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MYSFACE OR OURSPACE: A MEDIA SYSTEM DEPENDENCY VIEW OF MYSPACE

by

ANDREW SCHROCK  
B.A. Brandeis University, 2000

A thesis submitted in partial fulfillment of the requirements  
for the degree of Master of Arts  
in the Nicholson School of Communication  
in the College of Sciences  
at the University of Central Florida  
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## ABSTRACT

MySpace is a type of “social networking” website where people meet, socialize, and create friendships. The way MySpace members, particularly younger individuals, interact online underscores the changing nature of mass media. Media system dependency states that individuals become reliant on media in their daily life because of fundamental human goals. This reliance, termed a dependency, leads to repeated use. Media system dependency was applied in the current study to explain how and why individuals became habitual MySpace users.

To attain results a survey was administered to a convenience sampling of 401 adult undergraduates at the University of Central Florida. Members reported MySpace dependency had a moderate correlation to MySpace use, and they actively used the website an average of 1.3 hours of use per day. Results indicated members use MySpace to primarily satisfy play and interaction orientation dependencies. MySpace use was found to have a correlation with number of MySpace friends. “Number of friends created” in turn had a correlation with MySpace dependency, as people returned to interact with their friends.

Individual factors were also found to be a source of influence in MySpace dependency. These individual factors were demographics, psychological factors related to use of the Internet, and psychological factors related to use of MySpace. Factors related to MySpace, extroversion and self-disclosure, were positively correlated with intensity of dependency. The influence of factors related to the Internet was partly supported; computer self-efficacy was not significantly related to MySpace dependency, while computer anxiety was significantly related to MySpace dependency. Speed of connection to the Internet and available time to use the Internet were not related to MySpace dependency. Additionally, significant differences were found between

genders in overall dependency, extroversion, self-disclosure, computer anxiety, and computer self-efficacy. These findings provide evidence that MySpace members were little, if at all, constrained by factors related to use of the Internet, but were attracted to the websites for similar reasons as real-life relationships.

Finally, MySpace is just one of the large number of online resources that are predominantly social, such as email, message boards, and online chat. This study found that through a “technology cluster” MySpace members use these other social innovations more frequently than non-members. However, members also used significantly more non-social innovations, which may indicate that MySpace members are part of a larger technology cluster than anticipated or perhaps are in the same category of innovation adopter.

For Frances Polterzelski Carlson, for showing me where I can find my true friends.

## ACKNOWLEDGMENTS

The author expresses a debt of gratitude to his committee chair Tim Brown, for being generous with both time and knowledge, and committee members Rick Kenney and Sally Hastings for their invaluable insights.

Finally, nothing would be possible were it not for the wisdom and guidance of the author's parents, Richard and Nancy Schrock, and his caring wife and guru, Rebecca Sittler Schrock.

## TABLE OF CONTENTS

LIST OF FIGURES .....	x
LIST OF TABLES .....	xi
LIST OF TABLES .....	xi
LIST OF ACRONYMS/ABBREVIATIONS .....	xii
LIST OF ACRONYMS/ABBREVIATIONS .....	xii
CHAPTER ONE: INTRODUCTION.....	1
CHAPTER TWO: REVIEW OF RELEVANT LITERATURE.....	3
Media System Dependency.....	3
History and Overview .....	3
Micro and Macro.....	5
Individual-level Dependencies.....	8
Individual-level Dependencies and Usage.....	9
Dependency Dimensions and Categories.....	12
Individual Factors Moderating Intensity of Dependencies.....	13
Demographic Factors .....	13
Psychological Factors .....	15
The Internet.....	15
The Internet as Mass Medium.....	17
Social Uses of Internet Resources.....	19
Macro Level Constraints on the Internet .....	22
MySpace .....	23



Multimedia and Social Forms of Expression on Myspace .....	25
Computer-Mediated Communication .....	28
MySpace and Dependency.....	29
Individual Factors Moderating MySpace Dependencies .....	31
Computer Self-efficacy.....	32
Computer Anxiety.....	33
Internet Access Speed and Availability .....	34
Self-Disclosure.....	37
Extroversion.....	40
Factors in Repeated Use.....	43
Use of Related Technologies .....	45
CHAPTER THREE: METHODOLOGY .....	48
Administration and Sampling .....	48
Instrument .....	49
CHAPTER FOUR: FINDINGS .....	61
CHAPTER FIVE: DISCUSSION AND LIMITATIONS .....	70
Dependency and Use.....	70
MySpace Friendships and Repeated Use.....	73
Demographic Differences: Age, Gender, and Race.....	76
Medium Factors: Connection type, connection availability, computer self-efficacy and computer anxiety.....	78
MySpace Factors: Extroversion and Self-Disclosure .....	80
Technology Use .....	81

