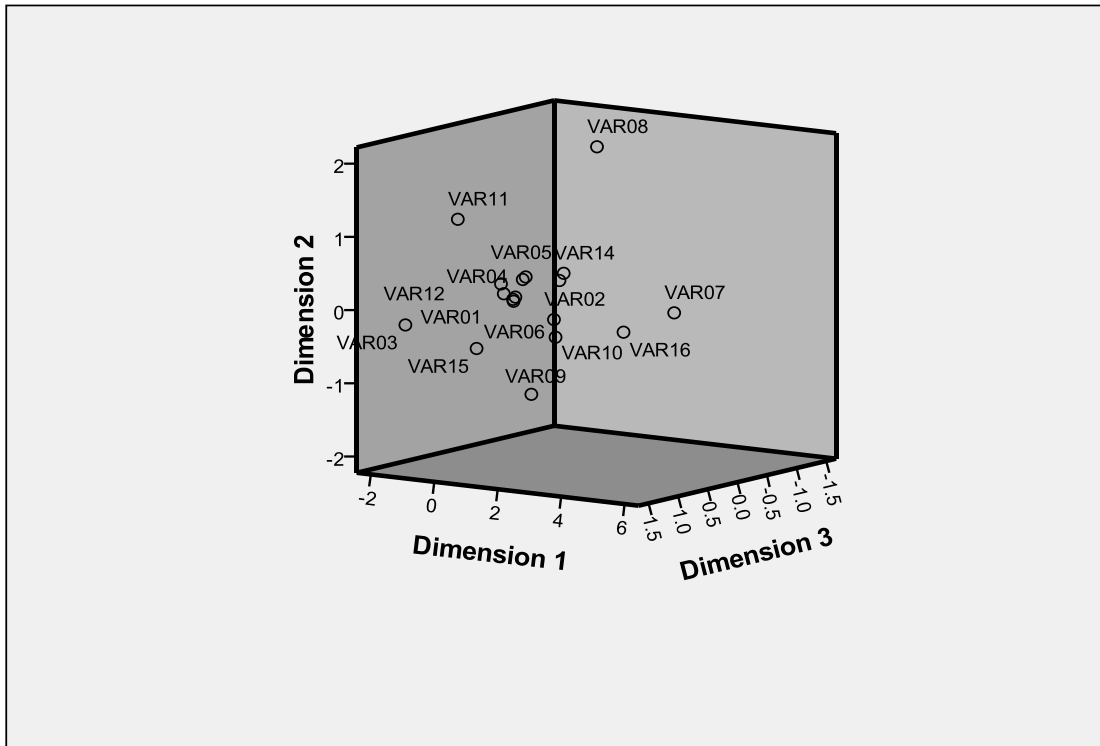
Figure 4b – MDS 3D Plot

A rotation of the same data shows an alternate view that lends support to the view of VAR08 as an outlier (

Figure 4c - Alternate MDS 3D Plot). While VAR07 appears to separate from the general grouping in this figure, other rotations, like that in figure 1 do not confirm its separation.   In this manner, we were able to cycle through rotations of the data sorts from both scenarios presented in elicitation 1 and evaluate the card sorts as a whole to determine if any should be excluded for the hierarchical cluster analysis which would follow.

Derived Stimulus Configuration

Euclidean distance model
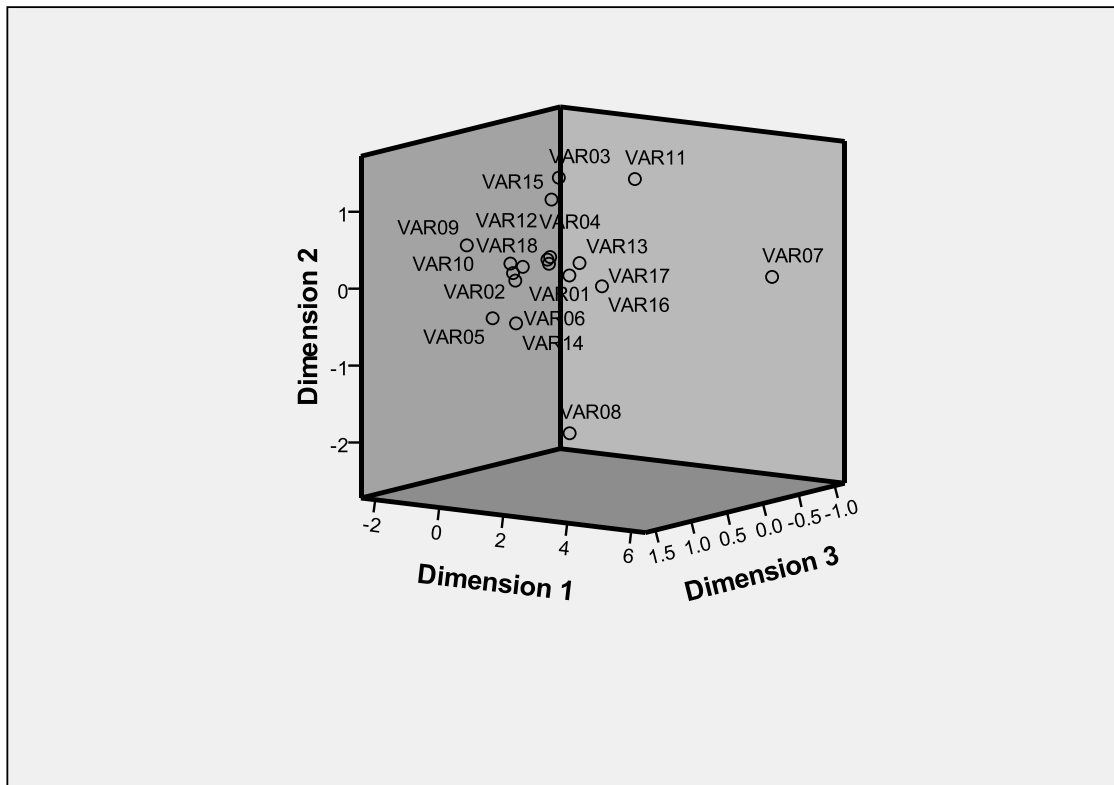
Figure 4c - Alternate MDS 3D Plot

Using this process, two outliers were identified for the card sorting of behaviors related

to the ethical dilemma scenario and one outlier was identified for the sortings of the non-ethical

dilemma scenario. In each case, the outliers were removed and the overall group was subjected

to scrutiny via MDS to see if the changed dynamic would produce further outliers. In both

cases, after the outliers were removed, the clusters appeared stable.

Hierarchical Cluster Analysis: Having identified a relatively homogenous grouping of

sorters in the prior analysis, the next step was to determine how the participants as a whole

clustered the behaviors into groupings. This was done through the use of hierarchical cluster

analysis (HCA) in SPSS. HCA has been used in IS research where the desired objective is

homogenous groupings of cases (Poston & Speier, 2005; Sircar, Et al., 2001). For this study the

groupings represent the sortings provided by the participants of the card sorting activity. The

objective was to determine commonalities in the sortings and produce a set of groupings that

would best represent the complete list of behaviors while keeping the list as small as possible.

For each behavior multiple questions would be asked on the survey. For each additional

behavior added the number of questions on the survey would grow exponentially.   This method

was used to ensure a comprehensive range of behaviors while meeting our efficiency

requirement.

The data from the groupings found with the MDS technique described above were used

to run a hierarchical cluster analysis in SPSS. The output included a dendrogram which gives a

graphical depiction of the hierarchical graduation of groupings from the individual variable up to

a single grouping for all variables. The dendrogram used to make groupings can be found in

Appendix 4.4.

Since the goal was to be as efficient as possible with the survey while incorporating as

complete a range of select behaviors as possible, the task became one of analyzing the hierarchy

for a point at which the clusters represented enough detail such that another step down in the

hierarchy would add little if any meaning to the representation of behavior. To make this

determination a group of 3 experts familiar with the study and familiar with the technique were

used to evaluate the cutoff points. The break was made where all three experts agreed.

The resultant clusters were further scrutinized by the group of experts. Each expert was

given the cluster data to evaluate individually. The goal was to produce a name which

represented the meaning behind each cluster of data. In other words, identify the behavior

represented by the grouping of phrases in each cluster. The experts did this independently,

after which the three came together as a group to discuss the names for each cluster. Where all three names were very similar, a decision was made to go with one of them. Where names were very different, an amalgamation of the names was produced to be sure all facets of the behavior were included.

The results of the first elicitation were then two separate scenarios and a list of behaviors which one might exhibit in response to each scenario. The scenarios included one which portrayed an ethical dilemma and the other with a non-ethical dilemma. For the ethical dilemma a list of seven behaviors was produced, further identified as 'actions' for the remainder of the study. For the non-ethical dilemma a list of three actions was produced. The list of resultant actions can be found in Appendix 4.5. These behaviors were used to create a survey for the second elicitation in the study.

Elicitation 2

The purpose of the first elicitation study was to identify the two scenarios to be used in the main survey and further identify possible actions that could be taken in response to the scenarios presented. A second elicitation study was then undertaken using the minimal set of behaviors identified in elicitation 1 as objectives for retrieving salient perceived consequences of the actions among study participants.

The Sample

Similar to elicitation 1, undergraduate students in a business school were chosen as the target population. A convenience sample was used comprised of students enrolled in two MIS courses. More than 40 students were asked to participate in part two of the elicitation study and 36 responses were collected. These responses were used to contrive a

list of consequences that could be associated with each of the possible actions taken in response to a given scenario.

The Survey

A similar procedure was used here to that used for elicitation 1. A survey was submitted to undergraduate students in the business college. In this survey the students were given a survey with either the ethical dilemma or the non-ethical dilemma.   For each scenario they were given the corresponding actions identified in elicitation 1 and asked to identify a list of possible consequences for each action (surveys are presented in Appendix 4.6).

Analysis

The 36 participants produced responses for each action corresponding to a scenario. For the ethical dilemma scenario there were 7 subsequent actions. Responses to these actions ranged from 39 to 60 depending on the action. For the non-ethical dilemma scenario there were 3 subsequent actions. Responses to these actions ranged from 61 to 65, again depending on the action. As with the first elicitation these lists were then consolidated into a list of unique responses by grouping those with exact or near exact wording together into a single statement. A further grouping was then done again using the previously identified experts. Responses were grouped together where they represented a similar idea. When the grouping was done, the experts independently gave each group a name they deemed representative of the cumulative meaning of the grouping. These names were then evaluated by the group as a whole and refined as needed.

Once the groups were set, a frequency analysis was used to determine the most salient consequences among the respondents (Moore & Benbasat 1991). Where 4 or more responses

fell in the same grouping, that consequence was included in the main survey. One exception to this rule was for the action, ("You take action which enables you to listen to the music along with your partner") which was a response to the non-ethical scenario. For this particular action it was felt the consequence of ("Your partner is offended") was an important possibility which should be included even though its frequency was below the cutoff. A representation of this consequence could be seen in several of the other groupings and its absence for this particular behavior seemed to be an anomaly (a list of all consequence groupings and frequencies is presented in Appendix 4.7).

Results from the first elicitation were twofold. First, they represent the first construct in the HV model necessary to proceed with the rest of the model. To insure the model activates it is important that these behaviors be salient to participants taking the survey. Second, they were used as a basis to construct a second elicitation to further develop measures for subsequent portions of the model.

The results from the second elicitation were consequence items which were needed for the three initial constructs in the teleological path of the HV model – 'Probability of consequences', 'Desirability of consequences', and 'Importance of stakeholders'.

Through both elicitations a total of 7 actions and their corresponding consequences for the ethical dilemma scenario and 3 actions and their corresponding consequences for the non-ethical dilemma were generated.

Operationalizing Remaining Constructs

The elicitation studies produced output which was used to operationalize the first three constructs of the HV model, perceived ethical problem, perceived alternatives, and perceived

consequences.   Measures for the remaining constructs were adapted from literature where possible or created where literature gave little guidance. The TPB has substantial support in literature and support specific to the ethical use of information technology, the latter of which includes measures which gave guidance developing measures for this study (e.g. Kwong & Lee 2002; Taylor & Todd 1995; Goles, et al. 2007; d'Astous, Colbert, and Montpetit 2005; George 2004; Leonard, Cronan, & Kreie 2004; Cronan, Leonard, & Kreie 2005). Support for the HV model specific to the ethical use of IT was sparse (Gopal, et al. 2004; Thong & Yap 1998), thus key studies in other domains were evaluated (Hunt & Vitell 1986, 2006; Tsalikis & Fritzsche 1989; Singhapakdi & Vitell, Jr. 1991; Mayo & Marks 1990; Henthorne, Robin, & Reidenbach 1992; Fraedrich 1993; Vitell & Singhapakdi 1991; Hunt & Vasquez-Parraga 1993; Reidenbach & Robin 1988, 1990, 1993; Cohen, Pant, & Sharp 1993; Vitell & Ho 1997; Harrington 1996).

Appendix 1.1 shows how other studies were evaluated and leveraged to create definitions for each construct used in this study. Additionally, this appendix also shows how other studies were leveraged to create measures for the constructs, where applicable. The following discussion gives the logic behind developing the set of measures for each construct. A summary of the construct definitions and their corresponding measures can be found in Appendix 4.8. These measures are the final measures used for the main survey. Refinement which helped arrive at these measures was achieved through the two pilots described following this discussion.

Behavioral Intention: This measure had to incorporate the meaning implied by the Hunt and Vitell paper as well as that originally intended by Fishbein and Ajzen. To achieve that end a two part definition is given in chapter 3. For both of these parts however, it was determined that the scenario based nature of this study did not lend itself well to the traditional

operationalization of intention. Here the participants would be envisioning themselves in a role

and determining the likelihood that they would act in a specific way given the situation.

Therefore these measures were adapted primarily from another study incorporating likelihood

to use an IT (Warshaw & Davis 1985). To accommodate the two part nature of the definition,

the measures were framed as the likelihood of making a choice and the likelihood of performing

an action:

BIC1: Please indicate the likelihood that you would choose this action among all possible actions.
(scale: -3 to 3, very unlikely to very likely)

BIC2: Of all possible things you could do, what is the likelihood that you would pick this action?
(scale: 1 to 7, very unlikely to very likely)

BIL1: If faced with this scenario in reality, what is the probability you would actually perform the
given behavior?   (scale: 0 to 100, no probability, ….)

BIL2: If faced with this scenario in reality, what is your expectation that you would follow
through with this action? (scale: -3 to 3, no expectation to full expectation)

   Ethical Judgment: This is the central construct in the HV model at which point the

deontological and teleological paths converge. As such, guidance was taken from Rallapalli, et.

al. and adapted to utilize components of each of the two paths contributing to this construct

(teleological and deontological) as designed in this study (Rallapalli, et al. 1998). The measures

should represent an overall assessment by the individual including all processing information

made salient up to this point:

EJ1-3: Now please provide us with your overall evaluation of this action. Specifically, try to
combine both your moral perspectives of this action and cost/benefits analyses plus anything
else you feel may be relevant. Overall my judgment of this action is:

(scale -3 to 2, Adjective Pairs: inappropriate/appropriate, unacceptable/acceptable,

unreasonable/reasonable)

Deontological Evaluation: The deontological evaluation should take place purely from a moral domain, excluding eventual outcomes or subsequent actions. From the definition this evaluation pertains solely to the action itself. Thus the measure specifies the exclusion of the utility of outcomes and uses adjective pairs similar to that used by Rallapalli, et al. 1998:

DE1-3: Each of the following actions has several possible consequences. Please disregard the fact that these consequences could bring harm or benefit, rather evaluate the action solely according to the nature of the act itself: (scale: -3 to 3)

(Adjective Pairs: Immoral/Moral , Unethical/Ethical, Right/Wrong)

Deontological Norms: This measure was intended to capture an overall index/rating of the individual's morality domain from which he/she would make moral judgments. As will be seen, developing these measures was not a straight forward process and little guidance was given in the literature. This construct started out with a total of 7 measures which had been refined to only 5 in the final survey:

(scale -3 to 3, endpoints: morally wrong – morally right)

DN1: Participating in activities which do harm to others is:

DN2: taking someone's property without their permission is:

DN3: taking someone's property without their knowledge is:)

DN4: borrowing somebody's things without returning the favor is:

DN5: enjoying the benefits of someone's work without compensating them is:

Teleological Evaluation: This measure was intended to capture all else in the domain of moral action that was not captured by the Deontological Evaluation. As such it was worded to state that this evaluation should be a product of the utility derived through outcomes associated with the action. These were adapted from two studies which incorporated a similar measure (Mayo & Marks 1990; Reidenbach & Robin 1988):

TE1: Taking into account the probability and desirability of the consequences, and their impact on all people involved, this action is: (scale: -3 to 3, endpoints: harmful to beneficial)

TE2: Taking into account the probability and desirability of the consequences, and their impact on all people involved, this action results in what type of utility? (scale: -3 to 3, endpoints: very low to very high)

TE3: Taking into account the probability and desirability of the consequences, and their impact on all people involved, this action results in what type of cost-benefit ratio? (scale: -3 to 3, endpoints: Negative to Positive)

Probability of Consequence: This measure was created as a straight forward probability assessment that the individual had of a specific consequence occurring, taken directly from the meaning expressed by Hunt and Vitell:

PC 1: For each possible consequence to a given action respondents are asked: What is the likelihood of this consequence occurring? (scale: 0 to 100, endpoints: No likelihood of Highly Likely)

Desirability of Consequence: This measure was created directly from the statements in the Hunt and Vitell paper (Hunt & Vitell 1986). However, Hunt and Vitell did not make clear to whom the desirability belonged nor did they describe how to handle multiple stakeholders. As expressed by the model, there may be many stakeholders involved as outcomes have the potential to reach beyond the scope of the individual. Hunt and Vitell did mention the scope of stakeholders as being specific to an individual's perception. Therefore one person may differ from another given the exact same consequence for evaluation. To deal with this variability at the most practical level, the measure here was split into two, one accounting for the individual and the other for everyone else. Since this model was designed to address the decision making process of the individual, the 'everyone else' desirability was expressed as a perception as well:

DC 1: For each possible consequence to a given action respondents are asked: How much would you want this consequence to happen to you? (scale: -3 to 3, endpoints: Highly Undesirable to Highly Desirable)

DC2: For each possible consequence to a given action respondents are asked: How much would people other than you want this consequence to happen? (scale: -3 to 3, endpoints: Highly Undesirable to Highly Desirable)

Importance of Stakeholders: To address this definition, importance of oneself is assumed. In other words, the assumption is made that every person considers themselves to be important. Therefore, to coincide with the second dimension of desirability expressed above, this measure seeks to find the importance of others in the individual's analysis:

IS1: For each possible consequence to a given action respondents are asked: How much would you care that this consequence would have an impact on other people? (scale: -3 to 3, endpoints: Very Little to Very Much)

Subjective Norm: These measures were adapted directly from Ajzen and the TPB (Ajzen 1991). This construct is the combination of two measures whereby there is a belief that the norm exists and a motivation to comply with that norm. These two measures would be combined in the analysis:

SN1: Influential people in my life would think that I should take this action. (scale: -3 to 3, endpoints: strongly disagree to strongly agree)

SNMC1: In general, I want to do what influential people in my life think that I should do. (scale: -3 to 3, endpoints: strongly disagree to strongly agree)

SN2: People whose opinion I respect would think that I should take this action. (scale: -3 to 3, endpoints: strongly disagree to strongly agree)

SNMC2: In general, I want to do what people whose opinion I respect think that I should do. (scale: -3 to 3, endpoints: strongly disagree to strongly agree)

Subjective Norm - Pressure: While Ajzen expresses the concept of subjective norm as 'social pressure to perform', the word pressure is missing from the measures provided (Ajzen

1990). Therefore, another construct was proposed as a part of this study which more directly

addresses pressure:

SNP1: Overall, I would feel pressure from others to take this action. (scale: -3 to 3, endpoints: strongly disagree to strongly agree)

SNP2: Overall, I would feel compelled by others to take this action. (scale: -3 to 3, endpoints: strongly disagree to strongly agree)

Subjective Norm Deontological/Teleological: The HV model represents the ethical

decision making process via two paths, deontological and teleological. To test for components

of subjective norm which may be specific to this detail of the model, two additional constructs

were defined and measures were developed. These measures take into account the

philosophical nature of each of these paths and borrow from the teleological and deontological

judgment measures:

(scale: -3 to 3, endpoints: strongly disagree to strongly agree)

SND1: Influential people in my life would think that I should take this action because it is the morally right thing to do.

SND2: People whose opinion I respect would think that I should take this action because it is the morally acceptable thing to do.

SNT1: Influential people in my life would think I should take this action because they believe the benefits outweigh the costs.

SNT2: People whose opinion I respect would think that I should take this action because they believe there are more positives to this action than negatives.

Attitude: As a measure of attitude, the adjective pairing method was adapted from

Ajzen and the TPB (Ajzen 1991). However, the pairing of adjectives ranges depending on the

study using TPB. For this study several pairings were considered and refinement was carried out

through the pilot studies leading to four final measures:

(scale: -3 to 3, endpoints as given)

A1: For each of the alternative actions identified subjects are asked if performing this action is a: Bad idea/good idea

A2: For each of the alternative actions identified subjects are asked if performing this action is a: Foolish idea/Wise idea

A3: For each of the alternative actions identified subjects are asked if performing this action would be: Unpleasant/Pleasant

A4: For each of the alternative actions identified subjects are asked if performing this action would be: Unfavorable/Favorable

Perceived Behavioral Control: Here again, measures were adapted directly from the TPB

(Ajzen 1991). These measures capture the perception of limitation's the individual has toward

performing the action:

(scale -3 to 3, endpoints: strongly disagree to strongly agree)

PBC1: I would be able to perform this action.

PBC2: Performing this action is within my control.

PBC 3: It is easy for me to perform this action.

Other Measures: Other measures that were incorporated into the study include a

manipulation check, latent marker variables, and demographic data. The manipulation check

was a series of questions to confirm that, as found in the elicitation studies, the scenarios were

expressing an ethical problem or not, relative to the scenario given. The use of latent marker

variables is a technique described by Chin, et al. to control for method bias in a survey when

using PLS as an analysis technique (Chin, et al. working paper). This technique will be discussed

further in the next chapter. Finally, demographic information was captured including: age,

gender, experience with computers, experience with file sharing software, and work experience.

Pilot Studies

Two pilot studies were run prior to implementing the main survey for this study. The first pilot study was run to validate measures and identify any need for adjustments. A need for adjustments was identified and a second pilot was run to test those adjustments and further validate all measures.

Pilot 1

The elicitation studies identified a total of 10 salient alternative behaviors, 7 in response to the ethical dilemma scenario and 3 in response to the scenario without an ethical dilemma. The two scenarios would provide a comparison for each of the models to determine if there were any differences when an ethical dilemma was presented as opposed to a dilemma without an ethical component. For each behavior a total of between 75 and 95 questions would be asked. With this number of questions, a survey containing more than one behavior would stretch the abilities of the target population beyond what was assumed reasonable. A decision was made to limit the surveys to a single behavior and randomly distribute behaviors amongst the sample population. To better take advantage of a limited sample size, the number of behaviors was also reduced. The three behaviors associated with the ethical scenario from elicitation one with the highest frequencies were used in the surveys. All three of the behaviors identified for the non-ethical scenario were used as well. This resulted in a total of six different surveys to be used in pilot 1. An example of a pilot 1 survey can be seen in Appendix 4.9. The six surveys differed only in the behavior presented at the beginning of the survey and the consequence sections.

The Sample

A mix of graduate and undergraduate students was used for the first pilot study. The

desirable target group of undergraduate students was not necessary since the salient behaviors

had already been determined in the elicitation and the intention of this pilot was to determine

the validity of the measures, though as it turned out the average age in the sample was close to

25, not far from the target population.   A total of 45 responses were collected with 22 males, 22

females, and one unidentified respondent. Each participant was given one of the six surveys at

random to fill out resulting in 7 or 8 completed surveys for each behavior.

Analysis

PLS is an appropriate tool for analysis when the following conditions apply to a study:

there are soft distributional assumptions, formative measures must be modeled, there is high

model complexity, and there may be sample size restrictions (Chin 2010). Since these conditions

apply to this study, PLS was the tool of choice for analysis in both pilots and the main study.

PLS-Graph version 3.00 build 1130 software was used as an analysis tool. A measurement

model was created with all constructs related to all other constructs in the model (see figure 4d

– Pilot Study Measurement Model). For this analysis all surveys were combined. This could be

done if only using data from questions in common to all surveys, leaving out consequence

specific data (representing 4 of the 17 constructs). The numbers needed to assess these

additional constructs were not practical for the pilot studies and it was decided these would be

evaluated as a part of the main study.
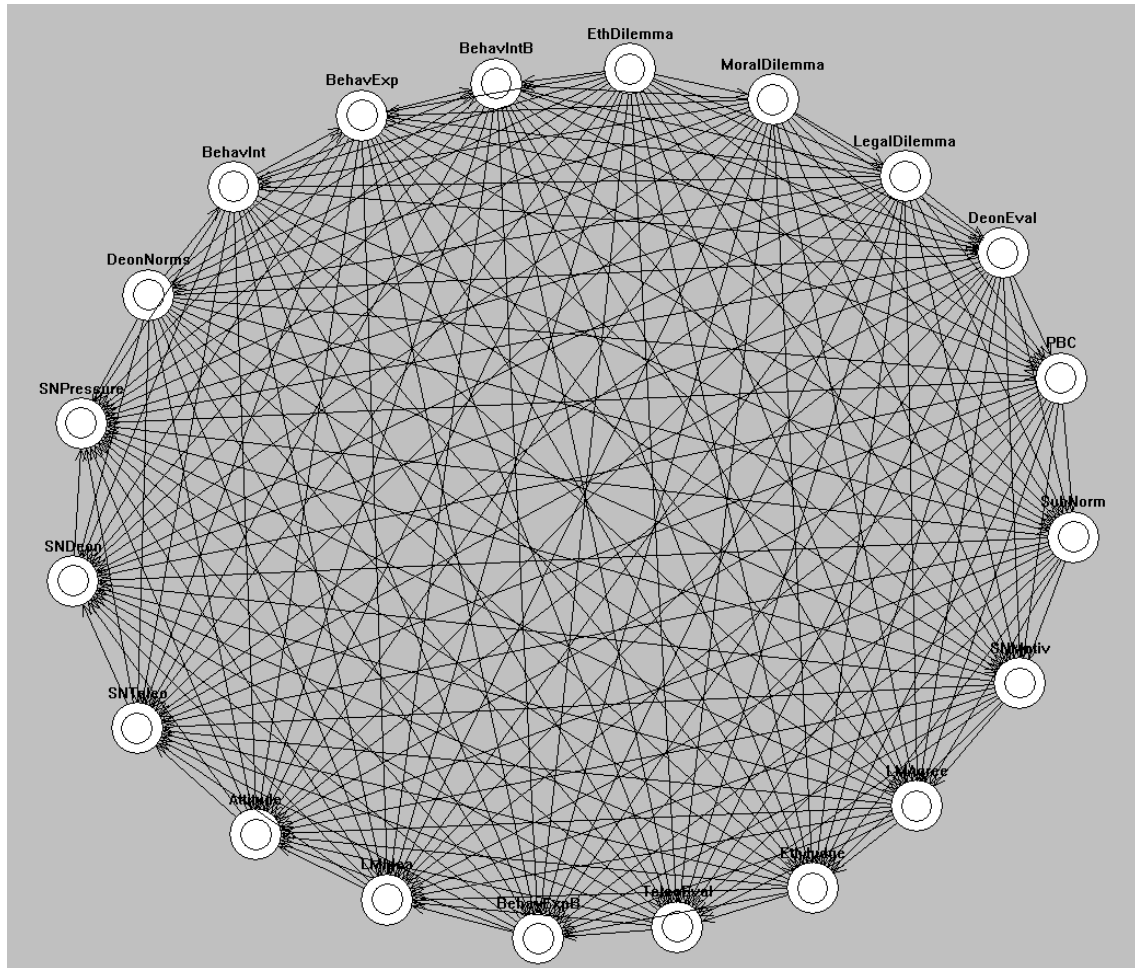
Figure 4d – Pilot Study Measurement Model

To evaluate convergent validity, factor loadings were examined and all factors which loaded at .7 or greater were considered acceptable (Chin 1998) (a table of factor loadings and cross loadings can be found in Appendix 4.10). This left only some of the measures for Deontological Norm (DN) (six of the seven) to be reworked along with one measure for Perceived Behavioral Control. Cross loadings were examined to verify discriminant validity of the measures. The cross loadings showed that measures not related to their intended construct were at least an order of magnitude smaller and in most cases not greater than .4.

A further look at the DN questions suggested their level of detail may be too specific to the context of the study when the desired measure should be an 'index' type of a value representing the individuals DN ranking in general. These questions were reworked.   The measure for PBC was similarly reworked based on a more specific interpretation of the study context in conjunction with the intent taken directly from the TPB (Ajzen 1991). Changes to the survey can be seen in Appendix 4.11.

Pilot 2

As mentioned, the second pilot was run to validate the newly adapted measures and provide further confirmation for the rest of the measures. For the same reasons concerning efficiency and effectiveness of the survey given a smaller sample size a reduced number of total behaviors was used. The same three ethical behaviors were included and only two of the non-ethical behaviors were included.   It was decided that since a subset of the ethical behaviors could be representative, so could a subset of the non-ethical behaviors. Since the elicitation analysis only produced three total behaviors for the non-ethical behavior list, this subset was smaller. Again the two responses with the highest frequencies from the elicitation surveys were used. This reduced set would mean the number of surveys per behavior would be increased and help take further advantage of a limited sample size. The five different surveys would again be distributed at random to the sample population.

The sample

The sample for the second pilot consisted primarily of undergraduate students with one class of graduate students. A total of 123 usable responses were collected. The average age of the sample was 24 with 82 males, 38 females, and 3 unidentified respondents. While the

distribution was random, response rates created a wider variance on the distribution of surveys

returned, ranging from 14 – 35 surveys for each behavior.

<u>Analysis</u>

A measurement model was created in PLS-Graph for an analysis similar to that

performed for the first pilot. Once again, to evaluate convergent validity, factor loadings were

examined and all factors which loaded at .7 or greater were considered acceptable (Chin 1998)

(a table of factor loadings and cross loadings can be found in Appendix 4.12). Once again some

of the measures for Deontological Norm (DN) (three of the six) did not reach an acceptable

loading. Cross loadings were examined to verify discriminant validity of the measures. The

cross loadings showed that measures not related to their intended construct were at least an

order of magnitude smaller and most were not greater than .4.

Deontological Norms measures were once again evaluated further. Cross loadings

showed that while individual loadings were not high, they were still higher than on any other

construct by an order of magnitude or greater for all except one measure. It was decided to

remove that one measure and move to the final survey with only 5 DN measures. Changes to

DN measures for the main study can be seen in Appendix 4.13.

The Main Study

The main study represents phase 3 of the research. Phases 1 and 2 were implemented

to elicit and evaluate responses regarding the primary constructs of the models. A fair amount

of effort was spent in the preliminary phases to ensure validity for the ethical component of the

scenario being tested and the validity of salient behaviors and perceived consequences.

According to Hunt and Vitell, it is critical to the success of their model that the individual

perceive an ethical dilemma (Hunt & Vitell 1986, 2006). Ajzen and Fishbein emphasize salience

of beliefs in the TPB (Ajzen & Fishbein 1980). In order for behavioral beliefs to be present, the

behaviors must be relevant to the model being tested. Phase 1 is implemented toward this end.

Phase 3 takes the results of phases 1 and 2 along with results from the pilot and implements a

main study survey which includes measures for all constructs of both the HV model and the TPB.

The surveys through two pilots had proven to be robust with only minor modifications

to this point. In an effort to maximize sample size relative to each behavior, the main study had

only two surveys: one for the ethical scenario with a single action and one for the non-ethical

scenario with a single action. Each action included 6 consequences making a total of 75

questions on each survey. The full survey for the ethical scenario can be seen in Appendix 4.14.

Only the differences for the second survey are shown since they are small.   These are due to the

non-ethical scenario, the behavioral action, and the resulting consequences.

The Sample

When using PLS as a tool for analysis, sample size can best be determined by the

number of predictors present in the most complex portion of the model (Chin & Todd 1995).

For this study that complexity was in the HV model where consequences are antecedent

constructs to Teleological Evaluation. This portion of the model has six predictors. Using the

two step process detailed by Green and an estimated R^2 of .35 based on similar studies on

ethical use of IT, a sample size of greater than or equal to 27 should be appropriate for a single

behavior (Green 1991). The main study incorporated two surveys each specifying a single

behavior giving us a recommended sample size of 54 or greater. The actual sample collected

was 267, far exceeding this recommendation.

Students from 3 sections of an introductory level MIS course were given the opportunity to participate in the study. Students were given no incentive other than the opportunity to support their university by furthering research productivity. The survey was given at the beginning of each class and students were given the option to opt out. A grand total of attendance was not collected but a rough estimate of the course instructor was that better than 2/3 of those attending participated in the study.

If the accuracy of an individual survey was in question, it was not used. This was determined by a stream of the same response for all questions on the survey (i.e. all 3's or all 0's) or if a majority of the survey was left blank. The result was a total of 267 surveys, 124 responses to the non-ethical scenario behavior and 143 to the ethical scenario behavior. The sample had an average age of 21 with 123 males, 127 females, and 17 unidentified respondents.

Summary

This chapter described the steps taken to construct measures for a set of surveys which were then evaluated and refined, preparing them for use in the main study. Elicitations were used to insure the preliminary components of the study (i.e. scenarios, behaviors, and consequences) represented salient, appropriate behaviors in response to an ethical dilemma (or not). Where components of the study were not developed in the elicitations, supporting literature was referenced and measures were either used directly from validated studies or synthesized, where appropriate, to align with the intentions of this study. Finally, the main study process was described. The procedures used to analyze the data gathered from the main study will be discussed and the results presented in Chapter 5.

Chapter 5

ANALYSIS AND RESULTS

This chapter reports on the analysis and presents results derived from the data gathered from the main study surveys. The scope of this chapter is restricted to discussion of the analysis process and presentation of the results. Speculation about measures which didn't work, discussion about meaning of the results, and discussion about contributions of the study will be presented in subsequent chapters.

The Measurement Model and Factor Analysis

As mentioned in chapter 4, model complexity, sample size, and relaxed distributional requirements make PLS the analysis tool of choice for this study. Therefore, a similar analysis to that used in the pilots is employed. The full data set (excluding the consequence specific constructs) is evaluated by creating a measurement model in PLS-Graph. This model is similar to the one shown in chapter 4 and can be found in Appendix 5.1.

The Data Sets

The complete data set was loaded into SPSS version 18 and missing values were replaced using the expectation maximization algorithm inherent in the program. The modified data set was then used to run the measurement model and all subsequent models.

It should be noted that for the theoretical models, two main data sets were used for analysis. One data set corresponds to the surveys containing the ethical scenario and the other to the surveys with the non-ethical scenario. Both of these data sets were broken out of the main data set with its corrections for missing data.

The data sets were saved as standardized values in SPSS. Where products were used, they were calculated with the standardized values. The averages used as formative measures for Subjective Norm were calculated with the raw data and then converted to standardized values. For each scenario, the data was then imported into Excel version 2010 and saved as a tab delimited text file. These files could then be renamed with the *.raw extension that PLS Graph requires of its data sets.

Factor Analysis

Factor loadings were examined to determine convergent validity of the measures for each construct (see Figure 5a – Main Study Factor Loadings). As can be seen here, Deontological Norms continue to be a problem even after two refinements from pilots one and two. Of the five measures only DN5 was greater than the recommended .7 (Chin 1998). Possibilities for these measures not working are discussed in the next chapter. For Perceived Behavioral Control, PBC2 loading was low at .54. The cross loadings would have to make the determination as to whether this measure would produce any value or if it should be dropped.

Cross loadings were examined to determine discriminant validity among the constructs (see figure 5a – Main Study Factor Loadings).   Loadings for measures related to each construct were compared to their loadings for all other constructs. It was determined that measures loaded at least an order of magnitude higher on their own constructs than on any other constructs in the model. The one exception here was the aforementioned, problematic PBC2 measure. Based on low convergent and discriminant validity, this measure was removed from analysis.

indicator	DNorms	BIntC	BIntL	BIntCb	BIntLb	PBC	SNorms	SNormsM	SNormsP	SNormsD	SNormsT	Attitude	DEval	TEval	EthJudge	LMVAgree	LMVIdea	EthProblem	
DN1	0.5262	0.0455	0.027	0.0566	0.0277	0.097	0.1748	0.0186	0.1288	0.1502	0.1413	0.1308	0.0673	0.1205	0.1148	-0.1307	-0.011	-0.0521	DN1
DN2	0.6376	0.0782	0.0499	0.1513	0.1571	0.1091	0.1682	0.0014	0.0611	0.0227	0.1073	0.1767	0.0864	0.173	0.1747	-0.0669	-0.0113	-0.0558	DN2
DN3	0.6948	0.144	0.1247	0.1529	0.1714	0.1303	0.125	-0.0491	0.0827	0.0589	0.0634	0.1676	0.1522	0.1422	0.1596	-0.0169	-0.0422	-0.0682	DN3
DN4	0.6932	0.1253	0.124	0.1107	0.1232	0.105	0.0704	-0.0516	-0.0456	0.0203	0.0167	0.1285	0.1778	0.1355	0.117	0.1087	0.0827	-0.0733	DN4
DN5	0.7414	0.1512	0.1406	0.1962	0.1524	0.1365	0.2044	0.059	0.0344	0.1005	0.095	0.1973	0.25	0.2408	0.2433	0.0231	-0.0056	-0.1674	DN5
BIC1	0.2067	0.9379	0.8372	0.777	0.6932	0.5216	0.4061	0.1747	0.157	0.316	0.3953	0.6032	0.4172	0.4673	0.4532	0.1467	0.0458	-0.1889	BIC1
BIC2	0.1153	0.9342	0.8778	0.742	0.7589	0.4904	0.4152	0.1723	0.1852	0.3293	0.4022	0.5457	0.3563	0.3968	0.4154	0.1384	0.024	-0.1428	BIC2
BIL1	0.1636	0.8369	0.9203	0.7301	0.6688	0.563	0.352	0.1612	0.1333	0.2593	0.3208	0.5308	0.332	0.3651	0.4216	0.1504	-0.0102	-0.0991	BIL1
BIL2	0.1118	0.848	0.9256	0.7249	0.7855	0.51	0.3849	0.1765	0.1269	0.3123	0.3935	0.546	0.3712	0.3842	0.3973	0.1282	0.0406	-0.1049	BIL2
BIC1b	0.2347	0.8127	0.7798	0.9631	0.7875	0.6052	0.4907	0.1846	0.1862	0.3409	0.4745	0.6705	0.4199	0.5127	0.5446	0.0802	0.0352	-0.2103	BIC1b
BIC2b	0.1775	0.7483	0.7455	0.9592	0.7761	0.558	0.4404	0.1242	0.1358	0.3435	0.4691	0.6397	0.3746	0.4944	0.5329	0.1001	0.0845	-0.1335	BIC2b
BIL1b	0.2117	0.7722	0.7614	0.7978	0.9805	0.5316	0.4846	0.1382	0.1934	0.3338	0.4689	0.6355	0.3737	0.4976	0.4837	0.1046	0.054	-0.1678	BIL1b
BIL2b	0.1808	0.746	0.7841	0.7948	0.9806	0.5587	0.4942	0.1509	0.1778	0.3431	0.4772	0.6229	0.3668	0.4635	0.4641	0.1329	0.0748	-0.1181	BIL2b
PBC1	0.1837	0.5735	0.6015	0.6447	0.6036	0.9059	0.4616	0.2085	0.1082	0.3383	0.4122	0.543	0.3479	0.3979	0.4744	0.118	0.1456	-0.189	PBC1
PBC2	0.0471	0.1342	0.1434	0.1602	0.0958	0.5417	0.0412	0.0696	-0.1416	-0.0244	0.0548	0.1751	0.1176	0.1083	0.1132	0.1607	0.2254	-0.0203	PBC2
PBC3	0.1345	0.3949	0.4509	0.4311	0.4025	0.8543	0.364	0.1151	-0.042	0.2518	0.2991	0.4152	0.2527	0.3233	0.4007	0.1423	0.1216	-0.1645	PBC3
SN1	0.1864	0.3584	0.3172	0.4395	0.4128	0.4261	0.898	0.1052	0.2096	0.5454	0.5862	0.4255	0.2584	0.3689	0.3874	0.064	0.038	-0.1661	SN1
SN2	0.2292	0.4312	0.4027	0.4332	0.4893	0.3853	0.9193	0.2581	0.2755	0.6044	0.6409	0.4158	0.3785	0.3812	0.4322	0.0709	0.0233	-0.2653	SN2
SNMC1	-0.003	0.1818	0.1712	0.1838	0.1357	0.192	0.2122	0.9173	0.2366	0.2352	0.1474	0.0773	0.0874	0.0889	0.0647	0.1567	0.1018	-0.0568	SNMC1
SNMC2	0.0066	0.1523	0.1604	0.1022	0.1304	0.1428	0.1548	0.8918	0.306	0.1344	0.0399	0.0528	0.002	0.0423	0.0272	0.2112	0.1562	0.0811	SNMC2
SNP1	0.0729	0.1947	0.1704	0.1764	0.1753	0.0241	0.2031	0.2931	0.9482	0.3174	0.2781	0.136	0.0193	0.0806	0.11	0.106	-0.0382	0.0199	SNP1
SNP2	0.0726	0.1555	0.1025	0.1454	0.1854	0.0275	0.3055	0.2749	0.9593	0.4123	0.3653	0.1182	0.0456	0.089	0.0775	0.084	-0.0079	-0.005	SNP2
SND1	0.102	0.3158	0.2834	0.3229	0.324	0.3092	0.6379	0.1774	0.3627	0.9534	0.7003	0.3519	0.335	0.3094	0.3248	0.1309	0.0345	-0.3423	SND1
SND2	0.1002	0.3406	0.3084	0.3539	0.3344	0.2843	0.5723	0.2173	0.3723	0.957	0.7328	0.386	0.3805	0.3682	0.4002	0.1296	0.0457	-0.3348	SND2
SNT1	0.0837	0.3426	0.3414	0.4049	0.4185	0.3508	0.5866	0.1584	0.3065	0.7322	0.9175	0.4264	0.3204	0.347	0.3941	0.0725	0.0102	-0.2461	SNT1
SNT2	0.1491	0.4419	0.3759	0.5002	0.4781	0.3703	0.6783	0.0464	0.3249	0.6661	0.9359	0.525	0.4188	0.4327	0.4759	-0.0172	0.0179	-0.2866	SNT2
A1	0.2158	0.5705	0.5332	0.6711	0.6358	0.4885	0.5076	0.0219	0.1793	0.4747	0.5951	0.8863	0.6158	0.6581	0.6764	0.1408	0.1482	-0.3143	A1
A2	0.2154	0.4765	0.44	0.5148	0.4953	0.405	0.4151	0.0274	0.172	0.3715	0.4672	0.8677	0.5762	0.602	0.6034	0.0725	0.1064	-0.2892	A2
A3	0.2219	0.5323	0.5051	0.5742	0.502	0.4892	0.3243	0.1276	0.017	0.2153	0.3154	0.8642	0.4196	0.5737	0.5245	0.1541	0.1264	-0.1815	A3
A4	0.2174	0.5794	0.5687	0.6171	0.5981	0.4986	0.36	0.0897	0.0801	0.2737	0.3915	0.8946	0.4637	0.6435	0.583	0.1727	0.1259	-0.2233	A4
DE1	0.2236	0.3521	0.3261	0.3546	0.3228	0.3264	0.3088	0.0263	0.0059	0.3277	0.34	0.5561	0.9302	0.6213	0.5989	0.1535	0.1258	-0.446	DE1
DE2	0.1513	0.4024	0.3672	0.3959	0.348	0.3066	0.3287	0.0557	0.0354	0.3473	0.3839	0.5166	0.9412	0.6066	0.5879	0.1123	0.0817	-0.526	DE2
DE3	0.2823	0.3998	0.3712	0.4061	0.3857	0.3167	0.356	0.0636	0.054	0.38	0.394	0.5993	0.9322	0.6386	0.653	0.1096	0.0692	-0.43	DE3
TE1	0.2143	0.4305	0.3785	0.4795	0.4455	0.338	0.3548	0.0668	0.102	0.3574	0.3873	0.6646	0.653	0.9026	0.7048	0.0689	0.1061	-0.3587	TE1
TE2	0.1845	0.355	0.3069	0.3747	0.3717	0.2503	0.2583	0.0822	0.0244	0.1944	0.2551	0.505	0.522	0.7787	0.4854	0.0585	0.0808	-0.2372	TE2
TE3	0.2574	0.393	0.352	0.4754	0.4374	0.4248	0.4414	0.0472	0.0909	0.3406	0.4184	0.6295	0.5319	0.8722	0.7443	-0.0066	0.1493	-0.3038	TE3
EJ1	0.2475	0.4052	0.407	0.5032	0.4568	0.4737	0.4649	0.0376	0.1108	0.3982	0.4516	0.614	0.6459	0.7066	0.9213	0.0079	0.0796	-0.3924	EJ1
EJ2	0.2542	0.46	0.4469	0.5407	0.4759	0.4493	0.4426	0.0701	0.1161	0.3831	0.4449	0.6769	0.6188	0.7369	0.9332	0.0517	0.1068	-0.3782	EJ2
EJ3	0.1952	0.3958	0.3551	0.4537	0.3792	0.3915	0.3136	0.0305	0.0287	0.248	0.3737	0.5566	0.5136	0.6375	0.8744	0.021	0.1268	-0.355	EJ3
LMV1	0.0502	0.1509	0.1592	0.1289	0.1389	0.1078	0.0735	0.1677	0.0547	0.0964	0.0165	0.1247	0.131	0.0912	0.0579	0.7456	0.2171	-0.0665	LMV1
LMV2	-0.0804	0.0407	0.0319	-0.0019	0.0755	0.0868	0.0878	0.1611	-0.0215	0.0034	-0.0592	0.0778	0.1233	0.0408	0.0312	0.545	0.3313	0.0007	LMV2
LMV3	0.0244	0.1184	0.1167	0.033	0.0429	0.1233	0.0371	0.115	0.1142	0.1293	0.035	0.1231	0.1034	0.0278	0.0115	0.7732	0.2353	-0.0598	LMV3
LMV4	-0.0569	0.1051	0.1002	0.0872	0.0676	0.1138	0.0077	0.1125	0.1234	0.1435	0.0794	0.0994	0.0103	-0.0404	-0.0191	0.6932	0.2837	0.1097	LMV4
LMV5	0.0537	0.0546	0.0125	0.0753	0.0962	0.1179	0.1028	0.0886	0.0307	0.1184	0.1064	0.1857	0.1284	0.1629	0.1134	0.2311	0.6987	-0.0221	LMV5
LMV6	-0.0668	0.0141	0.0223	0.0044	0.0029	0.1103	-0.0563	0.1035	-0.0169	-0.02	-0.0615	0.0718	0.0421	0.0366	0.0082	0.3901	0.7729	0.0276	LMV6
LMV7	0.0876	0.0325	-0.0045	0.07	0.0184	0.1134	0.0128	0.0244	-0.0914	-0.0287	-0.0323	0.0643	0.0651	0.105	0.1084	0.2084	0.6603	0.0194	LMV7
LMV8	-0.1088	-0.0234	0.0104	0.0017	0.0493	0.1248	0.0195	0.1844	-0.0008	0.0166	0.0089	0.0155	-0.0142	0.0178	0.0727	0.1222	0.4367	0.0742	LMV8
EP1	-0.1135	-0.1807	-0.1131	-0.2236	-0.1686	-0.1962	-0.2533	0.0106	-0.0411	-0.327	-0.294	-0.2848	-0.4117	-0.3397	-0.3863	0.0126	0.042	0.8852	EP1
EP2	-0.1717	-0.2086	-0.1506	-0.2118	-0.1863	-0.2194	-0.2656	-0.0016	0.0241	-0.3424	-0.2832	-0.3165	-0.4808	-0.314	-0.394	-0.0006	0.0589	0.8719	EP2
EP3	-0.0981	-0.0817	-0.037	-0.0543	-0.0531	-0.0714	-0.1655	0.0159	-0.0168	-0.3038	-0.1872	-0.1565	-0.4078	-0.264	-0.2798	0.0166	0.0156	0.8505	EP3
EP4	-0.0441	-0.0763	-0.0267	-0.0409	-0.019	-0.1078	-0.052	0.0072	0.0792	-0.174	-0.1493	-0.1601	-0.3547	-0.2489	-0.2895	-0.0782	-0.0655	0.7163	EP4

Figure 5a – Main Study Factor Loadings

Theoretical Models

The HV Model

A SEM was created in PLS Graph which represents the theoretical paths described in the HV model (Hunt& Vitell 1986, 2006). Hunt & Vitell do not have a link from Deontological Evaluation to Intention; however, for completeness of investigation one was created in the PLS model.