Methodological Considerations .....	82
CHAPTER SIX: CONCLUSIONS.....	85
APPENDIX A: SURVEY INSTRUMENT .....	87
APPENDIX B: WAIVER OF INFORMED CONSENT.....	99
APPENDIX C: IRB APPROVAL FORM.....	101
LIST OF REFERENCES.....	106

## LIST OF FIGURES

Figure 1: Sample MySpace User Profile .....	27
Figure 2: Revised Extended Individual Media Dependency Model for Television Shopping, taken from Skutmanich and Kintsfather (1998, p. 212).....	45
Figure 3: Complete MySpace MSD Model with Hypotheses .....	47
Figure 4: Gender Differences in Cognitive Factors.....	63
Figure 5: Age Distribution.....	65
Figure 6: Complete MySpace MSD Model <i>NOTE: Supported Hypotheses = solid line, Unsupported Hypotheses = dotted line.</i> .....	69

## LIST OF TABLES

Table 1: Typology of Individual media system dependency Relations .....	10
Table 2: Overall gender frequency compared to university 2005 enrollment statistics .....	50
Table 3: Frequency of Responses to select the “race that most accurately describes you” as compared with university undergraduate enrollment statistics for 2005.....	51
Table 4: Questions on Internet availability.....	52
Table 5: Questions on Internet connection type .....	53
Table 6: Questions on frequency of technology use.....	54
Table 7: Questions on Extroversion.....	55
Table 8: Questions on self-disclosure.....	56
Table 9: CSE (beginning and advanced level) questions.....	57
Table 10: Computer anxiety (using computers and in computer-related activities) questions.....	58
Table 11: Questions on MySpace history and use .....	58
Table 12: Dependency Questions .....	60
Table 13: Mean results for dependency categories of understanding, orientation, and play across two dimensions .....	61
Table 14: Weighted gender frequency of MySpace members compared to non-members .....	63
Table 15: Total Dependency by Response to select the “race that most accurately describes you.” .....	64
Table 16: Number of Friends Seen or Talked to per Day by MySpace Membership .....	74

## LIST OF ACRONYMS/ABBREVIATIONS

CSE	Computer Self-Efficacy
CMC	Computer-mediated Communication
CSSN	Computer Supported Social Network
ICI	Internet Connectedness Index
MSD	Media System Dependency
RIAA	Recording Industry Association of America

## CHAPTER ONE: INTRODUCTION

The Internet affords to individuals new ways of using mass resources. A “social networking” website, MySpace, is of the fastest-growing sites on the Internet. It attracted more than 38 million visitors in a single month, April, 2006 (Nielsen, 2006). Although not unique, MySpace is popular, claiming some 83 million total users (Metz, 2006) and 12 million unique visitors per day. A recent nationwide study found that 88% of Americans aged 18-29 use the Internet (Madden, 2005), indicating that younger American adults are leaders in use of Internet resources. The lack of research conducted on MySpace, combined with its popularity, suggested a need for investigation into why individuals habitually use the website. Backstrom, Huttenlocher, Kleinberg and Lan (2006) found that despite rapid growth the challenge of data collection “has left most basic questions about the evolution of such groups largely unresolved” (p. 44).

Socialization online has increased even when there has been an overall decline offline in organized groups (Putnam, 2001). Although online social resources, such as email and message boards, differ from traditional definitions of “mass media,” they have been shown to be among the most popular on the Internet. “Online social resource” here refers broadly to both public (message board, newsgroups) and private (email) Internet-based resources that facilitate interpersonal and group interaction. Scholars have repeatedly identified social motivations as related to Internet use. The types of features available on MySpace, such as making and cultivating virtual friends, public disclosure of multimedia images, and posting on a blog, act as a similar type of online social resource.

Media system dependency theory, on the individual level, discusses the relationship of individuals to entities who are in command of media production and consumption. Individuals become reliant on these resources, returning to them repeatedly over time to satisfy fundamental human needs. MySpace is the specific resource under investigation, and is accessed over the Internet, a medium. Therefore, individual dependency is constrained by factors associated with both the nature of the medium and specific media resource.