For the main study the consequence question data was incorporated into the analysis. These were left out of the pilot studies due to the practicality of sample size and the importance of validating the larger grouping of constructs. They were included here for completeness of the model (see figure 5b – HV Theoretical Model in PLS-Graph).
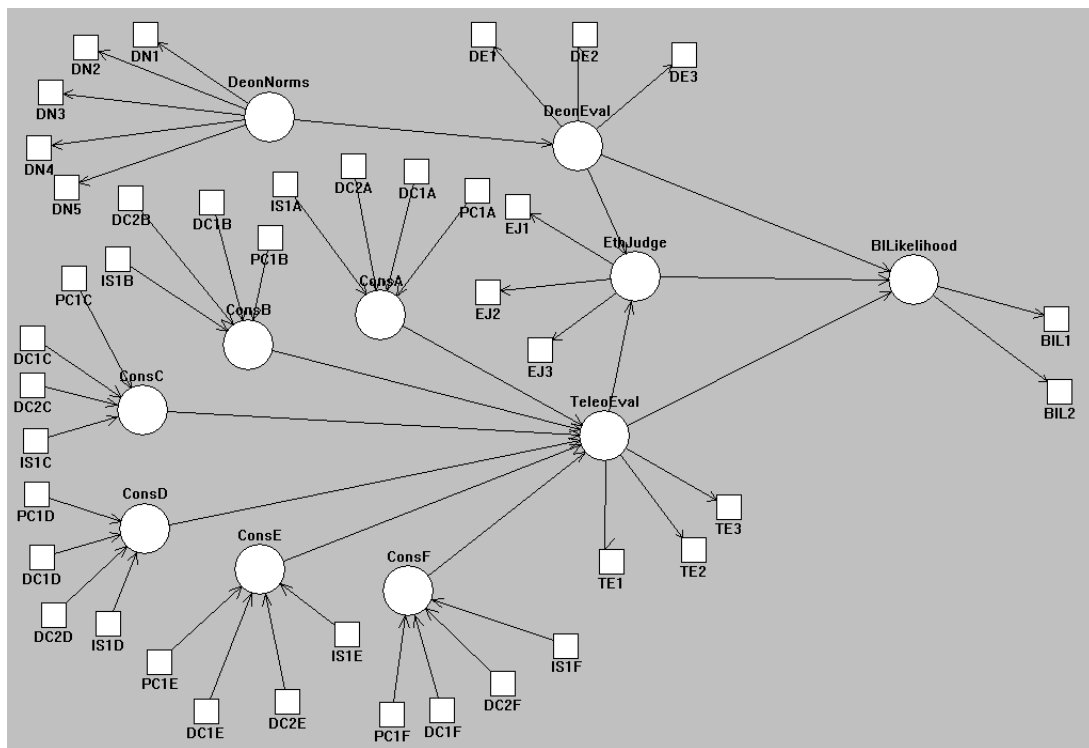
Figure 5b – HV Theoretical Model in PLS-Graph

The incorporation of consequence related data into the model required some interpretation of meaning from the HV model literature. The consequences were generated in order to operationalize the teleological evaluation path through the model. Hunt and Vitell suggest there is a combination of three main constructs: probability, desirability of the consequence, and importance of stakeholders. As described in chapter 4, these were operationalized as four distinct constructs, breaking desirability into two in an attempt to include self-centric evaluation as well as impact of other stakeholders to the individual. Hunt and Vitell suggest these constructs combine and feed into Teleological Evaluation, but do not describe how this should be done. Little guidance could be found in other literature which used the HV model. Charting new territory for this portion of the model, each consequence was set up as a construct using the four measures as formative indicators. The HV SEMs can be seen in Figures 5c and 5d for the ethical scenario and the non-ethical scenario respectively. In these models the indicators have been toggled off for clarity. This is only for simplicity of view and does not affect the way the model runs. Significant paths are shown in the models by their corresponding values; non-significant paths are represented by an 'ns'. Significance was calculated using a bootstrap in PLS Graph running 500 samples.
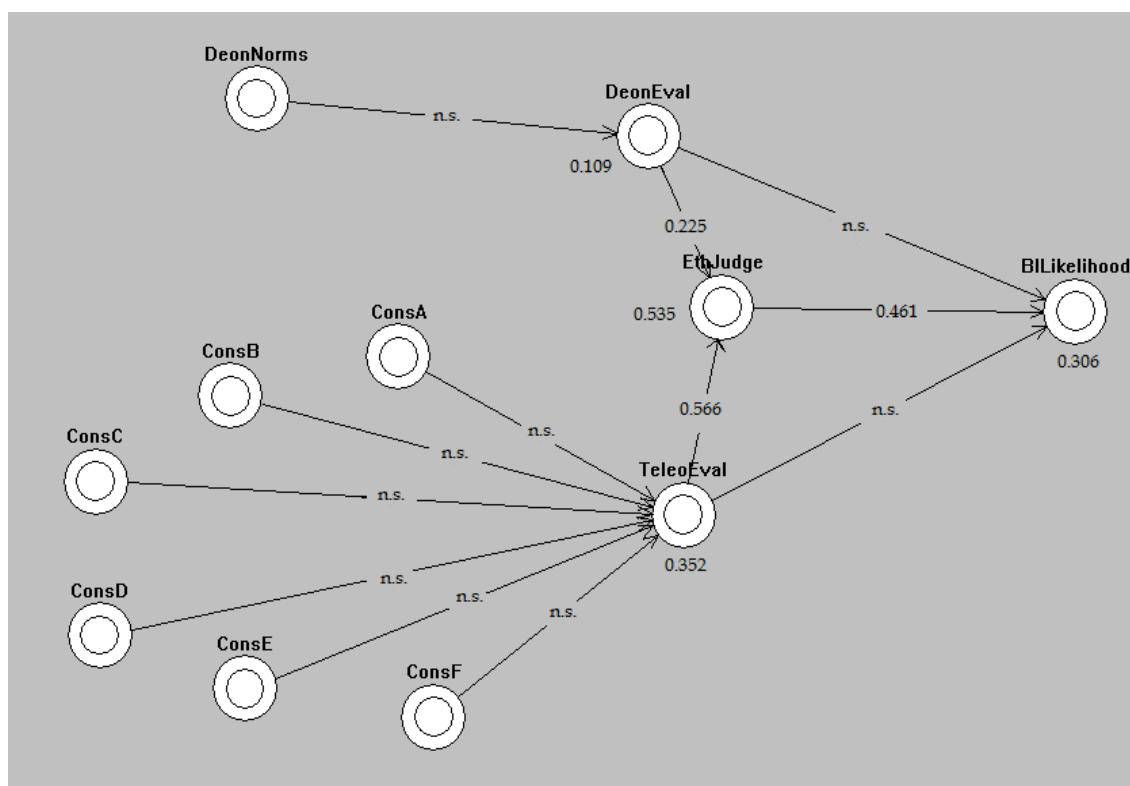
Figure 5c – PLS Graph of HV Model, Ethical Scenario
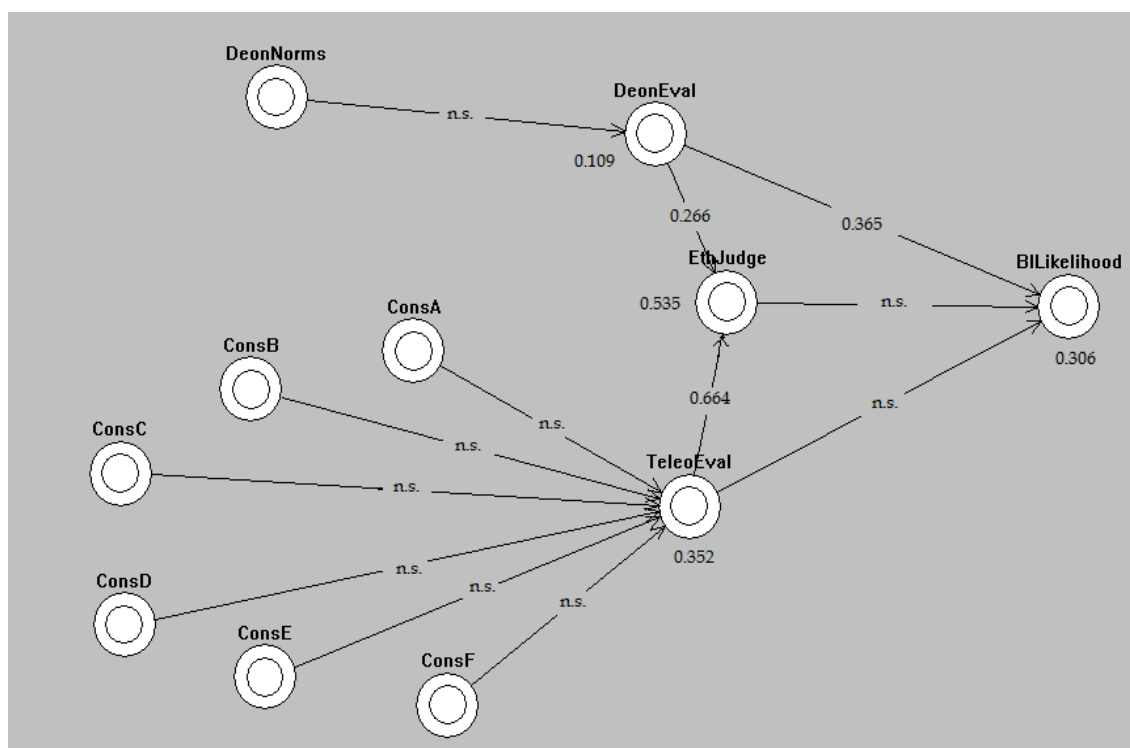
Figure 5d – PLS Graph of HV Model; Non-Ethical Scenario

<u>Incorporating Controls</u>

Another iteration of the models was run incorporating some control elements. An amount of bias may be introduced into a study simply from the structure of the questions. Latent marker variables (LMVs) are one method of accounting for some of this bias when using a SEM (Chin, et al. 2011). Questions are incorporated into the questionnaires which have nothing to do with the constructs but have the same basic structure. For example, in this study the strongly disagree to strongly disagree scale was used quite prominently, therefore a series of questions were added to the end of the survey which had nothing to do with the study but that used this scale for responses. A similar set were created for the bad idea to good idea scale. A construct element was then created in PLS Graph with these questions as indicators. A relation was drawn to the dependent variable. These LMVs may then account for bias introduced through the structure of the questions.

Age was singled out as one demographic element which may have some impact on ethical values concerning the use of IT (Moores & Chang 2006; Gattiker & Kelley 1999; Thong & Yap 1998; Gopal, et al. 2004). Kohlberg proposed stages of moral development which individuals evolve through over a lifetime (Kohlberg 1976). Older individuals will tend to be in later stages of this development and thus make decisions based on a different moral foundation. Even though our age sample was fairly homogenous, based on this support from literature, it was decided to include control for age differences in the model.

Alternate models were run using the LMVs and incorporating a control for age. These models can be seen in Figures 5e and 5f. Paths with significant (.05) values are labeled with a value; non-significant paths are indicated by 'n.s.'.

Figure 5e – PLS Graph of HV Model, Ethical Scenario with Controls

Figure 5f – PLS Graph of HV Model, Non-Ethical Scenario with Controls

In order to determine the combination effects suggested by Hunt and Vitell, product indicators were also created multiplying probability by desirability to one self, probability by desirability to others, and probability to desirability to others to importance of stakeholders to create a third product. These products were then incorporated into the model first one at a time and then in combination. Regardless of combinations of indicators with various products, paths were insignificant at .05. Figure 5g – PLS Graph of Teleological Evaluation with Antecedents and Indicators, shows the base model with indicators. Figure 5h – Configurations Attempted for HV Model, TE Subsection, shows a table with configurations of the various attempts made with this sub section of the model.
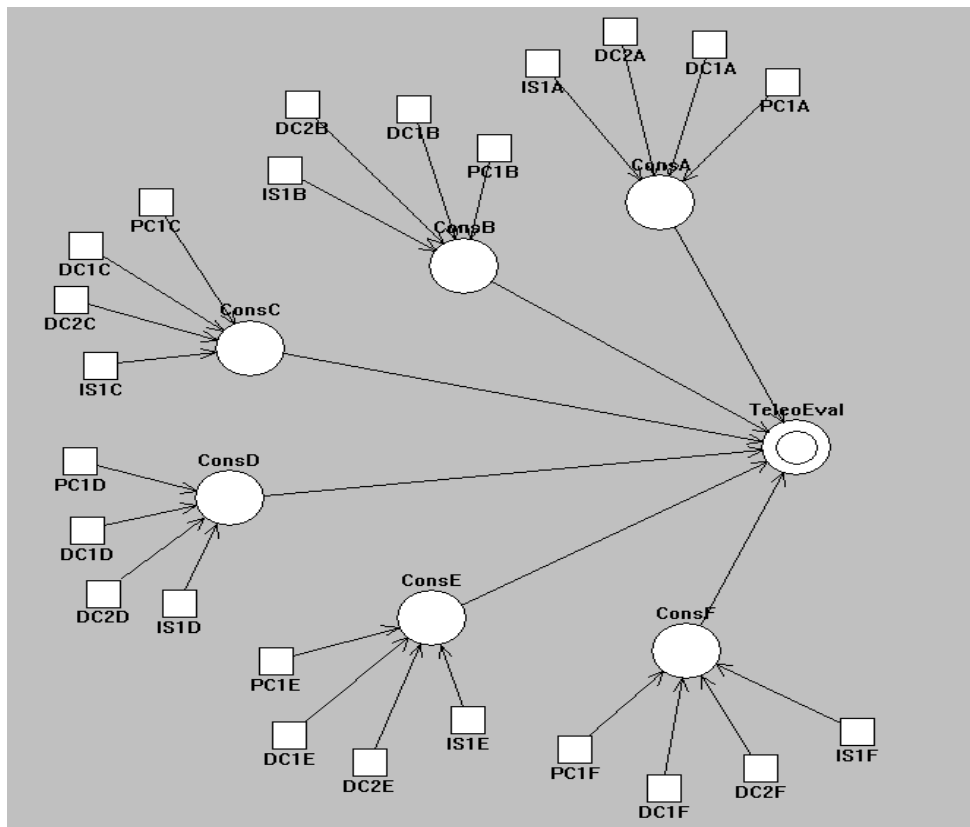
Figure 5g – PLS Graph of Teleological Evaluation with Antecedents and Indicators

Teleological Evaluation Model Runs					
Indicators for consequence constructs					
Base Model					
PC1	DC1	DC2	IS1		
Base with Product 1					
PC1	DC1	DC2	IS1	PC1xDC1	
Base with Product 2					
PC1	DC1	DC2	IS1	PC1xDC2	
Base with Products 1 and 2					
PC1	DC1	DC2	IS1	PC1xDC1	PC1xDC2
Base with Product3					
PC1	DC1	DC2	IS1	PC1xDC2xIS1	
PC1 = probability of consequence					
DC1 = desirability of consequence to self					
DC2 = desirability of consequence happening to others					
IS1 = importance of stakeholders					

Figure 5h –Configurations Attempted for HV Model, TE Subsection

Given the insignificance of paths from Deontological Norms to Deontological Evaluation and from the consequences to Teleological Evaluation, the right side of the model is where the concentration lies. A comparison of path values and R^2 values can be seen in Figure 5i – Comparing HV Model Runs. This table shows path estimates and significance values for the different configurations of the HV model under both the ethical and non-ethical scenario.

	EJ to BI	TE to BI	DE to BI	TE to EJ	DE to EJ	LMVA to BI	LMVI to BI	Age to BI	BI - Rsq	Adj BI - Rsq	EJ - Rsq	TE - Rsq	DE - Rsq
Ethical HV	0.460	ns	ns	0.566	0.225				0.306	0.291	0.535	0.352	0.109
Ethical HV LMV, Age	0.390	ns	ns	0.566	0.225	0.120	-0.120	-0.125	0.342	0.328	0.535	0.352	0.109
NonEthical HV	ns	ns	0.365	0.664	0.266				0.226	0.207	0.750	0.346	0.095
NonEthical HV LMV,Age	ns	0.249	0.238	0.664	0.266	0.161	0.105	-0.011	0.266	0.248	0.750	0.346	0.095

Figure 5i – Comparing HV Model Runs

The TPB Model

A SEM was created in PLS Graph which represents the theoretical paths described in the TPB (Ajzen 1991). Differences to note here are where Subjective Norm is only one construct in the traditional TPB, as described in chapter 4, three additional constructs were added to more completely encompass the notion of 'pressure' and to cover the ethical components examined through deontological and teleological cognitive processing. The theoretical model can be seen in Figure 5j – TPB Theoretical Model in PLS-Graph.
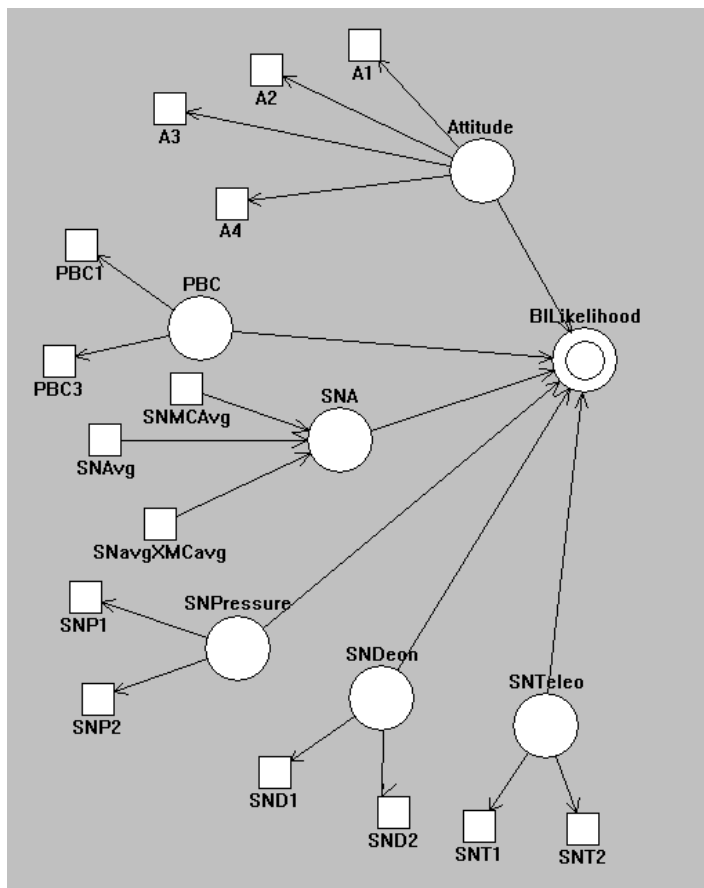
Figure 5j – TPB Theoretical Model in PLS-Graph

One note should be made about the indicators for SNA in this model. Individual measures were taken to represent normative beliefs and motivation to comply with those beliefs, however, those data points were not directly used as indicators. Instead, to better align

with the summation described in the TPB (Ajzen 1991), the measures were added and averaged

to create a single score for each component (motivation and belief). The product of the two was

then incorporated to check for interaction affects. All three of these were used as formative

indicators for the Subjective Norm Construct. The model run with the path estimates and R^2 can

be seen in Figure 5k – TPB Theoretical Model Path Estimates, Ethical Scenario.
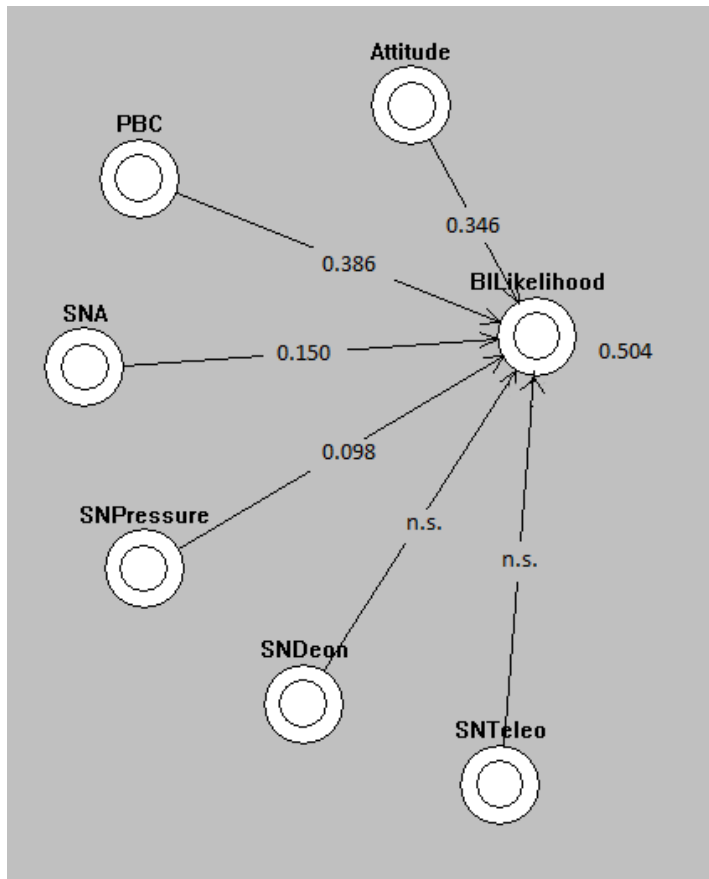
Figure 5k – TPB Theoretical Model Path Estimates, Ethical Scenario

Path estimates were also created for the non-ethical scenario and can be seen in Figure

5l – TPB Theoretical Model Path Estimates, Non-Ethical Scenario.
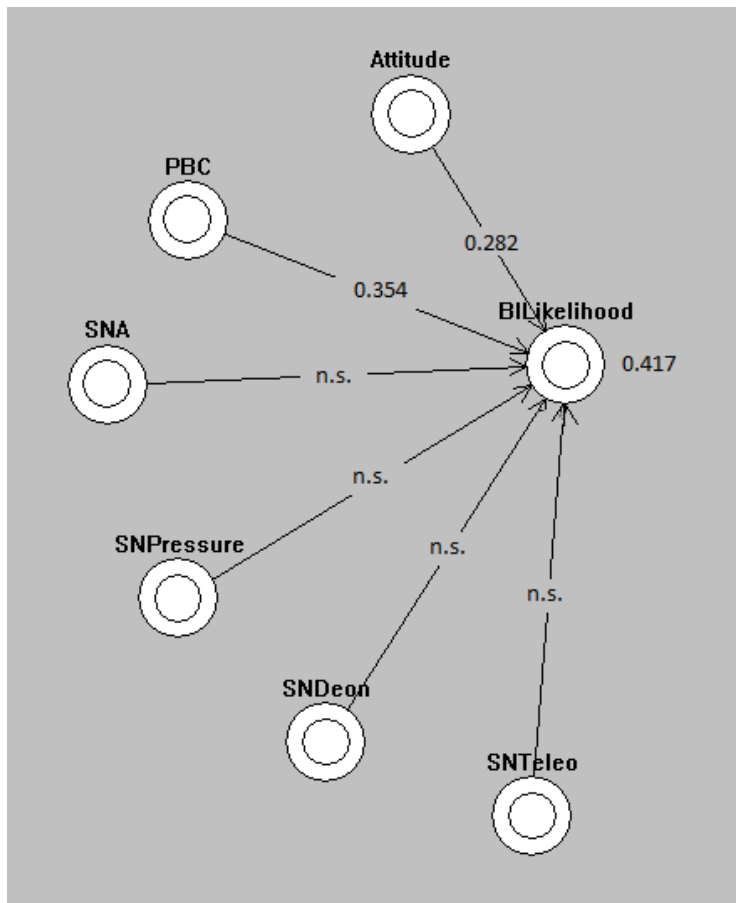
Figure 5l – TPB Theoretical Model Path Estimates, Non-Ethical Scenario

Incorporating Controls

These models were then run with the LMV and Age controls, similar to the procedure

followed for the HV model to account for method bias in the survey and control for variability in

age. The resultant models can be seen in Figures 5m and 5n.
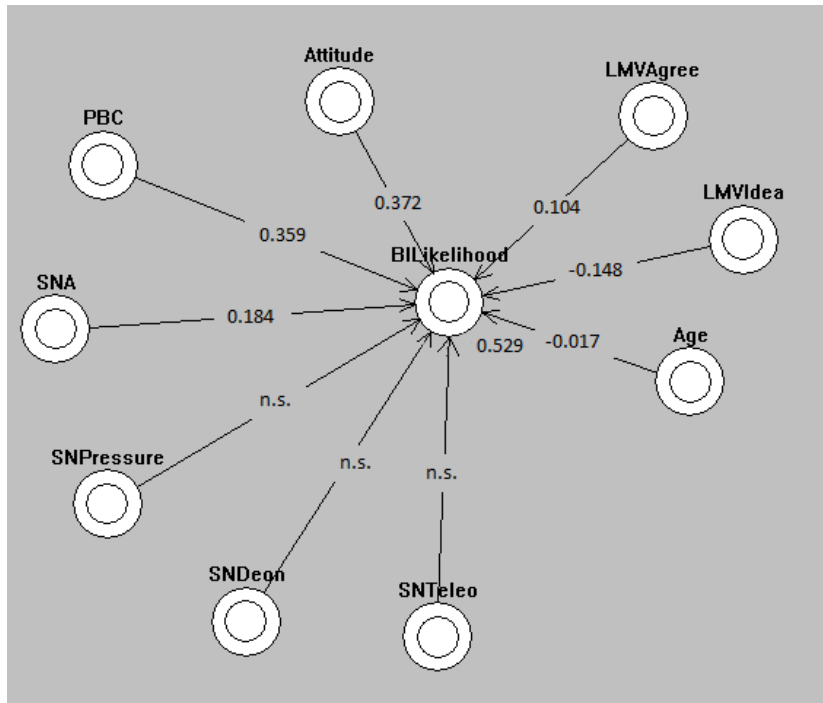
Figure 5m – PLS Graph of TPB Model, Ethical Scenario with Controls
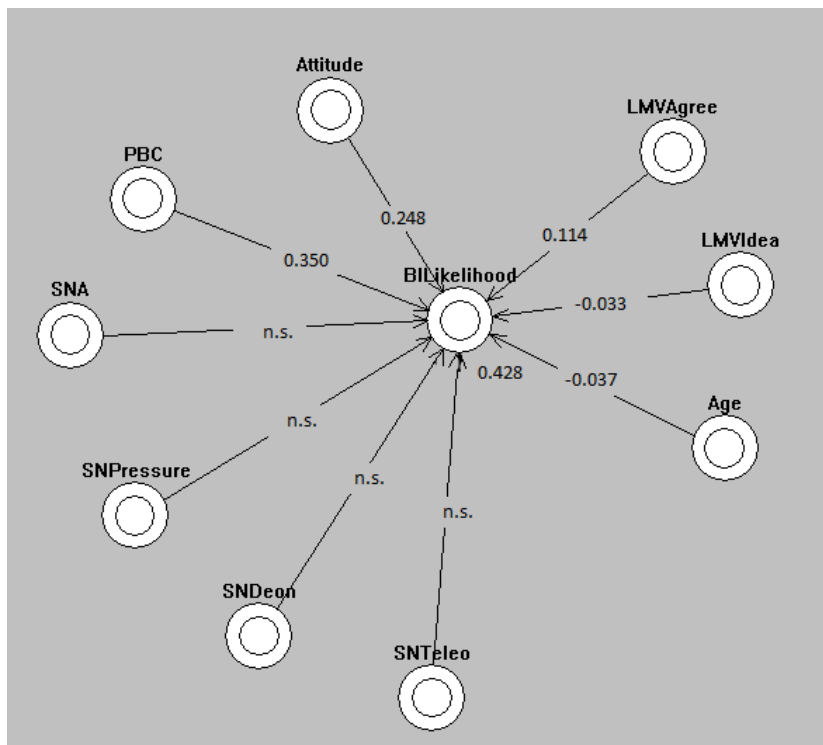
Figure 5n – PLS Graph of TPB Model, Non-Ethical Scenario with Controls

Finally, Figure 5o – Comparing TPB Model Runs, lays out a comparison of the four model runs showing significant paths and R^2 values. Tables for both models can be compared side by side in Appendix 5.2.

	A to BI	PBC to BI	SNA to BI	SNP to BI	SND to BI	SNT to BI	LMVA to BI	LMVI to BI	Age to BI	BI - Rsq	Adj BI- Rsq
Ethical TPB	0.346	0.386	0.158	0.098	ns	ns				0.504	0.482
Ethical TPB LMV, Age	0.372	0.359	0.184	ns	ns	ns	0.104	-0.148	-0.017	0.529	0.508
NonEthical TPB	0.282	0.354	ns	ns	ns	ns				0.417	0.387
NonEthical TPB LMV, Age	0.248	0.350	ns	ns	ns	ns	0.114	-0.033	-0.037	0.428	0.399

Figure 5o – Comparing TPB Model Runs

Summary

The purpose of this chapter was to analyze data from the main study surveys and test the theoretical models for their relevance to an ethical dilemma using IT. Structural equation models were developed using PLS-Graph software for the analysis. A measurement model was constructed to test the individual measures of constructs for convergent and discriminant validity. Then the relationships between variables were investigated by constructing theoretical models in PLS-Graph to represent the HV model and then the TPB. Overall, support was found for the right side of the HV model and more specifically for Ethical Judgment as a predictor of intention given an ethical dilemma, whereas it becomes insignificant when the dilemma has no ethical component. Support was found for the TPB under both scenarios; however, Subjective Norm did not have support as a predictor of intention when there was no ethical component to the dilemma presented. A more complete discussion of the findings, conclusions drawn from the findings, and a proposed synthesis of the two models will be presented in the next Chapter.

Chapter 6

CONCLUSIONS AND CONTRIBUTIONS

In this chapter, the results presented in chapter 5 are interpreted and discussed further. Some conclusions are drawn and possible explanations are given where measures did not work or results were not as expected. A synthesized theoretical model is proposed which utilizes aspects of both the HV model and the TPB for a more comprehensive explanation of ethical behaviors associated with using information technology.

The HV Model

Significant paths through the HV model, given our data set, were identified in the last chapter. A comparison of these paths and the R^2 associated with behavioral intention reveals two prominent models for our main comparison. The models which include the latent marker variables and control for age result in the highest R^2 values for intention for both the ethical and non-ethical scenarios. Figure 6a – Final HV Model Comparisons, shows the results of these specific runs of the model.

	EJ to BI	TE to BI	DE to BI	TE to EJ	DE to EJ	LMVA to BI	LMVI to BI	Age to BI	BI - Rsq	Adj BI - Rsq	EJ - Rsq	TE - Rsq	DE - Rsq
Ethical HV LMV, Age	0.390	ns	ns	0.566	0.225	0.120	-0.120	-0.125	0.342	0.328	0.535	0.352	0.109
NonEthical HV LMV,Age	ns	0.249	0.238	0.664	0.266	0.161	0.105	-0.011	0.266	0.248	0.750	0.346	0.095

Figure 6a – Final HV Model Comparisons

This comparison suggests that in the case of the ethical dilemma, ethical judgment fully mediates the effects of cognitive processes leading to behavioral intention. This aligns well with the proposal of this construct by Hunt and Vitell (Hunt & Vitell 2006). However, the direct influence of teleological evaluation on intention is not seen here. The original proposition suggests the utility centric nature of the teleological path may be strong enough to override the ethical judgment process and directly influence behavior. In the case of file sharing this might manifest as a desirable outcome, getting free music, which has a strong enough influence that it directly drives behavior without a consideration of ethical judgment. Two possible reasons are offered as to why this was not seen as a part of this study.

First, the teleological evaluation questions came late in this survey. Because of this placement it can be argued there was a considerable priming effect setting up the respondents to favor the ethical judgment as a path to behavior. Many of the questions leading up to teleological evaluation were pointing to the fact that there were moral implications of the behavior that should be taken into consideration.

A second possibility is that where an ethical dilemma is salient, this path simply does not activate. The elicitations implemented as a part of this study were done to insure the scenarios and possible behaviors would represent those that the participants would have in their own minds if faced with the situation. Direct paths are significant from both deontological and teleological evaluations to intention when the scenario gave a non-ethical dilemma. It seems

reasonable to assume that where a salient ethical dilemma and relevant behavior are defined, ethical judgment might fully mediate cognitive processes.

When considering the non-ethical dilemma the data shows a non-significant path from ethical judgment to intention. This finding is in agreement with the propositions of Hunt and Vitell and conforms to the purpose of the model with regard to defining thought processes only when an ethical dilemma is salient. However, Hunt and Vitell state that without a perceived ethical dilemma, their model does not activate. These direct links to behavior suggest otherwise.

Here the argument stated above for a direct link from teleological reasoning to behavioral intention has justification. As a function of utility, it is logical that teleological evaluation would have a direct impact on intention. This aligns with the Theory of Reasoned Action in which attitude is a product of beliefs about a behavior and their perceived outcomes (Fishbein & Ajzen 1975).

A significant link from deontological evaluation to intention is more challenging to explain. The nature of the scenario presented for the non-ethical dilemma may have had some impact. The scenario given presented a situation in which one member of a team was listening to music on a computer designated for work use. It is possible that the use of a work computer for something other than work might present a slight ethical dilemma. There is not a clear indication that the use of the computer for listening to music would do any harm to the computer or the work being done on it. This could account for the activation of deontological processing, however, since the dilemma is not certain or strong, it does not go through the mediated path of processing but instead directly impacts intention. This could equate to the casual statement 'This feels wrong, but I can't say why', used when evaluating a behavior and

points to the difficulty in determining the moral barometer or gauge an individual uses for

determining when a behavior is ethical or not (Cohen, et al. 1993; Pressley & Blevins 1984;

Fraedrich 1993; Henthorne, et al. 1992).

All this leads to a discussion of the deontological path through the HV model and a

possible explanation for why the measures of deontological norms did not work. Kohlberg

suggests there are stages of moral development (Kohlberg 1976). Individuals will vary in their

achievement in each of six stages of moral development. Not everyone reaches the final stage

and timing for each of these stages can be highly dependent on life experiences as well as

individual cognitive development. Assuming this, or a similar type of moral development, is

present in all individuals, a measure of deontological (moral) norms would need to be quite

complex. The attempt at deontological norms for our study consisted of only six high level

questions, reasoned to be salient given the behaviors presented. It seems likely a more detailed

study is needed to define a more comprehensive index which can account for all possible salient

moral principles, and various stages of moral development.

The paths from each of the consequences to teleological evaluation were not significant.

The individual measures for each consequence were also problematic. This was disappointing

considering the effort put into the elicitation portions of this study. It is possible the

consequences presented were not the appropriate set of salient consequences. Given the

aforementioned elicitation study, it seems more likely there was a problem with the questions

aimed at this portion of the study. Indeed, in looking at the raw data, this section did see a fair

amount of abuse in missing data or conspicuous answer patterns. The questions for these

constructs were constructed into a fairly dense matrix (the full survey can be seen in Appendix

4.14). It may be that the combination of a lengthy survey and what may perceived as a high demand on cognitive effort, led to a less than honest effort for this portion of the study.

The TPB Model

The significant paths through the TPB model were identified in the last chapter. A comparison of these paths and the R^2 associated with behavioral intention reveals two prominent models for our main comparison. The models which include the latent marker variables and control for age result in the highest R^2 values for intention for both the ethical and non-ethical scenarios. Figure 6b – Final TPB Model Comparisons, shows the results of these specific runs of the model.

	A to BI	PBC to BI	SNA to BI	SNP to BI	SND to BI	SNT to BI	LMVA to BI	LMVI to BI	Age to BI	BI - Rsq	Adj BI- Rsq
Ethical TPB LMV, Age	0.372	0.359	0.184	ns	ns	ns	0.104	-0.148	-0.017	0.529	0.508
NonEthical TPB LMV, Age	0.248	0.350	ns	ns	ns	ns	0.114	-0.033	-0.037	0.428	0.399

Figure 6b – Final TPB Model Comparisons

Support was found for the traditional implementation of the TPB model under the ethical scenario, though no support was found for the additional proposed interpretations of subjective norm. Interestingly, even the traditional approach to subjective norm taken from Fishbein and Ajzen was not supported under the non-ethical scenario. For this latter lack of support, the structure of the survey may once again be responsible. Questions for subjective norm come late in the survey, after the participant has been exposed to a great deal of priming regarding the possible ethical nature of the behavior. It could be that for the ethical scenario, this priming lends weight to the credence in what others think regarding behavior which manifests through the subjective norm construct. While this priming is still present in the non-ethical scenario survey, since the behavior does not suggest an ethical component, the influence

of others is simply not present. The priming works to highlight the non-influence, in essence, of others regarding this particular behavior. Or it may be that this ethical scenario simply doesn't activate a normative component.

A Synthesized Model

Discussions of the HV and TPB models suggest one thing in common. There is a difference in explanation when the individual is faced with an ethical scenario over when he is not. While in the domain of the HV model this is an intended feature. The HV model attempts to explain the cognitive approach an individual takes when faced with an ethical dilemma and deciding what to do regarding a specific behavior. According to Hunt and Vitell, their model was not intended to operate if there is no ethical dilemma present. From the results presented, we see that this is not entirely the case and there are still active paths through the model. These paths do however differ when there is no ethical dilemma. While the paths do not change, there is a differing R^2 value for intention in the TPB models when the ethical dilemma is presented over the non-ethical dilemma for the same model. Given this difference in the TPB without explanatory paths, a synthesis of the TPB with the HV model is proposed to better explain cognitive differences suggested by the difference in R^2.

The synthesized model was developed over several steps. The first step was to determine a starting point. This was done by evaluating all iterations of both models for the best explanatory result, e.g. the highest R^2 for behavioral intention. Figure 6c – Multi -Model Comparison shows all the relevant paths for a comparison. The only significant path for subjective norm was the traditional measure and was therefore the only one included in the synthesis.

	EJ to BI	TE to BI	DE to BI	TE to EJ	DE to EJ		LMVA to BI	LMVI to BI	Age to BI	BI-Rsq	Adj BI-Rsq	EJ-Rsq	TE-Rsq	DE-Rsq
Ethical HV LMV, Age	0.390	ns	ns	0.566	0.225		0.120	-0.120	-0.125	0.342	0.328	0.535	0.352	0.109
NonEthical HV LMV,Age	ns	0.249	0.238	0.664	0.266		0.161	0.105	-0.011	0.266	0.248	0.750	0.346	0.095

	A to BI	PBC to BI	SNA to BI	SNP to BI	SND to BI	SNT to BI	LMVA to BI	LMVI to BI	Age to BI	BI-Rsq	Adj BI-Rsq
Ethical TPB LMV, Age	0.372	0.359	0.184	ns	ns	ns	0.104	-0.148	-0.017	0.529	0.508
NonEthical TPB LMV, Age	0.248	0.350	ns	ns	ns	ns	0.114	-0.033	-0.037	0.428	0.399

Figure 6c – Multi-Model Comparison

With the starting point set using the TPB model which incorporates the LMVs and controls for age, the HV model components were evaluated. Prior analysis showed us that the right side of the model held significance and again the use of LMVs and controlling for age produced the highest R^2, thus the right side of the HV model was added. Since the extra measures for Subjective Norm were not significant these were dropped from the overall model. Figure 6d – Synthesized Model Direct to Intention shows the configuration in PLS-Graph. The expectation was that this synthesis should have incorporated the best of both models but results did not support this configuration. Instead, paths from the HV model were not significant in this combination. A table with path values and R^2 for this model can be found in Appendix 6.1.
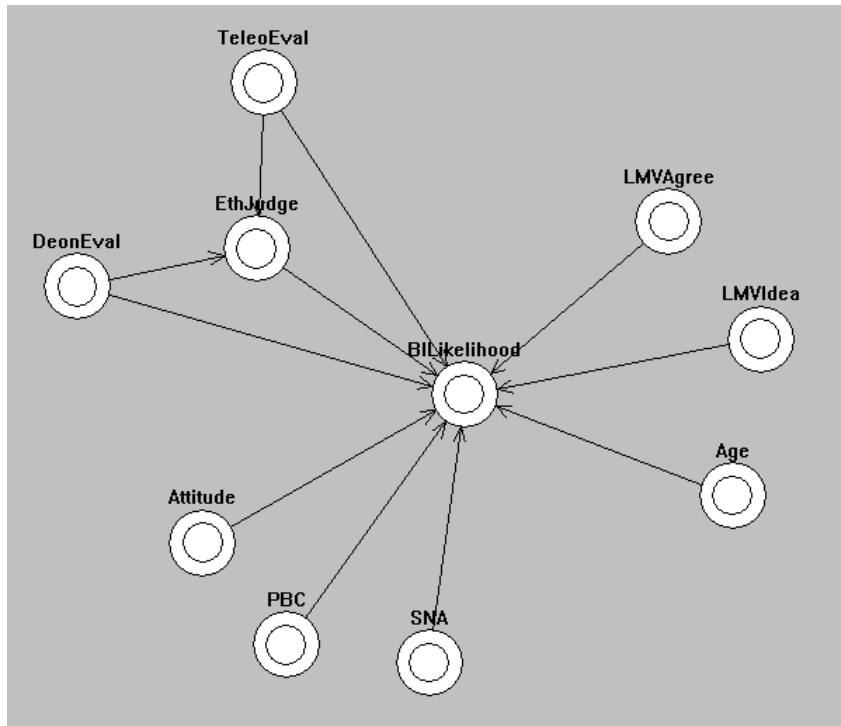
Figure 6d – Synthesized Model Direct to Intention

Fishbein and Ajzen describe the Attitude construct as consisting of a set of beliefs about the behavior as being good or bad weighted by the outcomes associated with that behavior (Fishbein & Ajzen 1975). Defined this way, attitude is similar to teleological evaluation in the HV model. Where ethical Judgment adds value in the HV model is that it incorporates a deontological path. With the similarities to attitude in the HV model, it is possible that the incorporation of dual cognitive paths toward an ethical evaluation fit in with attitude formation where an ethical dilemma is present. Thus, another formulation of a synthesized model was evaluated. Here the right side of the HV model was added to the TPB as being mediated through attitude. The significance of path values in this configuration reflects what was found when the models were evaluated separately. Figure 6e – Synthesized Model HV Mediated through Attitude, shows this iteration of a synthesized model. Figure 6f – Multi-Model

Comparison Two, shows significant paths in this iteration for both the ethical and non-ethical scenarios.
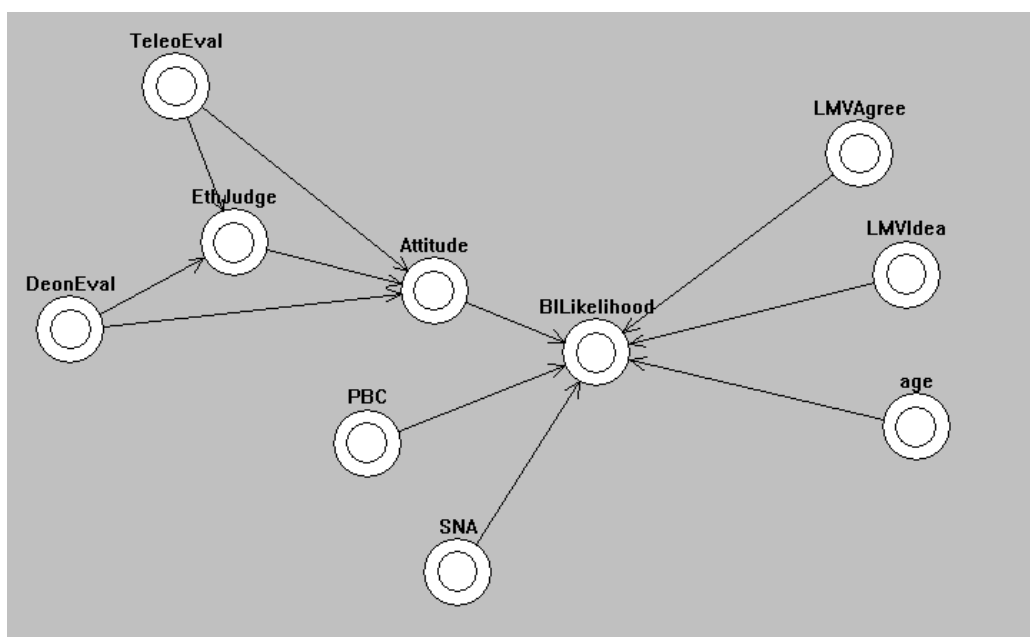
Figure 6e – Synthesized Model HV Mediated through Attitude

	TE to EJ	DE to EJ	EJ to A	TE to A	DE to A	A to BI	PBC to BI	SNA to BI	LMVA to BI	LMVI to BI	Age to BI	BI - rsq	A - rsq	EJ - rsq
Ethical Synth 2	0.561	0.224	0.362	0.48	ns	0.338	0.341	0.147	0.084	-0.135	-0.038	0.514	0.65	0.529
Non-Ethical Synth 2	0.667	0.265	ns	0.317	0.424	0.251	0.373	ns	0.117	-0.031	-0.027	0.411	0.497	0.752

Figure 6f – Multi-Model Comparison Two

The significant paths through this iteration of the model suggest the behavior seen in the HV model alone can add explanation to the TPB mediated through attitude. The R^2 for intention in this model is slightly lower; however, the explanation of cognitive processes used when an individual is faced with an ethical dilemma was the main goal of this study. It can be seen here that there is in fact a difference in contributing factors to the formation of attitude which can be explained by the inclusion of deontological and teleological paths of moral reasoning.

As seen in the HV model alone, ethical judgment has a direct impact on attitude when the individual is faced with an ethical dilemma but not when the dilemma has no ethical component. What changes here is that the teleological evaluation is not fully mediated by ethical judgment. As discussed above, the similarity of the teleological evaluation with Fishbein and Ajzen's definition of attitude makes this path not surprising. The fact that the deontological path is significant in the non-ethical scenario could be due to the effect described above with interpretation of the scenarios. While every effort was made to create a scenario which did not have an ethical component, it is reasonable to assume there are those who would perceive the use of a work(educational) computer for any other purpose than that which it was assigned for as having an ethical component. As mentioned, this component would not be strong or as well defined for the individual, and as such it would not activate the overall ethical judgment, but could still have an impact on the development of an attitude toward the behavior.

Contributions

Findings from this study have implications which impact the academic, both as a researcher and an educator, business managers, and even family members and home life. In all cases the implications center around the potential for an individual to behave unethically and IT is an enabler of this behavior. For the academic, a method for an elicitation study was developed, theoretical models were tested for effectiveness in the IS domain, and a synthesized theoretical model was proposed. For the manager this study sheds light on the cognitive processes individuals go through when deciding to participate in an unethical behavior involving the use of IT. Finally, for both the academic and the concerned parent, results suggest there may be an educational gap to address where the moral norms of young people show the need for a more expansive scope of development.

The elicitations performed in this study were important to insuring salient behaviors, actions, and consequences were identified. The process detailed in this study was in itself a synthesis of strategies found in extant literature combined with consultation of field experts. This process might be followed as detailed here, or may serve as a basis for further refinement and development and used wherever there is a research need for salient objects in the development of a survey or questionnaire.

The Hunt and Vitell Theory of Ethics was investigated as a part of this study for its applicability to the ethical use of IT. While Hunt and Vitell propose this model and have tested portions of it, they and extant literature produce no complete test of all constructs in the model. This study adds value in its process of creating measures and testing the complete model. Further, it was found that the right side of the HV model does in fact have applicability for explaining the ethical use of IT. Where measures did not work in this study, there is a basis for further development and perhaps greater explanatory power toward the cognitive processes involved in ethical behavior and the individual.

The use of the TPB in IT, or any domain, did not need further confirmation here, however, what was important is that it could be determined that there was an ethical component of behavior which appears to be a part of the TPB, yet not fully explained by it. A synthesis of components from the TPB and the HV model was proposed here which has validity toward more fully explaining ethical behavior using the strengths of both models. This synthesized model works as a tool for researching ethical use of IT as it stands, but also provides a basis for further exploration and refinement.

For business managers or owners concerned about the implications of unethical use of IT, this study provides some important insight into the cognitive paths the individual goes

through prior to developing an intention to act. More specifically, this study was done within the context of illegal online file sharing. For several years now this has been a growing concern for the music industry while battles between recording agencies and consumers are waged on the IT front. A better understanding of how the individual thinks when evaluating an unethical IT behavior shows there are two distinct paths, one based on consequence and utility, and another based on the moral nature of the act itself. The realization that the individual takes both of these paths into account gives support for waging a campaign in education or motivation tailored to this way of thinking. At the least, this gives direction for investigation into techniques for reaching the individual on a level which addresses the dual nature of thought processes involved in the decision process. For instance, promotional campaigns have been highlighting the illegal nature of downloading songs, but perhaps there is an alternate approach to utility that makes more sense, like a quantitative analysis on the quantity of quality music available and combining this with the moral implications.

Taking this a step further, opportunities extend to educational institutions and even the home. The direct link from the teleological evaluation to intention in addition to its impact through an overall evaluation suggests a bias toward utility, over that path which comes from established norms of morality. It would appear there is room for improvement toward the development of a moral foundation, at least evident in the undergraduate age group, which speaks more strongly to the ethical use of IT. The pervasive nature of IT in the lives of young people for the foreseeable future, suggests this is an issue that is increasing in scope. Time may be well spent developing curricula to incorporate this content. Indeed, it is arguable that the best place for initiating such education may be through discussions in the home, which must now extend beyond traditional approaches to wrong and right and incorporate their application to the use of the technologies becoming so popular with our youth.

Summary

This chapter discussed the findings presented in the previous chapter and offered an interpretation for measures and paths both working and not. Both the HV model and the TPB model were discussed and the steps for synthesizing a model combining the two were detail and a synthesized model proposed. Finally, contributions of this study were presented. Limitations and directions for further research will conclude this study in the next chapter.

Chapter 7

LIMITATIONS AND FURTHER RESEARCH

Limitations regarding the capabilities of this study are presented here. Where measures did not work, significant paths were unexpected, or expected significance for paths was not found, limitations of the study may have been at fault. Directions for future research are also presented.

Limitations

Several potential limitations may have affected the results of this study. The first of these was reflected in the recurring difficulties with the measures for deontological norms. Many attempts have been made at creating a good measure for this item with varying degrees of success (Mayo & Marks 1990; Singhapakdi & Vitell, Jr. 1991; Thong & Yap 1998). Even successful measures for this construct were not very strong (i.e. factor loadings less than .7). One possible explanation, already brought up, is the complexity of a scale necessary to measure this normative index amongst members of a population made up of varying stages of moral development (Kohlberg 1976). The attempt in this study was to focus on those attributes which seemed to tie in well with the behavior being described. It is likely that normative influences extend well beyond this scope and the full range must be included to get an accurate measure of deontological norms.

Also mentioned in the previous chapter were the problematic consequence measures. It may be that the full scope of consequences was not identified by the elicitation study. Though the robustness of the study seems to lay doubt on this possibility, a larger sample size may be beneficial. More likely, the questions for these measures need to be refined in future work. There may also have been issues in the design of this element of the survey. The matrix used to ask this large volume of questions was lacking in white space, perhaps giving the impression to the subject that completion of the survey would be 'hard work'. This could have led to less than honest or carefully considered responses to these questions. It may also be that the questions themselves were simply worded in a way which did not get the point across. Additional development of these measures could be beneficial to better understanding this portion of the HV model.

Since this study was of an ethical nature, a social desirability bias may have come into play. Participants could have felt as though they were expected to answer in a certain way and thus, did so accordingly. This could explain the direct path from deontological evaluation to intention, especially in the non-ethical scenario surveys.

The age group targeted for this study was specifically chosen to align with the behaviors described in the surveys, e.g. those that would be familiar with online file sharing activity and its consequences, and likely participants of the behaviors represented. While this may have helped with the salience of the behaviors to the sample, there may be, and probably are, differences in other age groups that should be identified, particularly within the context of other technologies or forms of intellectual property. Generalizability of the study therefore suffers to some extent at the expense of relevance to a target population.

As mentioned in the discussion of the non-ethical scenario results and ethical evaluation measures from the last chapter, the scenario itself may have presented a minor problem. Much thought was put into the construction of a dilemma which would not have an ethical component. In practice it is difficult to come up with any dilemma that cannot be interpreted to have some possible ethical implication. While the manipulation check shows the participants agreed the non-ethical scenario was in fact, non-ethical, it is likely that there were those that thought the use of a university property computer for anything other than working on the assigned project could be construed as an unethical use. This could account for the direct relations from deontological evaluation to intention for this scenario where the full ethical judgment was not activated, yet a smaller ethical influence still has an impact.

Finally, the ordering of the questions in the surveys may have presented some bias in the results. The questions were intentionally ordered so that the participant would have an understanding of those questions which combined prior constructs in the model before questions about them were asked. For example, it didn't make sense to ask a question about combining the effect of consequences and your evaluation of the action into an overall judgment without having first discussed consequences and the deontological evaluation. While this makes sense methodologically, it may have created a priming effect, especially for the non-ethical scenario surveys. There may be a better way of either wording the questions or reordering the survey to more randomly distribute questions and alleviate this effect.

Future Research

This study serves as a promising basis for other research. As a full test of the HV model has not been present in prior research, this was an attempt at creating several measures where there was little or no guidance. The measures for deontological norms and consequences, while

not working, provide direction for further refinement. Measures for deontological evaluation, teleological evaluation and especially, ethical judgment are a promising foundation for further investigation of the cognitive processes involved in the ethical use of IT. These measures may even add value to models other than those presented here.