Chapter two will first provide an overview of media system dependency, macro and micro relations, and individual-level dependencies. Next, the study will follow a “top-down” approach, starting with the macro level (Internet medium) and working down to interactive effects between the individual and specific resource (MySpace website). Last, “technology clustering” will be applied to examine use of similar technologies. A total of seven hypotheses and two research questions will be stated. Chapter three will explain the methodology used to construct and administer the research instrument, as well as tests used to attain result data. Chapter four will state findings from the stated hypotheses and research question. Chapter five will discuss these findings, as well as limitations and implications for future research. Chapter six provides conclusions and a context for future social networking websites research.

## CHAPTER TWO: REVIEW OF RELEVANT LITERATURE

### Media System Dependency

Media system dependency (MSD) theory describes the relationship of individuals to the media system. On one side are individuals, referred to as the “micro” level, and on the other, the more powerful media entities that control access to information, or “macro” level. Individuals become dependent on macro resources for non-mutually exclusive goals of understanding, orientation, and play. The activation of these goals in response to media is termed a “dependency.” Dependencies describe why individuals habitually use and how strong their relationship is with certain media. Dependencies vary according to power and symmetry of the media system in question, and individual factors. Individual factors describe why individuals in populations that have the same micro-to-macro relationship nonetheless have varying intensity of dependency. These individual differences are organized in three categories: cognitive, technological, and demographic.

### *History and Overview*

DeFleur and Ball-Rokeach (1975) developed media dependency theory as a reaction to the “magic bullet” view of mass media, which claimed the media has universal impact on individuals across populations. They posited that the reason behind the widely differing impact of the media on individuals was the result of the relationships between individuals, the media,



and society. These relationships were conceived as “dependencies” between levels of media (DeFleur & Ball-Rokeach, 1976). A dependency is defined as “a relationship in which the satisfaction of needs or the attainment of goals by one party is contingent upon the resources of another party” (Ball-Rokeach, 1985, p.47). Goals are attributes describing basic human needs; dependencies are the activation and expression of goals during media use.

Goals differ from the uses-and-gratifications perspective of needs in several ways. The primary difference is that uses-and-gratifications conceives of an individual’s actions as a result of specific factors related to the individual, while MSD sees “goals” as broadly capturing the motivations behind all possible media-related activities. Viewed through MSD, individual motivations are primarily determined by the media, and secondarily by individual factors. Uses and gratifications, by comparison, views an individual’s individual differences and gratifications received as fully defining media use. In MSD, the question is: what do media resources offer to individuals, and what does this dependencies exchange say about the structure of power in the system? Goals in MSD are measured in three non-mutually exclusive categories, lending the measurements to comparisons across populations and circumstances. In uses-and-gratifications, the question is, “how do individuals use available resources to meet specific needs?”

The presence of dependencies describes cognitive, affective, and behavioral change in individuals, and why individuals repeatedly returned to certain media. Successive revisions refined the theory into media system dependency, or MSD (DeFleur & Ball-Rokeach, 1989). MSD describes a hierarchy of media creators and distributors in control of information resources, a holistic view of the socio-economic system of media production and consumption. MSD incorporates elements of structuralism, conflict theory, evolutionary paradigm, symbolic interactionism, and cognitive theory (DeFleur & Ball-Rokeach, 1989).

Entities in the media production and consumption system interact with other levels to exchange information, here used to mean “all types of messages” transmitted between parties (DeFleur & Ball-Rokeach, 1976, p. 303), including both interpersonal and mass. The reason these can both be considered under the same theory stems from MSD’s theoretical roots. DeFleur and Ball-Rokeach (1989) developed it under the assumption that as mass media evolved in industrial society, it began to replace interpersonal communication for providing information to satisfy fundamental dependencies for information.

### *Micro and Macro*

MSD has a hierarchical view of the structure of media providers. According to MSD, the mass media system is composed of macro entities that create and distribute information to the micro, or individual, level. The mass media system is seen as either asymmetrical or symmetrical, which relates to the power structure of the particular system in question. In symmetrical systems, the distribution of power is equal. One example of a symmetrical system is email; no one party has control over more resources than the other. By comparison, television producers and broadcasters (macro entities) control what large numbers of individuals (micro) view. They are in charge of media production, processing, and dissemination. This would be an example of an asymmetrical system.