The synthesized model presented here shows a relationship between ethical judgment, deontological evaluation, teleological evaluation, and attitude. The finality of the word 'judgment' in ethical judgment may not be appropriate given there are other influences on attitude. A proposed study could focus on refining the definition of this construct to more accurately reflect the combination of influences leading to it and its overall impact on intention. A measure more specifically aligned with this new definition may find results directly tied to intention, as proposed in the first model synthesis attempted.

Moral stages of development are mentioned above and in the previous chapter. Future exploration of the impact of age over a greater range could be beneficial. Specifically, a study which incorporates a theoretical basis like Kohlberg's (Kohlberg 1976)could add dimensions to this and other models presented in this study which have both theoretical implications with the development of new constructs, and practical implications in the development of interventions based on age.

While this study was performed within the context of illegal online file sharing, ethical use extends beyond this scope. From something as seemingly innocuous as using a company computer to play solitaire or using a neighbor's wireless signal, to something more explicitly criminal like using technology to capture and use another's personal information, the research presented here might apply.

The scope of study could also be broadened by testing for cultural differences. This study using undergraduates in a southern university in the United States may differ dramatically from a study done in a country where there are much looser (or tighter) regulations or attitudes toward the pirating of digital content.

Finally, practical applications of the conclusions in this study provide a direction for research into appropriate interventions which capitalize on the cognitive processes identified. The understanding that a combined deontological/teleological evaluation takes place suggests a combined approach to marketing and/or education, encompassing the ethical impact of using IT and somehow affecting the normative moral gauge. Studies which investigate the effectiveness of various types of interventions have a direct implication to business strategies.

Appendix 1.1

SYNTHESIZED TABLE OF STUDY DEFINITIONS

Authors	Item	Definition	Measures	Scale	Notes
For this study	Intention	Two part definition incorporating both HV and Warshaw & Davis: "conceptualized as the likelihood that any particular alternative will be chosen" (Hunt & Vitell, 1986) "one's estimated likelihood of performing the action, whether or not a commitment has been made" (Warshaw & Davis, 1985)	Intention - Please indicate the likelihood that you would choose this action among all possible actions Expectation - If faced with this scenario in reality, how likely is it that you actually will perform the given behavior?	Scale 1 to 7, range: very unlikely to very likely	
Hunt & Vitell, 1986	Intention	"conceptualized as the likelihood that any particular alternative will be chosen"	faced with an ethical scenario and several alternatives which resolve an ethical dilemma in the scenario, respondents would be asked the likelihood in a probability sense that they would actually adopt each alternative		Suggested measures only, not implemented in the study
Warshaw & Davis, 1985	Intention	Difference between behavioral intention (BI) and behavioral expectation (BE) BI –" involves making a behavioral commitment to perform (or not perform) an action" BE – "one's estimated likelihood of performing the action, whether or not a	BI – Please indicate whether you presently intend to perform the given behavior sometime next weekend: 1. Eat only nonfattening foods 2. Go to a party Saturday night BE – All things considered, how likely is it that you actually will perform the given behavior some time next weekend: 1. Eat only nonfattening foods	BI 1 to 9 No, definitely do not intend to Yes, definitely do intend BE 1 to 9 Extremely	

Authors	Item	Definition	Measures	Scale	Notes
		commitment has been made"	2. Go to a party Saturday night	unlikely to extremely likely	
For this study	Ethical Judgments	the degree to which one thinks that the given alternatives for a scenario are ethical (Rallapalli, et al., 1998)	All things considered, how ethical is this action? Very unethical/ Very ethical All things considered, how fair is this action? Unfair/ Fair All things considered, how just is this action? Unjust/ Just	7 pt scale ranging from -3 to 3	3 item measure using one item from Rallapalli, et al. 1998 and two from the Justice component of ethical evaluations scales derived by Reidenbach & Robin, 1988. These last two were the two top factor loadings from their study under the Justice category.
Hunt & Vitell, 1986	Ethical Judgments	"the belief that a particular alternative is the most ethical alternative"			
Rallapalli, Vitell, & Barnes,	Ethical Judgments	"the degree to which one thinks that the given alternatives for a scenario	Subjects are asked to rank each of 3 alternatives given the scale provided.	7 point scale from 1=very unethical to	

Authors	Item	Definition	Measures	Scale	Notes
1998		are ethical"		7=very ethical	
Reidenbach & Robin, 1988	Ethical Judgments		Just/Unjust Fair/Unfair Violates/Does not violate my ideas of fairness Results/Does not result in an equal distribution of good and bad	7 point scales where 1= positive value and 7 = the negative value	R & R devise a multi component scale for ethical evaluations based on ethics philosophy. The category that best matches this construct is described as 'Justice'.
For this study	Deontological Evaluation	the individual evaluates the inherent rightness or wrongness of the behaviors implied by each alternative based only on the act itself, not considering the possible outcomes.	To what extent to would you feel obligated to perform this action? Not Obligated/ Obligated To what extent does this action violate an unwritten contract? Violates/Does not Violate To what extent is this action morally right? Not Morally Right/Morally Right	All scales 7 pt, range from -3 to 3	The top 3 items from the Reidenbach & Robin scales under deontology were selected (according to factor analysis)
Hunt & Vitell, 1986	Deontological	"the individual evaluates the inherent rightness or			

Authors	Item	Definition	Measures	Scale	Notes
	Evaluation	wrongness of the behaviors implied by each alternative. The process involves comparing the behaviors with a set of predetermined deontological norms. These norms represent personal values or rules of moral behavior."			
Reidenbach & Robin, 1988	Deontological Evaluation		Violates/Does not violate my ideas of fairness Obligated/Not obligated to act this way Duty bount/Not duty bound to act this way Morally right/Not morally right Violates/Does not violate an unwritten contract Violates/Does not violate an unspoken promise	7 point scales where 1= positive value and 7 = the negative value	R & R devise a multi component scale for ethical evaluations based on ethics philosophy. The category that best matches this construct is described as 'Deontology'.
For this study	Teleological Evaluation	Evaluating the sum total of goodness versus badness likely to be produced by each	Taking into account the probability and desirability of the consequences, and their impact on all people	All scales 7 pt, range from -3 to 3	Items were devised based on the Mayo

Authors	Item	Definition	Measures	Scale	Notes
		alternative when considering that evaluation based on possible outcomes of the alternative and not one's moral evaluation of the action.	involved, this action is: Bad/Good Taking into account the probability and desirability of the consequences, and their impact on all people involved, this action results in what type of utility? Very Low/ Very High Taking into account the probability and desirability of the consequences, and their impact on all people involved, this action results in what type of cost-benefit ratio? Negative/Positive		and Marks measure for the first statement, then the top two factor loadings from the Reidenbach & Robin study were used as well, taken from their 'Utilitarian' component of ethical evaluation.
Hunt & Vitell, 1986	Teleological Evaluation	"evaluating the sum total of goodness versus badness likely to be produced by each alternative"			
Mayo & Marks, 1990	Teleological Evaluation	"assesses the goodness or badness of the consequences which may result from the adoption of each alternative"	response to statement 'Considering the desirability of the consequences and the importance of each prty, please rate each alternative in terms of how Good or Bad you view it.'	7 pt Likert type, 1= very bad, 7= very good	
Reidenbach & Robin, 1988	Teleological Evaluation		On balance tends to be good/bad OK/Not OK if actions can be justified by their consequences Leads to the greatest/Least good for		R & R devise a multi component scale for

Authors	Item	Definition	Measures	Scale	Notes
			the greatest number Results in a positive/Negative cost-benefit ratio Produces the greatest/Least utility Maximizes/Minimizes pleasure Compromises/Does not compromise an important rule by which I live		ethical evaluations based on ethics philosophy. The category that best matches this construct is described as 'Utilitarianism'.
For this study	Probabilities of consequences	The likelihood that any consequence will occur for any stakeholder associated with the action	For each possible consequence to a given action respondents are asked to rate the likelihood of the consequence : No likelihood of occurring / Absolutely occurring	0 to 100 in increments of 10	
Hunt & Vitell, 1986	Probabilities of consequences	"the probability that each consequences will occur to each stakeholder group";	could be specified in the research design - e.g. respondents could be told that, if they adopted the alternative of 'doing nothing' there was a very 'high likelihood' that there would be a further increase of 20 percent in the total territory sales		Suggestion only, no measure provided
For this study	Desirability of consequences	"the desirability or undesirability of each consequence" (Hunt & Vitell, 1986)	For each possible consequence to a given action respondents are asked to rate the desirability of the consequence: Highly Undesirable /	7 pt scale, range from -3 to 3	

Authors	Item	Definition	Measures	Scale	Notes
			Highly Desirable		
Hunt & Vitell, 1986	Desirability of consequences	"the desirability or undesirability of each consequence"	could be measured by giving respondents the consequences in pairs and requesting that they indicate their degree of preference of each consequence compared with each other consequence		Suggestion only, no measure provided
For this study	Importance of stakeholders/ Subjective Norm	Pressure felt from others concerning a particular consequence	People who influence my behavior would think that I should take this action.: Strongly disagree/ Strongly agree People who are important to me would think that I should take this action. : Strongly disagree/ Strongly agree	7 pt scale, range from -3 to 3	Importance of stakeholders by this definition is seen as synonymous to subjective norms in TPB. As such items were adapted from Taylor & Todd, 1995 for use in this study.
Hunt & Vitell, 1986	Importance of stakeholder	"the importance of each stakeholder group"	The value system of the respondent should be explored with respect to each set of stakeholders; e.g. 'To		Suggestion only, no measure

Authors	Item	Definition	Measures	Scale	Notes
	s		what extent do you believe that the interests of your company should always be placed above your own personal self-interests?'		provided
Taylor & Todd, 1995	Subjective Norm		People who influence my behavior would think that I should use the (IT artifact) People who are important to me would think that I should use the (IT artifact)	Scales were not given	
For this study	Attitude	attitude toward the behavior and refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question (Ajzen, 1991)	For each of the alternative actions identified subjects are asked the following: Performing this action is a: Bad idea/good idea Performing this action is a: Foolish idea/ Wise idea	7pt scale, range : -3 to 3	These items were adapted from the Taylor and Todd, 1995 study
Ajzen, 1991	Attitude	"attitude toward the behavior and refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question"			
Taylor & Todd, 1995	Attitude		Using the (IT artifact)is a (bad/good) idea Using the (IT artifact) is a (foolish/wise) idea I (dislike/like) the idea of using the (IT artifact)	Scales were not given	

Authors	Item	Definition	Measures	Scale	Notes
			Using the (IT artifact) would be: (unpleasant/pleasant)		
For this study	Perceived Behavioral Control	The perceived ease or difficulty of performing the behavior (Ajzen, 1991)	I would be able to perform this action: Strongly disagree/ Strongly agree Performing this action is entirely within my control: Strongly disagree/ Strongly agree	7 pt scales, range from: -3 to 3	These items were adapted from Taylor & Todd, 1995
Ajzen, 1991	Perceived Behavioral Control	"the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles"			
Taylor & Todd, 1995	Perceived Behavioral Control		I would be able to use the (IT artifact) Using the (IT artifact) is entirely within my control I have the resources and the knowledge and the ability to make use of the (IT artifact)	Scales were not given	
For this study	Deontological Norms	General or issue specific beliefs that are internalized and relevant to the nature of an action without regard for its consequences in the sense of its acceptability, morality, or ethicality.	Based solely on the action, with no regard to consequences, please rate how individually acceptable this action is: (individually unacceptable to individually acceptable) Based solely on the action, with no regard to consequences, please rate how culturally acceptable this action is: (culturally unacceptable to culturally acceptable)	7 pt scales, range from: -3 to 3	Definition is adapted from the original HV model (Hunt & Vitell, 1986). Measures were taken from the Reidenbach

Authors	Item	Definition	Measures	Scale	Notes
			Based solely on the action, with no regard to consequences, please rate how traditionally acceptable this action is: (, traditionally unacceptable to traditionally acceptable)		and Robin paper using their ethical factor 'Relativism' (Reidenbach & Robin, 1988).
Hunt & Vitell, 1986	Deontological Norms	"Beliefs that "range from (1) general beliefs about things such as honesty, stealing, cheating, and treating people fairly to (2) issue-specific beliefs about things such as deceptive advertising, product safety, sales 'kickbacks,' confidentiality of data, respondent anonymity, and interviewer dishonesty. the norms, according to the H-V theory, take the form of beliefs of the following kinds: 'It is always right to....;, 'it is generally or usually right to...'; 'it is always wrong to ...'; and 'it is generally or usually wrong to.'"(Hunt & Vitell, 2006)			
Reidenbach & Robin,	Deontological Norms		Individually acceptable/Unacceptable Culturally acceptable/Unacceptable		R & R devise a multi

Authors	Item	Definition	Measures	Scale	Notes
1988			Acceptable/Unacceptable to people I most desire Traditionally/Not traditionally acceptable		component scale for ethical evaluations based on ethics philosophy. The category that best matches this construct is described as 'Relativism'.

Appendix 4.1

FIRST ELICITATION SURVEY

Elicitation Survey for Online File sharing Research

Scenario:

Tom and a partner are working on a school project together. To facilitate their work their instructor loans them a laptop computer which they are expected to share. While working with the computer Tom notices his partner has installed file sharing software which enables the user to download music files from the internet. He tells Tom that he is using the software to download copyrighted music files without having to pay for them so that he can listen to music while he works.

List up to five actions Tom might take in this scenario:

A: _____

_____

_____

Please rate the following statements according to how well you agree with them using the provided scale:

- The scenario presents an ethical problem for Tom.

Strongly Agree   1   2   3   4   5   6   7   Strongly Disagree

- The scenario presents a moral dilemma for Tom.

Strongly Agree   1   2   3   4   5   6   7   Strongly Disagree

- The scenario presents a legal dilemma for Tom.

Strongly Agree   1   2   3   4   5   6   7   Strongly Disagree

- The scenario presents an ethical problem for the average college student.

Strongly Agree   1   2   3   4   5   6   7   Strongly Disagree

- The scenario presents a moral dilemma for the average college student.

Strongly Agree   1   2   3   4   5   6   7   Strongly Disagree

- The scenario presents a legal dilemma for the average college student.

Strongly Agree   1   2   3   4   5   6   7   Strongly Disagree

For the actions you have listed previously, place a "+" next to those you feel are ethical and a "- " next to those you feel are unethical. Place a "0" next to the item if you feel it is neither.

Please list any additional unethical actions you may have thought of that Tom might take:

B: _____

_____

Please list any additional ethical actions you may have thought of that Tom might take:

C: _____

_____

- Place a "*" next to the action item in list A, B, or C that you feel is the most appropriate action to take if you were in Tom's position.
- Place a "Δ" next to the action item in list A, B, or C that you feel is the least appropriate action to take if you were in Tom's position.

How do you rate the alternative that "Tom takes no action"?

Highly Unethical

| -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 |

Highly Ethical

Please list any groups or people that would be affected by the actions Tom might take:

_____

_____

_____

_____

_____

Please respond to the statements after the following scenarios with how well you agree with each.

Scenario B

Tom and a partner are working on a school project together. To facilitate their work they have been loaned a laptop computer to share from their instructor. While working with the computer Tom notices his partner has installed file sharing software which enables the user to download files from the internet. He tells Tom that he is using the software to download the latest movie files without having to pay for them. He then burns these movies onto DVDs and sells copies of them to his classmates for a modest charge.

- The scenario presents an ethical problem for Tom.

Strongly Agree   1   2   3   4   5   6   7   Strongly Disagree

List up to five actions Tom might take in this scenario:

_____

_____

_____

_____

_____

Scenario C

Tom and a partner are working on a school project together. To facilitate their work they have been loaned a laptop computer to share from their instructor. Tom observes that while his partner uses the computer, he puts in a music CD and listens to music through headphones while he works.

- The scenario presents an ethical problem for Tom.

Strongly Agree   1   2   3   4   5   6   7   Strongly Disagree

List up to five actions Tom might take in this scenario:

_____

_____

_____
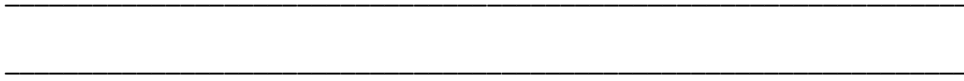
Appendix 4.2

CONSOLIDATED RESPONSES FROM ELICITATION 1

a1	report to instructor about this
a2	download music too
a3	tom could just remove the software from the machine
a4	do nothing
a5	report his partner
a6	ignore it
a7	ask partner to remove software
a8	report his partner to authorities
a9	talk to his partner about stopping
a10	tell his partner it is illegal
a11	tom could report this to the police
a12	use the music also
a13	sell the copyrighted music to others
a14	discuss with partner
a15	stop his friend from using it
a16	report to college about this
a17	copy the downloaded music to cds
a18	download his music to laptop
a19	inform partner of possible consequences
a20	explain why he shouldn't use the software
a21	tell his friend it's wrong to download on a computer that is school property
a22	he could threaten to report him
a23	download movies or software
a24	ask partner to share music files
a25	ask to install on his own computer
a26	explain to his partner it's not ethical
a27	tell other people in the school about an issue to see what they think
a28	contact his partner's parents
a29	delete program & music from laptop
a30	tom can tell his partner that he disagrees with file sharing software
a31	tom could refuse to work with his partner until he deletes the music
a32	tom can choose another partner
a33	he may pretend partner he will report him and get benefit from it
a34	show his partner the best torrent site
a35	tell others to download it without paying
a36	insist for his partner to purchase the music
a37	return laptop to school

a38	he can talk to his partner again & explain the implications
a39	tom may tell his partner that it is not a good idea
a40	tell him this is not right and convince him to delete the program
a41	collect information about illegal download to partner
a42	tell his partner to transfer the software to his own computer and delete the software on the loaned laptop
a43	have the professor uninstall it
a44	help his partner delete the software after using
a45	pretend to delete it
a46	tom can delete the program and let his partner know its wrong
a47	delete the music file
a48	told partner about his action and deleted it
a49	delete the file sharing software w/o telling this partner
a50	take legal action against his partner
a51	contact the fcc
a52	call RIAA
a53	report his partner to the dean
a54	report him to admin
a55	he could offer a compromise and watch his partner delete all the music or he could report him
a56	keep software but not download songs
a57	go along with the downloads
a58	tom may recommend songs to download
x	tell his partner to hook him up
a59	ask partner to assist with music wanted
x	use other programs without paying
a60	ask his professor to change partners
a61	take away his privileges
a62	notify metallica
a63	join in the fun
x	tom takes the status quo
a64	use a different laptop
a65	install one of his own programs
a66	agree to file sharing idea
a67	bring in cds from home for his partner to listen to instead of file sharing
a68	join tom uploading songs
a69	make copies of those movie files and give to

	people
a70	blow up the evidence
a71	lie that he knew about it if partner gets caught
a72	defriending him
x	get another cpu
a73	not participate in downloading
x	close the window
x	copy
b1	do nothing
b2	unplug the headphones so they can listen together
b3	tom might confront his partner to turn off the music
b4	ignore his friend and keep on working
b5	tell partner to turn down the volume
b6	tell his friend to take off the headphones
b7	turn the music off completely
b8	ask to change partners
b9	tom might refuse to work with his partner any more
b10	ask if he could turn it off
b11	tell partner to turn up the volume
b12	get partner's attention if needed
b13	no issues to work through
b14	he doesn't have to do anything about it. It's legal to use a CD to listen to music
b15	tom might just take the music away and work
b16	suggest a better cd that they would both enjoy
b17	make sure they can still get work done
b18	burn the cd
b19	say something if it effects the members' efficiency
b20	say something regardless
b21	be upset but hold his tongue
b22	do his part of the project unaffected by his partner's choices

Appendix 4.3

CARD SORTING

Card sorting for elicitation study instructions

Your task here will be to sort the set of responses that have been given by a group of study participants as possible actions that Tom might take according to each scenario. Please read the scenarios below then follow the instructions provided.

Scenario A

Tom and a partner are working on a school project together. To facilitate their work their instructor loans them a laptop computer which they are expected to share. While working with the computer Tom notices his partner has installed file sharing software which enables the user to download music files from the internet. He tells Tom that he is using the software to download copyrighted music files without having to pay for them so that he can listen to music while he works.

Instructions

Step 1: Group the index cards provided into different piles based on either some logical rationale of your choice or simply by 'gut feeling'.   There is no correct number of groups, so you may create as many groups as you deem necessary, but do not create a group for miscellaneous items. If a group item is seen as different from all others, place it into its own single item group.

Step 2: If you feel an existing item may also belong in another pile, please write the item label on a new blank index card and place it in the appropriate pile.

Scenario B

Tom and a partner are working on a school project together. To facilitate their work they have been loaned a laptop computer to share from their instructor. Tom observes that while his partner uses the computer, he puts in a music CD and listens to music through headphones while he works.

For Scenario B please use the appropriate set of index cards and repeat the procedure followed for Scenario A.

Thank you for taking the time to participate in this study

Appendix 4.4

HIERARCHICAL CLUSTER DENDROGRAM

Dendrogram using Average Linkage (Between Groups)

Rescaled Distance Cluster Combine
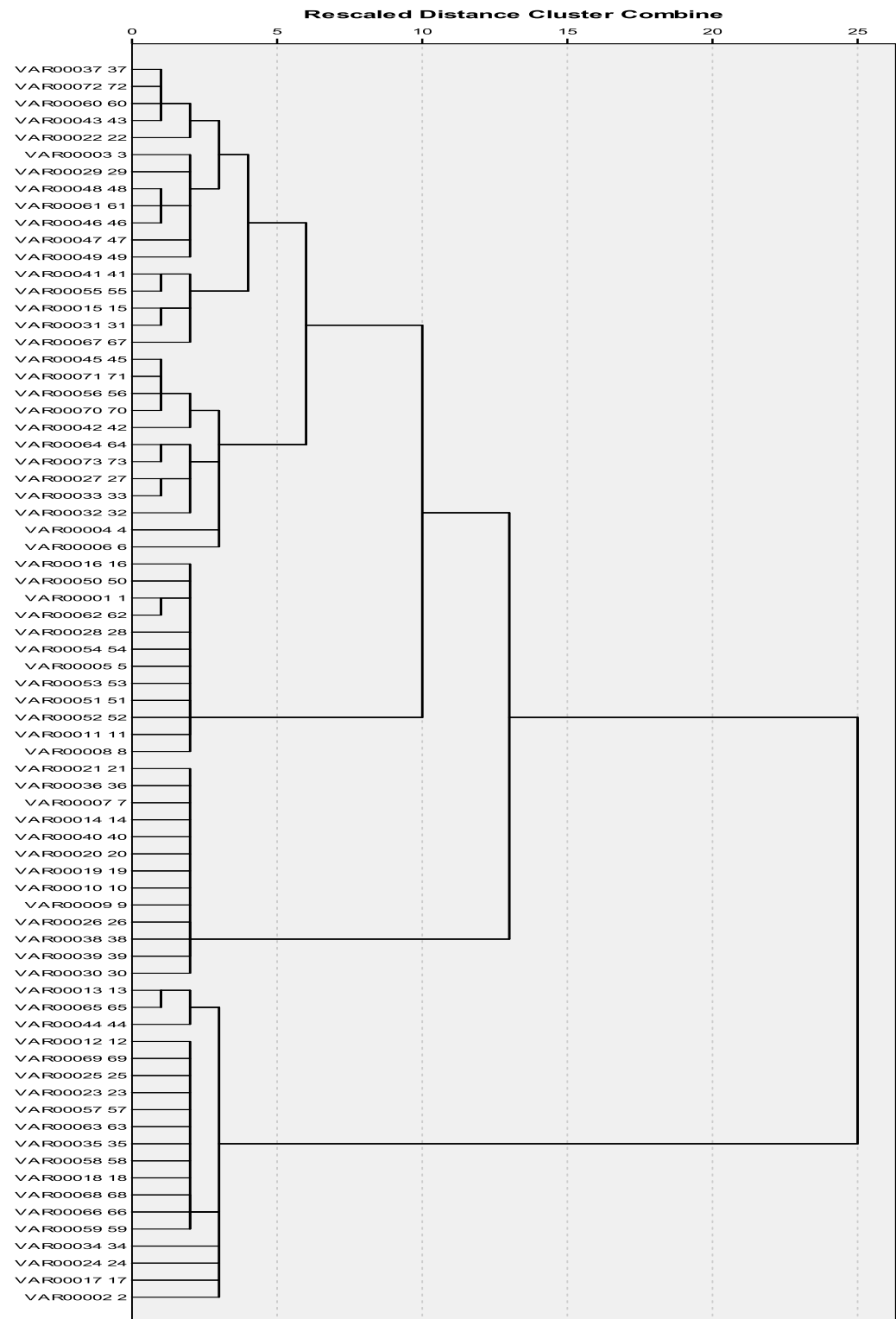
Appendix 4.5

ACTION RESPONSES TO SCENARIOS

Ethical Scneario: You and a partner are working on a school project together. To facilitate your work your instructor loans you a laptop computer which you are expected to share. While working with the computer you notice your partner has installed file sharing software on the computer which enables the user to download music files from the internet. Your partner tells you that he is using the software to download copyrighted music files without having to pay for them so that he can listen to music while he works.

Action 1 - You do not take any action which might stop your partner from participating in the illegal downloads and you do not take any action toward your own participation in the activity.

Action 2 – You seek advice concerning what you should do about the illegal downloads.

Action 3 - You join your partner in the illegal downloads.

Action 4 - You try to persuade your partner to voluntarily stop the illegal downloads.

Action 5 - You report the illegal downloads to an authority with the expectation that the authority will take appropriate action.

Action 6 - You take action to minimize, if not eliminate, the possibility that you will be associated with the illegal downloads. Examples of this action include but are not limited to: asking for a new partner, using a different computer to do your work, and asking your partner to use a different computer to perform the downloads.

Action 7 - You take action which will directly impact the behavior of your partner with the goal of stopping the illegal downloads. Examples of this action include but are not limited to: telling your partner to stop the downloads, deleting the download application software and any music that had been downloaded, and threatening to take other action if your partner does not delete the program and any downloaded music.

Non – Ethical Scneario: You and a partner are working on a school project together. To facilitate your work your instructor loans you a laptop computer which you are expected to share. You observe that while your partner uses the computer, he puts in a music CD and listens to music through headphones while he works.

Action 1 - You do not take any action which would prevent your partner from listening to the music on the computer.

Action 2 - You take action which enables you to listen to the music along with your partner. For example, you may unplug the headphones and use the computer's speakers to hear the music.

Action 3 - You take action intended to stop your partner from listening to the music. Examples of this action include but are not limited to: asking your partner to stop listening to the music, removing the CD from the computer, or refusing to work on the project until your partner stops the music.

Appendix 4.6

SECOND ELICITATION SURVEY

(Ethical dilemma)

An Elicitation Study toward Research on Ethical Decision Making and Peer to Peer File Sharing

You are invited to participate in a study presented to you by Kenneth Shemroske (klshemroske@uh.edu) under the supervision of Dr. Blake Ives and Dr. Wynne Chin of the Bauer College MIS Department. As a participant in this study, you may expect the following:

Main benefits of this study

- Experience participating in information systems research
- Helping to advance the field of MIS through the process of scientific inquiry

Choosing not to participate

Your participation is voluntary and you may refuse to participate or withdraw at any time without penalty or loss of benefits to which you are otherwise entitled. You may also refuse to answer any question. If you are a student, a decision to participate or not or to withdraw your participation will have no effect on your standing.

Purpose of the study

The purpose of this research is to study the ethics behind using information technology at a personal level.

Procedures

A total of approximately 100 students will be asked to participate in this study. If you agree to participate in this research you can expect:

- To be asked to read a scenario which describes a personal use of information technology.
- To complete a survey ranging from 18 to 42 questions based on your perceptions of the scenario.
- To be asked a series of general questions about you (demographics).
- The survey should take approximately 10 minutes to complete.

The total time for this study should not exceed 15 minutes.

Confidentiality

Every effort will be made to maintain the confidentiality of your participation in this project. No participant names or other identifying information are collected as a part of this study.

Benefits

While there is no direct benefit for taking part in this research, you will experience participating in information systems research and contributing to the advancement of the field of MIS through the process of scientific inquiry. Your participation may help investigators better understand the ethical use of information technology.

Publication Statement

The results of this study may be published in professional or scientific journals. It may also be used for educational purposes or for professional presentations. However, the data will be displayed only in aggregate; no individual subject will be identified.

<center>**Elicitation Survey for Online File sharing Research**</center>

Instructions:

In this survey you are given a scenario which presents a situation in which you may perceive there to be a problem. After the scenario several possible actions you might take to resolve the problem are presented. Please read through the scenario and answer the questions corresponding to each of the possible actions.

Scenario:

You and a partner are working on a school project together. To facilitate your work your instructor loans you a laptop computer which you are expected to share. While working with the computer you notice your partner has installed file sharing software on the computer which enables the user to download music files from the internet. Your partner tells you that he is using the software to download copyrighted music files without having to pay for them so that he can listen to music while he works.

Action 1 - You do not take any action which might stop your partner from participating in the illegal downloads and you do not take any action toward your own participation in the activity.

1. What do you see as advantages of this action?

_____

_____

_____

2. What do you see as disadvantages of this action?

_____

_____

_____

3. Is there anything else you associate with action?

_____

_____

_____

4. Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

5. Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

6. Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Action 2 - Seek advice about what you should do about the illegal downloads.

1. What do you see as advantages of this action?

_____

_____

_____

2. What do you see as disadvantages of this action?

_____

_____

_____

3. Is there anything else you associate with action?

_____

_____

_____

4. Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

5. Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

6. Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Action 3 - You join your partner in the illegal downloads.

1. What do you see as advantages of this action?

_____

_____

_____

2. What do you see as disadvantages of this action?

_____

_____

_____

3. Is there anything else you associate with action?

_____

_____

_____

4. Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

5. Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

6. Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Action 4 - You try to persuade your partner to voluntarily stop the illegal downloads.

1. What do you see as advantages of this action?

_____

_____

_____

2. What do you see as disadvantages of this action?

_____

_____

_____

3. Is there anything else you associate with action?

_____

_____

_____

4.   Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

5.   Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

6.   Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Action 5 - You report the illegal downloads to an authority with the expectation that the authority will take appropriate action.

1.   What do you see as advantages of this action?

_____

_____

_____

2.   What do you see as disadvantages of this action?

_____

_____

_____

3. Is there anything else you associate with action?

_____

_____

_____

4. Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

5. Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

6. Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Action 6 - You take action to minimize, if not eliminate, the possibility that you will be associated with the illegal downloads. Examples of this action include but are not limited to: asking for a new partner, using a different computer to do your work, and asking your partner to use a different computer to perform the downloads.

1. What do you see as advantages of this action?

    _____

    _____

    _____

2. What do you see as disadvantages of this action?

    _____

    _____

    _____

3. Is there anything else you associate with action?

    _____

    _____

    _____

4. Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

    _____

    _____

    _____

5. Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

    _____

_____

_____

6. Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Action 7 - You take action which will directly impact the behavior of your partner with the goal of stopping the illegal downloads. Examples of this action include but are not limited to: telling your partner to stop the downloads, deleting the download application software and any music that had been downloaded, and threatening to take other action if your partner does not delete the program and any downloaded music.

1. What do you see as advantages of this action?

_____

_____

_____

2. What do you see as disadvantages of this action?

_____

_____

_____

3. Is there anything else you associate with action?

_____

_____

_____

4. Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

5. Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

6. Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Demographic Information

Gender _____

Age _____

How many months of experience do you have using online file sharing software? ____

Are you currently using online file sharing software? _____

On a scale of 0 to 10, how would you rate your technical expertise in working with file sharing software (0 represents no expertise)? _____

On a scale of 0 to 10, how would you rate your technical expertise in working with computers (0 represents no expertise)? _____

(Non-ethical dilemma)

An Elicitation Study toward Research on Ethical Decision Making and Peer to Peer File Sharing

You are invited to participate in a study presented to you by Kenneth Shemroske (klshemroske@uh.edu) under the supervision of Dr. Blake Ives and Dr. Wynne Chin of the Bauer College MIS Department. As a participant in this study, you may expect the following:

Main benefits of this study

- Experience participating in information systems research
- Helping to advance the field of MIS through the process of scientific inquiry

Choosing not to participate

Your participation is voluntary and you may refuse to participate or withdraw at any time without penalty or loss of benefits to which you are otherwise entitled. You may also refuse to answer any question. If you are a student, a decision to participate or not or to withdraw your participation will have no effect on your standing.

Purpose of the study

The purpose of this research is to study the ethics behind using information technology at a personal level.

Procedures

A total of approximately 100 students will be asked to participate in this study. If you agree to participate in this research you can expect:

- To be asked to read a scenario which describes a personal use of information technology.
- To complete a survey ranging from 18 to 42 questions based on your perceptions of the scenario.
- To be asked a series of general questions about you (demographics).
- The survey should take approximately 10 minutes to complete.

The total time for this study should not exceed 15 minutes.

Confidentiality

Every effort will be made to maintain the confidentiality of your participation in this project. No participant names or other identifying information are collected as a part of this study.

Benefits

While there is no direct benefit for taking part in this research, you will experience participating in information systems research and contributing to the advancement of the field of MIS through the process of scientific inquiry. Your participation may help investigators better understand the ethical use of information technology.

Publication Statement

The results of this study may be published in professional or scientific journals. It may also be used for educational purposes or for professional presentations. However, the data will be displayed only in aggregate; no individual subject will be identified.

Elicitation Survey for Online File sharing Research

Instructions:

In this survey you are given a scenario which presents a situation in which you may perceive there to be a problem. After the scenario several possible actions you might take to resolve the problem are presented. Please read through the scenario and answer the questions corresponding to each of the possible actions.

Scenario:

You and a partner are working on a school project together. To facilitate your work your instructor loans you a laptop computer which you are expected to share. You observe that while your partner uses the computer, he puts in a music CD and listens to music through headphones while he works.

Action 1 - You do not take any action which would prevent your partner from listening to the music on the computer.

7.   What do you see as advantages of this action?

_____

_____

_____

8. What do you see as disadvantages of this action?

_____

_____

_____

9. Is there anything else you associate with action?

_____

_____

_____

10. Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

11. Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

12. Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Action 2 - You take action which enables you to listen to the music along with your partner. For example, you may unplug the headphones and use the computer's speakers to hear the music.

    7.   What do you see as advantages of this action?

_____

_____

_____

    8.   What do you see as disadvantages of this action?

_____

_____

_____

    9.   Is there anything else you associate with action?

_____

_____

_____

    10. Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

    11. Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

12. Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Action 3 - You take action intended to stop your partner from listening to the music. Examples of this action include but are not limited to: asking your partner to stop listening to the music, removing the CD from the computer, or refusing to work on the project until your partner stops the music.

7. What do you see as advantages of this action?

_____

_____

_____

8. What do you see as disadvantages of this action?

_____

_____

_____

9. Is there anything else you associate with action?

_____

_____

_____

10. Please list any groups or people who would approve of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

11. Please list any groups or people who would disapprove of this action if you were to respond in this way to the scenario presented.

_____

_____

_____

12. Please list any other groups or people who come to mind when you think about this action if you were to respond in this way to the scenario presented.

_____

_____

_____

Demographic Information

Gender _____

Age _____

How many months of experience do you have using online file sharing software? ____

Are you currently using online file sharing software? _____

On a scale of 0 to 10, how would you rate your technical expertise in working with file sharing software (0 represents no expertise)? _____

On a scale of 0 to 10, how would you rate your technical expertise in working with computers (0 represents no expertise)? _____

Appendix 4.7

CONSEQUENCES TO ACTIONS

This table shows the consequences for each of the actions described in the survey according to the frequency with which they were given. Consequences with a frequency of 4 or more are given as those preferred for use. Consequences with a frequency of three are listed for further reference.

Table of elicited consequences for given actions
Action 1 – ED - You do not take any action which might stop your partner from participating in the illegal downloads and you do not take any action toward your own participation in the activity.
Consequences:
4+ My partner gets to listen to free music
4+ You do not upset your partner
4+ There is no conflict between you and your partner
4+ You and your partner get in trouble for illegally downloading music
4+ An illegal activity takes place
Action 2 – ED - Seek advice concerning what you should do about the illegal downloads.
Consequences:
4+ The advice makes you better informed
4+ The advice helps you make a better decision about what to do
4+ Your partner gets mad at you
3 You keep yourself from getting into trouble
3 This creates a confrontation with our partner
3 You could still both get in trouble for the illegal downloads
Action 3 – ED - You join your partner in the illegal downloads.
Consequences:
4+ You and your partner get in trouble for illegally downloading music
4+ You get free music
3 You feel guilty for participating
3 You gain peer acceptance from your partner
2 You lose the trust of your instructor
2 You download a virus
Action 4 – ED -: You try to persuade your partner to voluntarily stop the illegal downloads.
Consequences:
4+ You persuade your partner to stop
4+ Your partner does not stop the illegal downloads
4+ Your partner gets upset with you
3 You are doing the right thing
3 This creates a confrontation with your partner
Action 5 - ED -: You report the illegal downloads to an authority with the expectation that the authority will take appropriate action.
Consequences:

4+ You don't get in trouble for your partner's actions
4+ You stop an illegal activity
4+ You do the right thing
4+ Your partner gets in trouble for the illegal downloads
3 Your partner hates you
3 Your partner gets mad
3 This creates a confrontation with your partner
Action 6 – ED - You take action to minimize, if not eliminate, the possibility that you will be associated with the illegal downloads. Examples of this action include but are not limited to: asking for a new partner, using a different computer to do your work, and asking your partner to use a different computer to perform the downloads.
Consequences:
4+ You don't get into trouble for the illegal downloads
4+ You do not participate in an illegal activity
4+ You allow an illegal activity to take place without intervening
4+ You get in trouble for your partner's actions
3 You create a conflict between you and your partner
Action 7 – ED - You take action which will directly impact the behavior of your partner with the goal of stopping the illegal downloads. Examples of this action include but are not limited to: telling your partner to stop the downloads, deleting the download application software and any music that had been downloaded, and threatening to take other action if your partner does not delete the program and any downloaded music.
Consequences:
4+ You stop the illegal downloads
4+ You don't get in trouble for the illegal downloads
4+ You negatively affect the relationship between you and your partner
3 Your partner gets mad at you
Action 8 – NED - You do not take any action which would prevent your partner from listening to the music on the computer.
Consequences:
4+ Your partner works better while listening to music
4+ The music is a distraction to your work
4+ Your are not able to communicate with your partner
3 You are not able to hear the music
Action 9 – NED - You take action which enables you to listen to the music along with your partner. For example, you may unplug the headphones and use the computer's speakers to hear the music.
Consequences:
4+ The music is a distraction to the project
4+ You get enjoyment from listening to the music
4+ You and your partner argue about the type of music to play
4+ The music disrupts others around you
4+ The activity leads to a better working relationship
1 Your partner is offended
Action 10 – NED - You take action intended to stop your partner from listening to the music. Examples of this action include but are not limited to: asking your partner to stop listening to

the music, removing the CD from the computer, or refusing to work on the project until your partner stops the music.
Consequences:
4+ You are better able to focus on your project
4+ Your partner gets mad
4+ This creates conflict between you and your partner
4+ You and your partner do not work well together on the project
3 You lose your partner

Appendix 4.8

MAIN SURVEY DEFINITIONS AND MEASURES

Behavioral Intention

Definition: (two part) a - "conceptualized as the likelihood that any particular alternative will be chosen" (Hunt & Vitell, 1986); b - "one's estimated likelihood of performing the action, whether or not a commitment has been made" (Warshaw & Davis, 1985)

*Note – Though intention is the traditional operationalization for this measure it doesn't work well for this scenario based study. In lieu of this, the construct is operationalized here as expectation.

BIC1: Please indicate the likelihood that you would choose this action among all possible actions. (scale: 1 to 7, very unlikely to very likely)

BIC2: Of all possible things you could do, what is the likelihood that you would pick this action? (scale: 1 to 7, very unlikely to very likely)

BIL1: If faced with this scenario in reality, what is the probability you would actually perform the given behavior? (scale: 0 to 100, no probability, ….)

BIL2: If faced with this scenario in reality, what is your expectation that you would follow through with this action? (scale: 1 to 7, no expectation to full expectation)

Ethical Judgments/Overall judgment

Definition: the degree to which one thinks a given alternative is an appropriate alternative to act on considering all other things, moral and utility based. (Rallapalli, et al., 1998)

EJ1-3: Now please provide us with your overall evaluation of this action. Specifically, try to combine both your moral perspectives of this action and cost/benefits analyses plus anything else you feel may be relevant. Overall my judgment of this action is:

(scales: inappropriate/appropriate, unacceptable/acceptable, unreasonable/reasonable)

Deontological Evaluation

Definition: The individual evaluation of the inherent rightness or wrongness of the behaviors implied by each alternative based only on the act itself, not considering the possible outcomes.

DE1-3: Each of the following actions has several possible consequences. Please disregard the fact that these consequences could bring harm or benefit, rather evaluate the action solely according to the nature of the act itself: (scale: -3 to 3)

Immoral/Moral , Unethical/Ethical, Right/Wrong

Deontological Norms (personal norms/internal values)

Definition: General or issue specific beliefs that are internalized and relevant to the nature of an action without regard for its consequences in the sense of its acceptability, morality, or ethicality.

DN1: Participating in activities which do harm to others is: (scale: -3 to 3, morally wrong/morally right)

DN2: taking someone's property without their permission is: (scale: -3 to 3, morally wrong/morally right)

DN3: taking someone's property without their knowledge is: (scale: -3 to 3, morally wrong/morally right)

DN4: borrowing somebody's things without returning the favor is: (scale: -3 to 3, morally wrong/morally right)

DN5: enjoying the benefits of someone's work without compensating them is: (scale: -3 to 3, morally wrong/morally right)

Teleological Evaluation

Definition: Evaluating the sum total of goodness versus badness likely to be produced by each alternative when considering that evaluation based on possible outcomes of the alternative and not one's moral evaluation of the action.

TE1: Taking into account the probability and desirability of the consequences, and their impact on all people involved, this action is: (scale: -3 to 3, harmful to beneficial)

TE2: Taking into account the probability and desirability of the consequences, and their impact on all people involved, this action results in what type of utility? (scale: -3 to 3, very low to very high)

TE3: Taking into account the probability and desirability of the consequences, and their impact on all people involved, this action results in what type of cost-benefit ratio? (scale: -3 to 3, Negative to Positive)

Probabilities of Consequences

Definition: The likelihood that any consequence will occur for any stakeholder associated with the action

PC 1: For each possible consequence to a given action respondents are asked: What is the likelihood of this consequence occurring? (scale: 0 to 100, No likelihood of Highly Likely)

Desirability of Consequences/personal importance

Definition: "the desirability or undesirability of each consequence" (Hunt & Vitell, 1986)

DC 1: For each possible consequence to a given action respondents are asked: How much would you want this consequence to happen to you? (scale: -3 to 3, Highly Undesirable to Highly Desirable)

DC2: For each possible consequence to a given action respondents are asked: How much would people other than you want this consequence to happen? (scale: -3 to 3, Highly Undesirable to Highly Desirable)

Importance of Stakeholders

Definition: The degree to which one considers the positive or negative consequences of an action to be meaningful for all those affected by the action.

IS1: For each possible consequence to a given action respondents are asked: How much would you care that this consequence would have an impact on other people? (scale: -3 to 3, Very Little to Very Much)

Subjective Norm

Definition: Perceived social pressure to perform or not perform a behavior (Ajzen, 1990).

SN1: Influential people in my life would think that I should take this action. (scale: -3 to 3, strongly disagree to strongly agree)

SNMC1: In general, I want to do what influential people in my life think that I should do. (scale: -3 to 3, strongly disagree to strongly agree)

SN2: People whose opinion I respect would think that I should take this action. (scale: -3 to 3, strongly disagree to strongly agree)

SNMC2: In general, I want to do what people whose opinion I respect think that I should do. (scale: -3 to 3, strongly disagree to strongly agree)

Subjective Norm - Pressure

Definition: Direct pressure felt from others concerning a particular action

 (Items include traditional subjective norm, motivation to comply, pressure, deontological norms, teleological norms, and importance of stakeholders)

SNP1: Overall, I would feel pressure from others to take this action. (scale: -3 to 3, strongly disagree to strongly agree)

SNP2: Overall, I would feel compelled by others to take this action. (scale: -3 to 3, strongly disagree to strongly agree)

Subjective Norm – Moral

Definition: Perceived social pressure to perform or not perform a behavior based exclusively on the nature of the behavior as being the right or wrong thing to do.

SND1: Influential people in my life would think that I should take this action because it is the morally right thing to do.

SND2: People whose opinion I respect would think that I should take this action because it is the morally acceptable thing to do.

Subjective Norm – Utility

Definition: Perceived social pressure to perform or not perform a behavior, disregarding the morality of the action but considering the costs vs. benefits evaluation of the action.

SNT1: Influential people in my life would think I should take this action because they believe the benefits outweigh the costs. (scale: -3 to 3, strongly disagree to strongly agree)

SNT2: People whose opinion I respect would think that I should take this action because they believe there are more positives to this action than negatives. (scale: -3 to 3, strongly disagree to strongly agree)

Attitude

Definition: The attitude toward the behavior and refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question (Ajzen, 1991)

A1: For each of the alternative actions identified subjects are asked if performing this action is a: Bad idea/good idea (scale: -3 to 3)

A2: For each of the alternative actions identified subjects are asked if performing this action is a: Foolish idea/Wise idea (scale: -3 to 3)

A3: For each of the alternative actions identified subjects are asked if performing this action would be: Unpleasant/Pleasant (scale: -3 to 3)

A4: For each of the alternative actions identified subjects are asked if performing this action would be: Unfavorable/Favorable (scale: -3 to 3)

Others considered: undesirable/desirable, dislike/like, unfavorable/favorable, negative/positive, unsatisfying/satisfying, harmful/beneficial

Perceived Behavioral Control

Definition: The perceived ease or difficulty of performing the behavior (Ajzen, 1991)

PBC1: I would be able to perform this action. (-3 to 3, strongly disagree to strongly agree)

PBC2: Performing this action is within my control. (-3 to 3, strongly disagree to strongly agree)

PBC 3: It is easy for me to perform this action (-3 to 3, strongly disagree to strongly agree)

Ethical Problem

Definition: The extent to which a problem is perceived as being ethical in nature. This is a manipulation checks to determine whether or not participants perceive the scenario as representing an ethical dilemma. The

EP1: The scenario presents an ethical problem (-3 to 3, strongly disagree to strongly agree)

EP2: The scenario presents a moral dilemma (-3 to 3, strongly disagree to strongly agree)

EP3: The scenario presents a legal dilemma (-3 to 3, strongly disagree to strongly agree)

EP4: To the average student the scenario presents a legal dilemma (-3 to 3, strongly disagree to strongly agree)

Latent Marker Variables:

LMV1: In general, people's moods are better on a sunny day. (scale: -3 to 3, strongly disagree to strongly agree)

LMV2: Undergraduate educational programs are effective at teaching and developing skills in students.   (scale: -3 to 3, strongly disagree to strongly agree)

LMV3: Businesses will get better performance from their employees on sunny days if they have a view to the outside. (scale: -3 to 3, strongly disagree to strongly agree)

LMV4: Business performance is directly related to general public perception of the business building architecture. (scale: -3 to 3, strongly disagree to strongly agree)

LMV5: Using the financial market as an indicator for choosing a career path is a: (scale: -3 to 3, bad idea to good idea)

LMV6: Always viewing the weather out the window before leaving the house is a: (scale: -3 to 3, bad idea to good idea)

LMV7: Using online resources to research a paper is a: (scale: -3 to 3, bad idea to good idea)

LMV8: Spending more than 20 hours preparing for a major exam is a: (scale: -3 to 3, bad idea to good idea)

Appendix 4.9

PILOT 1 SURVEY EXAMPLE

Research on Ethical Decision Making and Peer to Peer File Sharing

You are invited to participate in a study presented to you by Kenneth Shemroske (klshemroske@uh.edu) under the supervision of Dr. Blake Ives and Dr. Wynne Chin of the Bauer College MIS Department. As a participant in this study, you may expect the following:

Main benefits of this study

- Experience participating in information systems research
- Helping to advance information systems through the process of scientific inquiry

Choosing not to participate

Your participation is voluntary and you may refuse to participate or withdraw at any time without penalty. You may also refuse to answer any question. If you are a student, a decision not to participate or to withdraw your participation will have no effect on your standing.

Purpose of the study

The purpose of this research is to study the ethics behind using information technology at a personal level.

Procedures

A total of approximately 100 students will be asked to participate in this study. If you agree to participate in this research you can expect:

- To be asked to read a scenario which describes a personal use of information technology.
- To complete a survey ranging from 18 to 42 questions based on your perceptions of the scenario.
- To be asked a series of general questions about you (demographics).

The survey should take approximately 15 minutes to complete; the total time for this study should not exceed 20 minutes.

Confidentiality

Every effort will be made to maintain confidentiality. No participant names or other identifying information are collected as a part of this study.

Benefits

While there is no direct benefit for taking part in this research, you will experience participating in information systems research and contributing to the advancement of the field of MIS

through the process of scientific inquiry. Your participation may help investigators better understand the ethical use of information technology.

Publication Statement

The results of this study may be published in professional or scientific journals. It may also be used for educational purposes or for professional presentations. However, the data will be displayed only in aggregate; no individual subject will be identified.

Main Study Survey for Online File sharing Research

Instructions:

Many questions in this survey may seem repetitive. Please bear with us. We would like you to answer all of them. Analogous to a doctor requiring multiple measures of blood pressure, we often have to take averages of several questions to obtain accurate assessments.

Preliminary Questions:

You are given an initial set of questions which are independent of the rest of the study. These will act as a normative gauge so please take your time to answer accurately.

Scenario Questions:

You are then given a scenario in which you are asked to place yourself. Based on this scenario several possible actions that you could take are presented. For each of these actions you are given a series of statements with which to evaluate the action as well as some possible consequences of each action. You will be asked to rate the desirability and likelihood of each of these consequences. Please indicate your response to each statement according to the scale presented by circling the appropriate number.

More questions will follow that pertain to the described action you could take as a result of the scenario. Please indicate your answer to these questions by circling the number which best represents your response.

Preliminary questions:

Statement	Morally Wrong			Neither			Morally Right
Ignoring an illegal activity is:	-3	-2	-1	0	1	2	3
Joining another in an illegal activity is:	-3	-2	-1	0	1	2	3
Trying to persuade an individual from committing an illegal act is:	-3	-2	-1	0	1	2	3
Disassociating yourself from illegal activity without taking action to stop that activity is:	-3	-2	-1	0	1	2	3
Taking direct action to stop an illegal activity is:	-3	-2	-1	0	1	2	3
Breaking the law is:	-3	-2	-1	0	1	2	3
Participating in activities which do harm to others is:	-3	-2	-1	0	1	2	3

For the remaining questions please reference the following scenario and action that follows. While answering the questions, put yourself in the scenario and answer as if you have taken the action described below in response to the dilemma presented in the scenario.

You and a partner are working on a school project together. To facilitate your work your instructor loans you a laptop computer which you are expected to share. While working with the computer you notice your partner has installed file sharing software which enables the user to download music files from the internet. He tells you that he is using the software to download copyrighted music files without having to pay for them so that he can listen to music while he works.

Action: You do not take any action which might stop your partner from participating in the illegal downloads and you do not participate in the activity yourself.

Statement	Very Unlikely						Very Likely
Please indicate the likelihood that you would choose this action among all possible actions:	-3	-2	-1	0	1	2	3
If faced with this scenario in reality, what is your expectation that you would follow through with this action?	-3	-2	-1	0	1	2	3

	No Percentage										100%
Of all possible things you could do, what is the likelihood that you would pick this action?	0	10	20	30	40	50	60	70	80	90	100
If faced with this scenario in reality, what is the probability you would actually perform the given behavior?	0	10	20	30	40	50	60	70	80	90	100

The following table lists possible consequences of the action described above. For each consequence please circle the number which best represents your assessment according to each statement.

Consequence	What is the likelihood of the consequence occurring?	How much would you want this consequence to happen to you?	How much would people other than you want this consequence to happen?	How much would you care that this consequence would have an impact on other people?
	No Likelihood — Highly Likely	Highly Undesirable — Highly Desirable	Highly Undesirable — Highly Desirable	Very Little — Very Much
My partner gets to listen to free music	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3
You do not upset your partner	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3
There is no conflict between you and your partner	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3
You and your partner get in trouble for illegally downloading music	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3
An illegal activity takes place	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3

Now that you've considered the consequences, please respond to these statements once more:

Statement	Very Unlikely						Very Likely

Please indicate the likelihood that you would choose this action
among all possible actions: -3 -2 -1 0 1 2 3
Of all possible things you could do, what is the likelihood
that you would pick this action? -3 -2 -1 0 1 2 3

Statement	No Percentage										100%

If faced with this scenario in reality, what is the probability you
would actually perform the given behavior? 0 10 20 30 40 50 60 70 80 90 100
If faced with this scenario in reality, what is your expectation that
you would follow through with this action? 0 10 20 30 40 50 60 70 80 90 100

Statement	Strongly Disagree						Strongly Agree

I would be able to perform this action. -3 -2 -1 0 1 2 3
Performing this action is entirely within my control. -3 -2 -1 0 1 2 3
Influential people in my life would think that I should take this action. -3 -2 -1 0 1 2 3
In general, I want to do what influential people in my life think that I should do. -3 -2 -1 0 1 2 3
People whose opinion I respect would think that I should take this action. -3 -2 -1 0 1 2 3
In general, I want to do what people whose opinion I respect think that I should do -3 -2 -1 0 1 2 3
Overall, I would feel pressure from others to take this action. -3 -2 -1 0 1 2 3
Overall, I would feel compelled by others to take this action. -3 -2 -1 0 1 2 3
Influential people in my life would think that I should take this action
because it is the morally right thing to do. -3 -2 -1 0 1 2 3

Statement	Strongly Disagree						Strongly Agree

People whose opinion I respect would think that I should take this action because it is the morally acceptable thing to do.

-3 -2 -1 0 1 2 3

Influential people in my life would think I should take this action because they believe the benefits outweigh the costs.

-3 -2 -1 0 1 2 3

Statement	Strongly Disagree						Strongly Agree

People whose opinion I respect would think that I should take this action because they believe there are more positives to this action than negatives.

-3 -2 -1 0 1 2 3

Performing this action would be (a):

Bad Idea	-3	-2	-1	0	1	2	3	Good Idea
Foolish Idea	-3	-2	-1	0	1	2	3	Wise Idea
Unpleasant	-3	-2	-1	0	1	2	3	Pleasant
Unfavorable	-3	-2	-1	0	1	2	3	Favorable

This action has several possible consequences. Please disregard the fact that these consequences could bring harm or benefit, rather evaluate the action solely according to the nature of the act itself:

Immoral	-3	-2	-1	0	1	2	3	Moral
Unethical	-3	-2	-1	0	1	2	3	Ethical
Wrong	-3	-2	-1	0	1	2	3	Right

Statement	Harmful						Beneficial

Taking into account the probability and desirability of the consequences,
and their impact on all people involved, this action is: -3   -2   -1   0   1   2   3

Statement	Very Low						Very High

Taking into account the probability and desirability of the consequences, and
their impact on all people involved, this action results in what type of utility?   -3   -2   -1   0   1   2   3

Statement	Negative						Positive

Taking into account the probability and desirability of the consequences,
and their impact on all people involved, this action results in what type
of cost-benefit ratio?   -3   -2   -1   0   1   2   3

Now please provide us with your overall evaluation of this action. Specifically, try to combine both your moral perspectives of this action and cost/benefits analyses plus anything else you feel may be relevant. Overall my judgment of this action is:

Inappropriate	-3	-2	-1	0	1	2	3	Appropriate
Unacceptable	-3	-2	-1	0	1	2	3	Acceptable
Unreasonable	-3	-2	-1	0	1	2	3	Reasonable

Please respond to each of the following statements accordingly:

Statement	Strongly Disagree						Strongly Agree
In general, people's moods are better on a sunny day.	-3	-2	-1	0	1	2	3
Undergraduate educational programs are effective at teaching and developing skills in students.	-3	-2	-1	0	1	2	3
Businesses will get better performance from their employees on sunny days if they have a view to the outside.	-3	-2	-1	0	1	2	3
Business performance is directly related to general public perception of the business building architecture.	-3	-2	-1	0	1	2	3

Statement	Bad Idea						Good Idea
Using the financial market as an indicator for choosing a career path is a:	-3	-2	-1	0	1	2	3
Always viewing the weather out the window before leaving the house is a:	-3	-2	-1	0	1	2	3
Using online resources to research a paper is a:	-3	-2	-1	0	1	2	3
Spending more than 20 hours preparing for a major exam is a:	-3	-2	-1	0	1	2	3

Statement	Morally Wrong						Morally Right
Breaking the law is:	-3	-2	-1	0	1	2	3

Demographic information:

Gender _____

Age _____

Undergraduate_____   Graduate_____

Years of work experience _____years _____months

How much experience do you have using online file sharing software? _____years _____months

Are you currently using online file sharing software? _____

On a scale of 0 to 10, how would you rate your technical expertise in working with file sharing software (0 represents no expertise)? _____

On a scale of 0 to 10, how would you rate your technical expertise in working with computers (0 represents no expertise)? _____

Appendix 4.10

PILOT 1 LOADINGS AND CROSS LOADINGS

indicator	SNDeon	DeonNorm	BehavInt	BehavExp	BehavIntB	BehavExpl	SNPressur	SNTeleo	Attitude	DeonEval	SNMotiv	SubNorm	PBC	TeleoEval	EthJudge	LMAgree	LMIdea	
SND1	0.9806	-0.249	0.224	0.1095	0.2124	0.2646	0.4778	0.7536	0.4384	0.2656	0.2221	0.6631	0.3347	0.4755	0.3485	0.3235	0.3015	SND1
SND2	0.9828	-0.3124	0.2133	0.0927	0.1752	0.2578	0.5738	0.7356	0.5109	0.3666	0.2483	0.683	0.2822	0.5286	0.3974	0.3573	0.268	SND2
DN1	-0.1232	0.1667	-0.255	-0.1346	0.022	-0.0818	-0.0728	-0.1097	-0.2018	-0.012	-0.0155	-0.1526	-0.1685	0.0401	-0.1684	-0.067	-0.2306	DN1
DN2	0.1127	-0.2559	-0.0218	-0.0504	0.0451	0.0094	-0.032	0.0769	0.012	0.0674	0.0139	-0.0369	-0.0323	-0.0559	0.0503	0.1622	-0.0457	DN2
DN3	0.0703	0.0925	0.1829	0.2465	0.0665	0.13	0.3162	0.0067	0.0781	0.1319	-0.1148	0.0446	0.0252	-0.0052	0.0765	-0.126	-0.1834	DN3
DN4	0.1256	-0.6302	0.0707	0.0885	0.0527	0.0064	0.1226	0.2428	0.2964	0.2817	0.3652	0.2683	0.2933	0.2874	0.2703	0.2488	-0.002	DN4
DN5	0.163	0.1028	0.0038	0.1176	0.0228	0.2341	0.2356	0.0778	0.0264	-0.1172	-0.1352	-0.0331	-0.0981	-0.041	-0.0369	0.0023	-0.1719	DN5
DN6	0.0981	-0.2937	0.0823	0.0059	0.1573	0.0916	0.145	0.0756	0.0916	-0.0205	0.2095	-0.0536	0.0043	0.0077	0.1218	0.0179	0.1256	DN6
DN7	-0.2088	0.7018	-0.112	-0.1521	-0.1186	0.036	-0.172	0.0158	-0.1077	-0.2431	-0.064	-0.1831	-0.1474	-0.0159	-0.5065	-0.6047		DN7
BI1	0.2342	-0.3503	0.9457	0.8794	0.7472	0.7442	0.2074	0.4229	0.2746	0.4542	0.348	0.3858	0.6209	0.3264	0.4409	0.132	0.1474	BI1
BI2	0.1878	-0.2694	0.9356	0.8758	0.6428	0.6745	0.167	0.3805	0.2415	0.3582	0.1915	0.3729	0.5091	0.2886	0.3463	0.1805	0.3334	BI2
BIE1	0.1164	-0.2303	0.8601	0.9416	0.7289	0.7127	0.2689	0.3466	0.3271	0.3739	0.3226	0.3971	0.6305	0.2646	0.3509	-0.0178	0.0175	BIE1
BIE2	0.0727	-0.0936	0.8856	0.9249	0.5948	0.6885	0.1079	0.3396	0.1885	0.3378	0.148	0.3666	0.4946	0.296	0.3026	-0.008	0.0532	BIE2
BI1b	0.2021	-0.2088	0.7455	0.6767	0.9782	0.7879	0.0543	0.419	0.4312	0.4667	0.1627	0.3501	0.5914	0.4151	0.5774	0.0719	0.2653	BI1b
BI2b	0.1884	-0.144	0.7115	0.7209	0.9718	0.8523	0.1472	0.4262	0.4698	0.5274	0.1118	0.453	0.6	0.465	0.6047	-0.0257	0.0668	BI2b
BIE2b	0.2876	-0.1331	0.739	0.7309	0.8109	0.9857	0.2452	0.5825	0.4829	0.4589	0.1839	0.532	0.6154	0.5558	0.6443	0.0558	0.0975	BIE2b
BIE1b	0.2369	-0.134	0.7502	0.7505	0.8482	0.9858	0.2379	0.5291	0.445	0.4293	0.2826	0.5399	0.5988	0.5834	0.6356	0.0337	0.1471	BIE1b
SNP1	0.5585	-0.0941	0.1801	0.1903	0.0857	0.2207	0.9674	0.4692	0.3035	0.2659	0.2361	0.4582	0.2476	0.3457	0.2867	0.1234	0.0687	SNP1
SNP2	0.4791	-0.1131	0.205	0.2101	0.1159	0.2552	0.966	0.4323	0.3204	0.3685	0.091	0.4321	0.1993	0.3343	0.3507	0.1583	0.0328	SNP2
SNT1	0.7942	-0.2302	0.3829	0.3119	0.3947	0.4727	0.4733	0.9318	0.57	0.5415	0.3376	0.7571	0.5036	0.6687	0.5498	0.1798	0.2543	SNT1
SNT2	0.634	-0.3952	0.4154	0.3773	0.4126	0.5909	0.4091	0.9389	0.59	0.5199	0.4469	0.7949	0.6134	0.7965	0.6719	0.3015	0.3192	SNT2
A1	0.4523	-0.26	0.1938	0.2106	0.3911	0.3853	0.242	0.6078	0.8938	0.4854	0.2372	0.6513	0.5556	0.6152	0.695	0.0725	0.0535	A1
A2	0.2716	-0.0651	0.1422	0.1587	0.376	0.3173	0.1176	0.3313	0.8377	0.4451	-0.0683	0.3783	0.3528	0.4038	0.4747	0.1336	-0.122	A2
A3	0.3248	-0.1337	0.2824	0.3452	0.3601	0.4006	0.4676	0.4612	0.7294	0.4185	0.102	0.4291	0.4974	0.4201	0.4477	-0.0257	-0.1366	A3
A4	0.4993	-0.3303	0.2713	0.2092	0.3752	0.4175	0.2308	0.5685	0.826	0.4023	0.2884	0.5806	0.4231	0.6177	0.584	0.2904	0.3116	A4
DE1	0.3044	-0.2216	0.4102	0.3949	0.5254	0.456	0.3167	0.5261	0.5529	0.9496	0.1352	0.4725	0.4492	0.576	0.5659	0.0431	-0.0385	DE1
DE2	0.3011	-0.2677	0.4279	0.3544	0.4396	0.4362	0.3262	0.5463	0.4587	0.9658	0.0726	0.4298	0.4292	0.5491	0.4928	0.1756	0.065	DE2
DE3	0.3255	-0.2485	0.4028	0.3486	0.4392	0.4	0.2996	0.5564	0.5051	0.9617	0.07	0.4789	0.4874	0.5336	0.4803	0.1277	0.0352	DE3
SNMC1	0.1407	-0.4045	0.3034	0.3088	0.1096	0.2286	0.1636	0.3374	0.1899	0.0691	0.922	0.4521	0.3819	0.3161	0.2335	0.1459	0.2087	SNMC1
SNMC2	0.3138	-0.4135	0.2367	0.1707	0.1533	0.2128	0.1505	0.4299	0.1738	0.1134	0.919	0.4015	0.2997	0.3549	0.1391	0.2332	0.2832	SNMC2
SN1	0.5705	-0.2083	0.3314	0.3915	0.3599	0.5001	0.377	0.7142	0.6578	0.3884	0.479	0.9457	0.6093	0.6936	0.5807	0.0673	0.0799	SN1
SN2	0.7263	-0.2509	0.4312	0.3876	0.417	0.5312	0.4935	0.8525	0.5597	0.5191	0.4039	0.9543	0.5898	0.733	0.573	0.1411	0.1619	SN2
PBC1	0.3466	-0.381	0.6211	0.6232	0.6434	0.6271	0.2474	0.6357	0.6025	0.5154	0.3201	0.6307	0.9818	0.518	0.5672	0.08	0.1657	PBC1
PBC2	-0.0288	-0.0558	0.1328	0.1663	0.0872	0.1866	0.0182	0.0551	0.0556	0.0015	0.3773	0.2502	0.4817	0.0131	0.2016	-0.1037	0.0354	PBC2
TE1	0.5835	-0.293	0.3692	0.3242	0.3454	0.5199	0.4101	0.826	0.5955	0.6212	0.4647	0.7822	0.5995	0.8802	0.6785	0.2545	0.1477	TE1
TE2	0.2368	-0.1717	0.2956	0.2776	0.2679	0.3675	0.1615	0.5636	0.3627	0.3635	0.1837	0.5248	0.2936	0.8061	0.4896	0.3076	0.2238	TE2
TE3	0.3817	-0.1431	0.1278	0.1285	0.5089	0.527	0.2526	0.5159	0.6271	0.4101	0.179	0.5197	0.2293	0.7767	0.6243	0.2375	0.1183	TE3
EJOJ1	0.3905	-0.2865	0.3759	0.3025	0.5569	0.5761	0.2986	0.6361	0.6452	0.5617	0.1546	0.5683	0.4846	0.6966	0.9718	0.2184	0.2165	EJOJ1
EJOJ2	0.4386	-0.3423	0.5004	0.4121	0.6223	0.6871	0.3885	0.7039	0.6641	0.5448	0.2772	0.6579	0.6209	0.7476	0.9688	0.3089	0.2994	EJOJ2
EJOJ3	0.2536	-0.1737	0.3147	0.2895	0.5399	0.6082	0.2523	0.5371	0.6643	0.4399	0.1332	0.5166	0.5103	0.6656	0.957	0.0806	0.1657	EJOJ3
LMV1	0.1799	-0.2035	0.0006	-0.0477	0.0132	0.1633	0.0899	0.1698	0.1114	0.0763	0.2933	0.2513	-0.0667	0.2968	0.2059	0.4695	0.1004	LMV1
LMV2	0.2533	-0.4028	0.1005	-0.0635	-0.0361	-0.0779	0.1711	0.1318	0.094	0.1394	0.0548	0.025	0.0869	0.1458	0.0968	0.7178	0.5367	LMV2
LMV3	-0.01	-0.1931	0.143	0.0354	-0.0287	0.0547	-0.2023	-0.0024	0.077	-0.0125	0.0782	-0.0086	0.0641	0.1789	0.1806	0.491	0.2068	LMV3
LMV4	0.3175	-0.4286	0.1613	0.0525	0.0824	0.0326	0.1418	0.2401	0.0895	0.0505	0.1191	0.0274	0.0375	0.2118	0.1182	0.7415	0.3717	LMV4
LMV5	0.0129	-0.0747	-0.3991	-0.2969	-0.3233	-0.2198	0.1707	-0.0178	-0.0462	-0.1276	0.0643	-0.0847	-0.2265	0.1202	0.0143	0.0612	-0.123	LMV5
LMV6	0.0187	-0.2209	0.1497	-0.0124	0.1687	0.0573	-0.3243	-0.0055	0.0026	-0.0093	0.0782	-0.0566	0.0612	0.006	0.1521	0.3679	0.6058	LMV6
LMV7	0.3285	-0.5387	0.274	0.0755	0.172	0.1758	0.0229	0.2777	0.0275	0.0642	0.154	0.0698	0.1245	0.1218	0.1597	0.3335	0.8087	LMV7
LMV8	0.1358	-0.1998	-0.0428	-0.0771	-0.0672	-0.0637	0.3379	0.1834	0.0721	-0.0665	0.3044	0.1985	0.0763	0.2558	0.1851	0.4163	0.5264	LMV8

Appendix 4.11

PILOT 2 SURVEY CHANGES

Preliminary questions:

Statement	Morally Wrong			Neither			Morally Right

(DN changes)

Statement							
Participating in activities which do harm to others is:	-3	-2	-1	0	1	2	3
Taking someone's property without their permission is:	-3	-2	-1	0	1	2	3
Taking somebody's property without their knowledge is:	-3	-2	-1	0	1	2	3
Borrowing somebody's things without returning the favor is:	-3	-2	-1	0	1	2	3
Enjoying the benefits of someone's work without compensating them is:	-3	-2	-1	0	1	2	3
Breaking the law is:	-3	-2	-1	0	1	2	3

(PBC changes)

Statement							
I would be able to perform this action.	-3	-2	-1	0	1	2	3
Performing this action is within my control.	-3	-2	-1	0	1	2	3
It is easy for me to perform this action.	-3	-2	-1	0	1	2	3

Appendix 4.12

PILOT 2 LOADINGS AND CROSS LOADINGS

indicator	SNDeon	DeonNorr	BehavInt	BehavExp	BehavIntE	BehavExp	SNPressur	SNTeleo	Attitude	DeonEval	SNMotiv	SubNorm	PBC	TeleoEval	EthJudge	LMAgree	LMIdea	EthDilemr	MoralDile	LegalDilemma	
SND1	0.9268	0.1507	0.3026	0.2739	0.3921	0.3861	0.3764	0.6451	0.3972	0.2939	0.4798	0.5577	0.1238	0.4236	0.3993	0.0786	0.2591	0.1377	0.0655	0.0591	SND1
SND2	0.9421	0.1493	0.3006	0.2596	0.4328	0.4614	0.3386	0.7591	0.5491	0.4924	0.3213	0.6077	0.1165	0.4762	0.5239	-0.0194	0.1166	0.0235	-0.0371	0.0622	SND2
DN1	0.1475	0.716	0.013	0.0749	0.1369	0.1532	0.1278	0.2005	0.1322	0.1741	0.1065	0.1274	0.0714	0.1545	0.2325	-0.22	0.0166	0.1013	0.1753	0.1683	DN1
DN2	0.0166	0.8038	-0.0194	0.029	0.089	0.085	0.1866	0.0638	0.0615	0.1457	0.0624	0.0799	-0.0354	0.105	0.0956	-0.1647	-0.2042	-0.0623	-0.013	0.1063	DN2
DN3	0.1516	0.8385	0.1041	0.1353	0.1999	0.2178	0.1385	0.2032	0.174	0.2413	0.0503	0.1088	0.0584	0.1974	0.1892	0.0068	-0.0619	0.0634	-0.0231	0.1124	DN3
DN4	-0.105	0.2685	0.1196	0.1275	0.0579	0.0285	-0.0098	-0.0675	-0.0277	-0.0723	0.1343	-0.1798	0.139	-0.0023	-0.0745	-0.003	-0.0213	0.1056	-0.097	0.0216	DN4
DN5	-0.162	0.3775	0.0937	0.0779	0.0489	0.0944	0.0263	-0.0743	0.0139	0.038	-0.0038	-0.1189	0.1689	-0.0325	-0.0924	0.0105	-0.1817	0.0494	-0.0385	-0.0767	DN5
DN6	0.0471	0.5803	0.0528	0.0452	-0.024	0.0201	-0.0519	0.017	0.0529	0.0864	-0.0236	0.0203	0.0456	0.0443	0.0859	-0.0881	-0.1133	-0.0143	-0.0841	0.0546	DN6
BI1	0.2349	0.129	0.8933	0.7999	0.6308	0.5607	0.0358	0.1882	0.3344	0.2421	0.2161	0.3214	0.3107	0.1779	0.2639	0.0462	0.0803	0.0654	0.0881	0.0517	BI1
BI2	0.3423	-0.0316	0.9168	0.7829	0.6705	0.7101	0.0106	0.3602	0.4168	0.205	0.2398	0.3986	0.3274	0.3711	0.3355	0.1327	0.0551	0.0509	0.1013	-0.0191	BI2
BE1	0.2286	0.1579	0.7537	0.8848	0.6217	0.5779	0.0929	0.2078	0.3114	0.274	0.2667	0.3529	0.2625	0.1886	0.2898	0.014	0.0772	0.1438	0.1599	0.0747	BE1
BE2	0.2776	0.035	0.806	0.9098	0.6902	0.6945	0.0111	0.2869	0.4129	0.2782	0.1891	0.2965	0.3258	0.3333	0.3658	0.1139	0.0356	0.1392	0.1941	0.0799	BE2
BI1b	0.4183	0.1791	0.7022	0.6745	0.9726	0.7523	0.2117	0.4627	0.555	0.3413	0.2288	0.472	0.4223	0.4685	0.4817	0.1252	0.1332	0.1079	0.1621	0.036	BI1b
BI2b	0.4391	0.1659	0.6926	0.7468	0.9739	0.7811	0.1839	0.4948	0.5315	0.3843	0.2257	0.4471	0.4294	0.468	0.5072	0.1722	0.1152	0.057	0.1129	0.0322	BI2b
BE1b	0.436	0.1938	0.6975	0.6478	0.7352	0.965	0.1103	0.5359	0.552	0.3807	0.1272	0.5916	0.4128	0.5307	0.5335	0.113	-0.0445	0.042	0.1173	0.1052	BE1b
BE2b	0.4421	0.1894	0.6625	0.725	0.7881	0.967	0.156	0.5256	0.5962	0.4381	0.1708	0.5461	0.3757	0.5336	0.5559	0.1315	0.0262	0.062	0.1289	0.0919	BE2b
SNP1	0.2556	0.1262	0.015	0.0446	0.1183	0.0731	0.9098	0.2724	0.1544	0.1476	0.4372	0.1572	0.0414	0.2575	0.101	0.0278	0.1311	-0.0033	-0.0375	0.022	SNP1
SNP2	0.4277	0.1877	0.0287	0.0575	0.2424	0.1709	0.957	0.3772	0.3293	0.2421	0.4165	0.3243	0.0319	0.3189	0.2429	0.0252	0.1151	0.1215	0.0687	0.0985	SNP2
SNT1	0.7681	0.2471	0.2292	0.2146	0.4137	0.4722	0.3689	0.921	0.5159	0.3196	0.3001	0.5852	0.1669	0.5573	0.5415	-0.0026	0.164	0.0808	0.0246	0.1343	SNT1
SNT2	0.6325	0.1489	0.341	0.2994	0.5033	0.5454	0.2846	0.923	0.5609	0.4578	0.2043	0.603	0.2179	0.5644	0.5487	0.063	0.1743	-0.026	-0.0161	0.0615	SNT2
A1	0.5844	0.1739	0.4847	0.4708	0.6102	0.582	0.203	0.6643	0.8863	0.4722	0.2617	0.5859	0.2642	0.5577	0.6703	0.0035	0.1724	0.0153	0.0049	0.1711	A1
A2	0.4879	0.1052	0.3866	0.3758	0.514	0.5469	0.2806	0.5232	0.8761	0.447	0.1602	0.5078	0.2535	0.4672	0.5911	-0.0175	0.0642	0.018	0.0763	0.1232	A2
A3	0.2468	0.1871	0.2291	0.2367	0.3499	0.3993	0.1274	0.3052	0.7524	0.4653	0.1573	0.2975	0.2534	0.4249	0.5635	0.0752	0.098	0.1009	0.0943	0.2622	A3
A4	0.3192	0.103	0.2437	0.2365	0.3464	0.4396	0.3103	0.3764	0.829	0.4185	0.2101	0.4947	0.2889	0.4221	0.6075	0.0507	0.0131	0.0716	0.1251	0.2132	A4
DE1	0.427	0.2324	0.2333	0.2845	0.3492	0.3836	0.2157	0.4096	0.5063	0.9495	0.1001	0.3983	0.0581	0.4124	0.576	0.0024	-0.0351	-0.0809	-0.0633	-0.0837	DE1
DE2	0.4208	0.2762	0.2173	0.2834	0.3609	0.4203	0.2133	0.4215	0.4919	0.9762	0.0361	0.37	0.0593	0.4239	0.6085	0.016	-0.0284	-0.0689	-0.028	-0.0693	DE2
DE3	0.3773	0.2028	0.2456	0.3137	0.3639	0.4167	0.1931	0.3698	0.529	0.9303	0.0233	0.3137	0.1272	0.3967	0.587	0.0773	-0.0103	-0.026	-0.0529	-0.0819	DE3
SNMC1	0.4471	0.0706	0.2231	0.2301	0.2512	0.1629	0.422	0.3084	0.2576	0.0443	0.9413	0.4078	0.2369	0.1686	0.179	0.0682	0.2746	0.099	0.0136	0.0139	SNMC1
SNMC2	0.3432	0.0858	0.2559	0.2453	0.1839	0.1265	0.4272	0.1912	0.1887	0.0624	0.9299	0.3525	0.3578	0.1357	0.0993	0.0625	0.2732	0.0427	-0.0502	-0.0703	SNMC2
SN1	0.5289	0.1141	0.3294	0.2926	0.3698	0.5118	0.2332	0.5715	0.5322	0.3405	0.3271	0.9292	0.3276	0.4077	0.4873	0.0506	0.1154	-0.0266	-0.0587	0.1319	SN1
SN2	0.6348	0.1606	0.4135	0.3757	0.5104	0.5874	0.2759	0.6217	0.5477	0.3721	0.4305	0.9442	0.2649	0.4546	0.4787	-0.0379	0.0988	-0.0361	0.0332	0.0565	SN2
PBC1	0.1081	0.04	0.3666	0.3235	0.5058	0.4697	0.0635	0.2009	0.3901	0.1632	0.1639	0.3038	0.8575	0.3057	0.3575	0.2188	0.0888	0.0807	0.0804	-0.0855	PBC1
PBC2	0.1304	0.0526	0.2034	0.2293	0.2192	0.222	-0.0404	0.1172	0.0777	-0.0374	0.3344	0.207	0.7296	0.1127	0.1253	0.0501	0.0566	-0.021	0.0371	-0.0894	PBC2
PBC3	0.0665	0.0122	0.2009	0.1818	0.1926	0.1616	0.0379	0.1452	0.156	-0.0011	0.3266	0.1977	0.7668	0.0779	0.1245	0.2096	0.2373	0.1026	0.1032	-0.0084	PBC3
TE1	0.494	0.2213	0.3473	0.3565	0.48	0.5305	0.3185	0.6155	0.496	0.4708	0.1733	0.4501	0.168	0.8851	0.6202	0.0801	0.041	0.0359	0.0287	0.1606	TE1
TE2	0.3812	0.1573	0.2572	0.2092	0.4028	0.4784	0.2334	0.4903	0.5172	0.3095	0.1315	0.4042	0.2403	0.8957	0.5247	0.0637	0.0177	0.0745	0.0742	0.1945	TE2
TE3	0.3806	0.1403	0.1856	0.1873	0.3784	0.4301	0.2615	0.4678	0.4787	0.3451	0.118	0.3484	0.262	0.8571	0.5778	0.0822	0.0179	-0.0021	0.0497	-0.0315	TE3
EJ1	0.4988	0.2458	0.3356	0.3794	0.4957	0.6021	0.2314	0.579	0.7287	0.6339	0.1138	0.521	0.2426	0.6302	0.9239	0.1063	0.1101	0.0419	0.0367	0.1148	EJ1
EJ2	0.3981	0.1977	0.2805	0.3022	0.423	0.4989	0.1429	0.5397	0.651	0.5549	0.0809	0.4377	0.283	0.6134	0.937	-0.0383	0.0236	0.0644	0.108	0.0604	EJ2
EJ3	0.4817	0.2268	0.3053	0.3303	0.4876	0.4609	0.167	0.5161	0.6321	0.5194	0.2258	0.4518	0.3001	0.5681	0.911	-0.0614	0.0165	0.0795	0.1148	0.1076	EJ3
LMV1	0.01	-0.1201	0.0722	0.0546	0.157	0.1572	0.0252	0.0813	0.1004	0.0381	0.109	0.0607	0.2981	0.1663	0.018	0.8827	0.3815	-0.04	-0.0602	-0.0891	LMV1
LMV2	0.0156	-0.1098	0.1342	0.0567	0.119	0.1275	0.03	0.0266	-0.014	-0.0483	0.0113	0.0101	0.0749	0.0533	0.033	0.6434	0.2252	0.006	0.103	0.0043	LMV2
LMV3	0.0218	-0.1515	0.0708	0.0823	0.0879	0.0222	-0.0007	-0.0593	-0.0254	0.0676	0.0277	-0.1028	0.1169	-0.0396	-0.0207	0.7483	0.307	0.0796	-0.0518	-0.14	LMV3
LMV4	0.0972	-0.0252	-0.048	-0.0214	0.0032	-0.0617	0.0498	0.0065	-0.1402	0.019	-0.0322	0.0432	-0.1012	-0.0736	-0.0471	0.4874	0.2422	0.0426	0.0229	-0.0277	LMV4
LMV5	0.2252	-0.0173	0.0201	0.0352	0.112	0.0624	0.172	0.2298	0.1271	0.0386	0.194	0.176	0.1004	0.0738	0.1267	0.4255	0.8465	-0.0536	-0.0126	0.0195	LMV5
LMV6	0.0866	-0.0602	0.1641	0.1013	0.1368	-0.0365	0.0127	0.0236	0.094	-0.0073	0.2627	-0.0494	0.1418	-0.042	-0.0191	0.1928	0.6062	0.1141	0.0045	-0.0032	LMV6
LMV7	-0.0236	-0.195	-0.0152	-0.027	0.0031	-0.1399	-0.0136	0.0294	-0.0993	-0.1145	0.1672	-0.0007	0.1123	-0.036	-0.0966	0.1381	0.4496	0.0153	0.0236	-0.063	LMV7
LMV8	0.0403	-0.0789	-0.0414	0.0025	-0.0681	-0.0745	0.0317	0.0424	0.0134	-0.213	0.0828	0.0828	-0.0133	0.0246	-0.0361	0.0485	0.4868	-0.0307	-0.0919	0.0276	LMV8
MD1	0.0825	0.052	0.0634	0.1575	0.0844	0.0539	0.0757	0.0303	0.0538	-0.061	0.0774	-0.0336	0.0766	0.0422	0.0654	0.0124	0.0087	1	0.6961	0.4108	MD1
MD2	0.0119	0.0647	0.1043	0.1983	0.141	0.1272	0.0275	0.0048	0.0807	-0.0502	-0.0174	0.0482	0.095	0.0562	0.0909	-0.0187	-0.0136	0.6961	1	0.5172	MD2
MD3	0.0419	0.0985	0.0232	0.0962	0.0137	0.0288	0.0095	0.05	0.1708	-0.1406	0.0277	0.0209	-0.0593	0.0536	0.0366	-0.1693	-0.0418	0.4437	0.4984	0.8979	MD3
MD4	0.0749	0.2055	0.0032	0.0571	0.0497	0.1557	0.1214	0.1422	0.224	-0.0031	-0.0785	0.1575	-0.0898	0.1829	0.1505	-0.0072	0.0493	0.2865	0.4237	0.8879	MD4

Appendix 4.13

CHANGES TO DEONTOLOGICAL NORMS

Statement	Morally Wrong			Neither			Morally Right
Participating in activities which do harm to others is:	-3	-2	-1	0	1	2	3
Taking someone's property without their permission is:	-3	-2	-1	0	1	2	3
Taking somebody's property without their knowledge is:	-3	-2	-1	0	1	2	3
Borrowing somebody's things without returning the favor is:	-3	-2	-1	0	1	2	3
Enjoying the benefits of someone's work without compensating them is:	-3	-2	-1	0	1	2	3

Appendix 4.14

MAIN STUDY SURVEYS

Research on Ethical Decision Making and Peer to Peer File Sharing

You are invited to participate in a study presented to you by Kenneth Shemroske (klshemroske@uh.edu) under the supervision of Dr. Blake Ives and Dr. Wynne Chin of the Bauer College MIS Department. As a participant in this study, you may expect the following:

Main benefits of this study

- Experience participating in information systems research
- Helping to advance information systems through the process of scientific inquiry

Choosing not to participate

Your participation is voluntary and you may refuse to participate or withdraw at any time without penalty. You may also refuse to answer any question. If you are a student, a decision not to participate or to withdraw your participation will have no effect on your standing.

Purpose of the study

The purpose of this research is to study the ethics behind using information technology at a personal level.

Procedures

A total of approximately 100 students will be asked to participate in this study. If you agree to participate in this research you can expect:

- To be asked to read a scenario which describes a personal use of information technology.
- To complete a survey ranging from 18 to 42 questions based on your perceptions of the scenario.
- To be asked a series of general questions about you (demographics).

The survey should take approximately 15 minutes to complete; the total time for this study should not exceed 20 minutes.

Confidentiality

Every effort will be made to maintain confidentiality. No participant names or other identifying information are collected as a part of this study.

Benefits

While there is no direct benefit for taking part in this research, you will experience participating in information systems research and contributing to the advancement of the field of MIS

through the process of scientific inquiry. Your participation may help investigators better understand the ethical use of information technology.

Publication Statement

The results of this study may be published in professional or scientific journals. It may also be used for educational purposes or for professional presentations. However, the data will be displayed only in aggregate; no individual subject will be identified.

Main Study Survey for Online File sharing Research

Instructions:

Many questions in this survey may seem repetitive. Please bear with us. We would like you to answer all of them. Analogous to a doctor requiring multiple measures of blood pressure, we often have to take averages of several questions to obtain accurate assessments.

Preliminary Questions:

You are given an initial set of questions which are independent of the rest of the study. These will act as a normative gauge so please take your time to answer accurately.

Scenario Questions:

You are then given a scenario in which you are asked to place yourself. Based on this scenario several possible actions that you could take are presented. For each of these actions you are given a series of statements with which to evaluate the action as well as some possible consequences of each action. You will be asked to rate the desirability and likelihood of each of these consequences. Please indicate your response to each statement according to the scale presented by circling the appropriate number.

More questions will follow that pertain to the described action you could take as a result of the scenario. Please indicate your answer to these questions by circling the number which best represents your response.

Preliminary questions:

Statement	Morally Wrong			Neither			Morally Right
Participating in activities which do harm to others is:	-3	-2	-1	0	1	2	3
Taking someone's property without their permission is:	-3	-2	-1	0	1	2	3
Taking somebody's property without their knowledge is:	-3	-2	-1	0	1	2	3
Borrowing somebody's things without returning the favor is:	-3	-2	-1	0	1	2	3
Enjoying the benefits of someone's work without compensating them is:	-3	-2	-1	0	1	2	3

For the remaining questions please reference the following scenario and action that follows. While answering the questions, put yourself in the scenario and answer as if you have taken the action described below in response to the dilemma presented in the scenario.

You and a partner are working on a school project together. To facilitate your work your instructor loans you a laptop computer which you are expected to share. While working with the computer you notice your partner has installed file sharing software which enables the user to download music files from the internet. He tells you that he is using the software to download copyrighted music files without having to pay for them so that he can listen to music while he works.

Action: You join your partner in the illegal downloads.

Statement	Very Unlikely						Very Likely
Please indicate the likelihood that you would choose this action among all possible actions:	-3	-2	-1	0	1	2	3
If faced with this scenario in reality, what is your expectation that you would follow through with this action?	-3	-2	-1	0	1	2	3

	No Percentage										100%
Of all possible things you could do, what is the likelihood that you would pick this action?	0	10	20	30	40	50	60	70	80	90	100
If faced with this scenario in reality, what is the probability you would actually perform the given behavior?	0	10	20	30	40	50	60	70	80	90	100

The following table lists possible consequences of the action described above. For each consequence please circle the number which best represents your assessment according to each statement.

Consequence	What is the likelihood of the consequence occurring?	How much would you want this consequence to happen to you?	How much would people other than you want this consequence to happen?	How much would you care that this consequence would have an impact on other people?
	No Likelihood ... Highly Likely	Highly Undesirable ... Highly Desirable	Highly Undesirable ... Highly Desirable	Very Little ... Very Much
You and your partner get in trouble for illegally downloading music	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3
You get free music	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3
You feel guilty for participating	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3
You gain peer acceptance from your partner	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3
You lose the trust of your instructor	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3
You download a virus	0 20 40 50 60 80 100	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3	-3 -2 -1 0 1 2 3

Now that you've considered the consequences, please respond to these statements once more:

Statement	Very Unlikely						Very Likely
Please indicate the likelihood that you would choose this action among all possible actions:	-3	-2	-1	0	1	2	3
Of all possible things you could do, what is the likelihood that you would pick this action?	-3	-2	-1	0	1	2	3

Statement	No Percentage										100%
If faced with this scenario in reality, what is the probability you would actually perform the given behavior?	0	10	20	30	40	50	60	70	80	90	100
If faced with this scenario in reality, what is your expectation that you would follow through with this action?	0	10	20	30	40	50	60	70	80	90	100

Statement	Strongly Disagree						Strongly Agree
I would be able to perform this action.	-3	-2	-1	0	1	2	3
Performing this action is within my control.	-3	-2	-1	0	1	2	3
It is easy for me to perform this action.	-3	-2	-1	0	1	2	3
Influential people in my life would think that I should take this action.	-3	-2	-1	0	1	2	3
In general, I want to do what influential people in my life think that I should do.	-3	-2	-1	0	1	2	3
People whose opinion I respect would think that I should take this action.	-3	-2	-1	0	1	2	3
In general, I want to do what people whose opinion I respect think that I should do.	-3	-2	-1	0	1	2	3
Overall, I would feel pressure from others to take this action.	-3	-2	-1	0	1	2	3
Overall, I would feel compelled by others to take this action.	-3	-2	-1	0	1	2	3
Influential people in my life would think that I should take this action because it is the morally right thing to do.	-3	-2	-1	0	1	2	3
People whose opinion I respect would think that I should take this action because it is the morally acceptable thing to do.	-3	-2	-1	0	1	2	3
Influential people in my life would think I should take this action because they believe the benefits outweigh the costs.	-3	-2	-1	0	1	2	3

Statement	Strongly Disagree						Strongly Agree

People whose opinion I respect would think that I should take this action
because they believe there are more positives to this action than negatives.   -3   -2   -1   0   1   2   3

Performing this action would be (a):

Bad Idea	-3	-2	-1	0	1	2	3	Good Idea
Foolish Idea	-3	-2	-1	0	1	2	3	Wise Idea
Unpleasant	-3	-2	-1	0	1	2	3	Pleasant
Unfavorable	-3	-2	-1	0	1	2	3	Favorable

This action has several possible consequences. Please disregard the fact that these consequences could bring harm or benefit, rather evaluate the action solely according to the nature of the act itself:

Immoral	-3	-2	-1	0	1	2	3	Moral
Unethical	-3	-2	-1	0	1	2	3	Ethical
Wrong	-3	-2	-1	0	1	2	3	Right

Statement	Harmful						Beneficial

Taking into account the probability and desirability of the consequences,
and their impact on all people involved, this action is: -3   -2   -1   0   1   2   3

Statement	Very Low						Very High

Taking into account the probability and desirability of the consequences, and
their impact on all people involved, this action results in what type of utility?   -3   -2   -1   0   1   2   3

Statement	Negative						Positive
Taking into account the probability and desirability of the consequences, and their impact on all people involved, this action results in what type of cost-benefit ratio?	-3	-2	-1	0	1	2	3

Now please provide us with your overall evaluation of this action. Specifically, try to combine both your moral perspectives of this action and cost/benefits analyses plus anything else you feel may be relevant.

Overall my judgment of this action is:

Inappropriate	-3	-2	-1	0	1	2	3	Appropriate
Unacceptable	-3	-2	-1	0	1	2	3	Acceptable
Unreasonable	-3	-2	-1	0	1	2	3	Reasonable

Please respond to each of the following statements accordingly:

Statement	Strongly Disagree						Strongly Agree
In general, people's moods are better on a sunny day.	-3	-2	-1	0	1	2	3
Undergraduate educational programs are effective at teaching and developing skills in students.	-3	-2	-1	0	1	2	3
Businesses will get better performance from their employees on sunny days if they have a view to the outside.	-3	-2	-1	0	1	2	3
Business performance is directly related to general public perception of the business building architecture.	-3	-2	-1	0	1	2	3

Statement	Bad Idea						Good Idea
Using the financial market as an indicator for choosing a career path is a:	-3	-2	-1	0	1	2	3
Always viewing the weather out the window before leaving the house is a:	-3	-2	-1	0	1	2	3
Using online resources to research a paper is a:	-3	-2	-1	0	1	2	3
Spending more than 20 hours preparing for a major exam is a:	-3	-2	-1	0	1	2	3

Please respond to these statements by going back to the scenario presented at the beginning of this survey:

Statement	Strongly Disagree						Strongly Agree
The scenario presents an ethical problem	-3	-2	-1	0	1	2	3
The scenario presents a moral dilemma	-3	-2	-1	0	1	2	3
The scenario presents a legal dilemma	-3	-2	-1	0	1	2	3
To the average student the scenario presents a legal dilemma	-3	-2	-1	0	1	2	3

Demographic information:

Gender _____

Age _____

Undergraduate_____   Graduate_____

Years of work experience _____years _____months

How much experience do you have using online file sharing software? _____years _____months

Are you currently using online file sharing software? _____

On a scale of 0 to 10, how would you rate your technical expertise in working with file sharing software (0 represents no expertise)? _____

On a scale of 0 to 10, how would you rate your technical expertise in working with computers (0 represents no expertise)? _____

**(Differences shown for the non-ethical scenario survey - scenario, action, and consequences)**

You and a partner are working on a school project together. To facilitate your work you have been loaned a laptop computer to share from your instructor. You observe that while your partner uses the computer, he puts in a music CD and listens to music through headphones while he works.

Action: You take action which enables you to listen to the music along with your partner. For example, you may unplug the headphones and use the computer's speakers to hear the music.

Consequence	What is the likelihood of the consequence occurring?		How much would you want this consequence to happen to you?		How much would people other than you want this consequence to happen?		How much would you care that this consequence would have an impact on other people?	
	No Likelihood ... Highly Likely		Highly Undesirable ... Highly Desirable		Highly Undesirable ... Highly Desirable		Very Little ... Very Much	
The music is a distraction to the project	0 20 40 50 60 80 100		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3	
You get enjoyment from listening to the music	0 20 40 50 60 80 100		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3	
You and your partner argue about the type of music to play	0 20 40 50 60 80 100		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3	
The music disrupts others around you	0 20 40 50 60 80 100		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3	
The activity leads to a better working relationship	0 20 40 50 60 80 100		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3	
Your partner is offended	0 20 40 50 60 80 100		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3		-3 -2 -1 0 1 2 3	

Appendix 5.1

MAIN STUDY MEASUREMENT MODEL
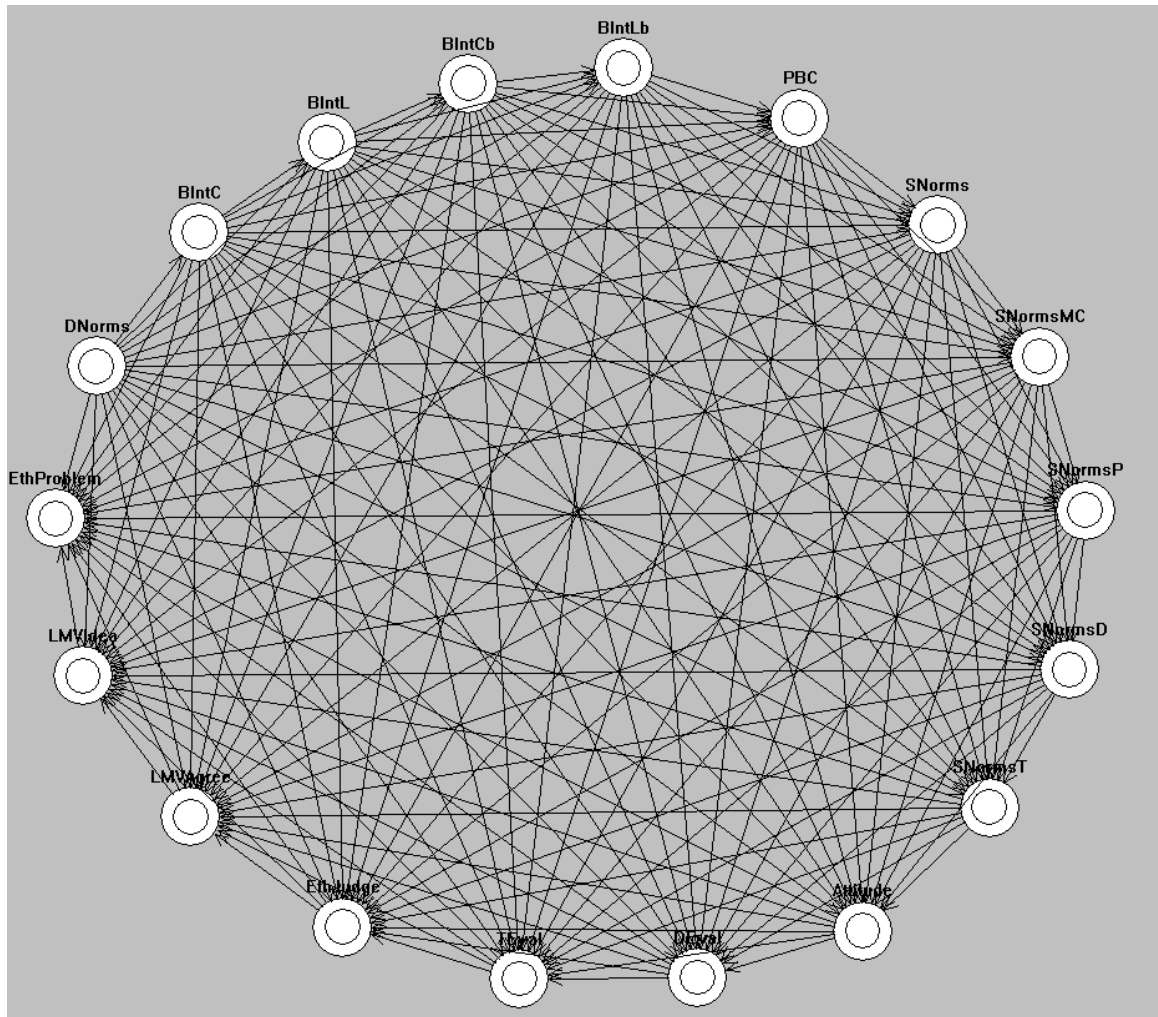
Appendix 5.2

THEORETICAL MODEL COMPARISON

	EJ to BI	TE to BI	DE to BI	TE to EJ	DE to EJ		LMVA to BI	LMVI to BI	Age to BI	BI - Rsq	Adj BI - Rsq	EJ - Rsq	TE - Rsq	DE - Rsq
Ethical HV	0.460	ns	ns	0.566	0.225					0.306	0.291	0.535	0.352	0.109
Ethical HV LMV, Age	0.390	ns	ns	0.566	0.225		0.120	-0.120	-0.125	0.342	0.328	0.535	0.352	0.109
NonEthical HV	ns	ns	0.365	0.664	0.266					0.226	0.207	0.750	0.346	0.095
NonEthical HV LMV,Age	ns	0.249	0.238	0.664	0.266		0.161	0.105	-0.011	0.266	0.248	0.750	0.346	0.095

	A to BI	PBC to BI	SNA to BI	SNP to BI	SND to BI	SNT to BI	LMVA to BI	LMVI to BI	Age to BI	BI - Rsq	Adj BI- Rsq
Ethical TPB	0.346	0.386	0.158	0.098	ns	ns				0.504	0.482
Ethical TPB LMV, Age	0.372	0.359	0.184	ns	ns	ns	0.104	-0.148	-0.017	0.529	0.508
NonEthical TPB	0.282	0.354	ns	ns	ns	ns				0.417	0.387
NonEthical TPB LMV, Age	0.248	0.350	ns	ns	ns	ns	0.114	-0.033	-0.037	0.428	0.399

Appendix 6.1

SYNTHESIZED MODEL PATH VALUES

	TE to EJ	p-val	DE to EJ	p-val	EJ to BI	p-val	TE to BI	p-val	DE to BI	p-val	A to BI	p-val	PBC to BI	p-val	SNA to BI	p-val	LMVA to BI	LMVI to BI	Age to BI	BI - rsq		EJ - rsq
Ethical Synth 1	0.562	0.000000	0.225	0.005667	0.13	0.088814	-0.138	0.065507	0.06	0.181658	0.329	0.000203	0.32	0.000076	0.144	0.048782	0.068	-0.108	-0.046	0.525		0.531
Non-Ethical Synth 1	0.672	0.000000	0.262	0.001099	-0.32	0.015270	-0.32	0.093604	0.228	0.026502	0.171	0.068982	0.393	0.000000	0.131	0.049094	0.054	-0.012	-0.009	0.443		0.755

	TE to EJ	p-val	DE to EJ	p-val	EJ to A	p-val	TE to A	p-val	DE to A	p-val	A to BI	p-val	PBC to BI	p-val	SNA to BI	p-val	LMVA to BI	LMVI to BI	Age to BI	BI - rsq	A - rsq	EJ - rsq
Ethical Synth 2	0.561	0.000000	0.224	0.005970	0.362	0.000097	0.48	0.000000	0.04	0.308361	0.338	0.000065	0.341	0.000000	0.147	0.037933	0.084	-0.135	-0.038	0.514	0.65	0.529
Non-Ethical Synth 2	0.667	0.000000	0.265	0.000866	0.031	0.419258	0.317	0.008073	0.424	0.000070	0.251	0.002365	0.373	0.000000	0.079	0.153260	0.117	-0.031	-0.027	0.411	0.497	0.752

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