Because macro entities are in command of a greater number of information resources media systems are often investigated as being asymmetrical. Research has been conducted in asymmetrical media systems where organizations hold a great degree of power, such as in totalitarian governments (Halpern, 1994), complex systems consisting of multiple organizations

each with a specific function (Ball-Rokeach, Hale, Schaffer, Porras, Harris, & Drayton, 1999) or in circumstances where the media provide access to certain critical information during natural disaster (Ball-Rokeach & Cantor, 1986).

Because asymmetrical media entities are in charge of more resources, they are considered to be more powerful. One example can be demonstrated by examining the influence of a newspaper as compared to that of an individual can have. The distribution of a newspaper provides access to a greater percentage of the population than an individual. Even though certain outlets exist for individuals to influence a newspaper publisher, such as an ombudsperson or submitting an op-ed article, these do not carry the same impact on society.

The three primary information-providing functions the macro level possesses are gathering and creating, processing, and dissemination (DeFleur & Ball-Rokeach, 1989). One example of a powerful macro entity in charge of media processing functions would be the efforts by the Recording Industry Association of America (RIAA) to restrain music downloading by influencing government policy. This media conglomerate performs political functions based on the interests of its financiers, namely, the companies in charge of several large record labels. Individuals, or even small record labels, are not likely to have the same level of political clout as the RIAA for several reasons. It simply isn't within the financial or political reach of the consumer to organize hundreds of lawsuits to deter downloading, and an individual is unlikely to influence Congress about effects of music downloading. But the actions of the RIAA do have an effect on individuals; they might be affected by restrictions placed on "appropriate use" of music samples, or new laws enacted to protect the interests of the RIAA's financiers.

Since macro entities hold more power in asymmetrical environments, particularly in mediums where messages travel one-way such as television or radio, most MSD studies focus on

media dependency and effects of the media system at the micro level (Ball-Rokeach, Rokeach, & Grube, 1984; Grant, Guthrie & Ball-Rokeach, 1991; Grant, 1998; Halpern 1994; Loges, 1994; Morton & Duck, 2000; Skumanich & Kintsfather, 1998). It has been theorized that the ideal way to examine dependency relations, as they come predominantly from macro influences, is to discuss the mass media system from the macro level on down to the micro, or individual, level (Ball-Rokeach, 1985, p. 506).

Researchers who opt to model large, complex systems using MSD have frequently followed a macro-to-micro approach of examination to explain cognitive and affective effects on individuals. Grant, Guthrie and Ball-Rokeach (1991) developed a model of the socio-economic process behind television use and purchasing for their examination of television shopping channels. Buying a television was found to lead to television watching, that is, once a television was purchased it began to satisfy an individual's dependencies. After dependency on the television medium commenced, dependency on a particular genre followed; specifically, a dependency on television shopping programs commenced. This model was subsequently expanded by Skumanich and Kintsfather (1998) to describe "feedback effects" impacting continued dependency over time. The items purchased through television shopping programs led to continued television dependency. Ball-Rokeach, Hale, Schaffer, Porras, Harris and Drayton (1999) examined the effects of a program designed to decrease aggressive driving habits by outlining the individual, economic and social entities that make up the traffic report production system. The system was found to be made up of complex series of exchanges, and by altering the symmetry and structures of the entities involved, a plan was proposed to improve the reporting of media coverage of car crashes.

An examination using MSD does not necessarily need to encompass the entire media structure; such studies would be nearly impossible to conduct. Ball-Rokeach (1998) describes the scope of MSD investigations as such: "... depending on the problem under investigation, MSD relations may be conceived to involve the whole media system or one of its empirical parts (e.g., television, radio, etc.)" (p. 16). Therefore, this investigation is constrained to factors related to MySpace use, that is, factors affecting use of the Internet medium and the specific resource, MySpace.

### *Individual-level Dependencies*

Individuals are dependent on macro entities for information used to satisfy dependencies for understanding, orientation, and play. These non-mutually exclusive categories describe fundamental human goals. Goals are attributes of an individual, while dependencies are how these goals are outwardly expressed in response to available media resources. "Individuals, like social systems, develop dependency relationships with the media, because individuals are goal directed and some of their goals require access to resources controlled by the mass media" (DeFleur & Ball-Rokeach, 1989, p.305).

MSD views this dependent relationship between individuals and the media system as predominantly the result of activities of macro entities, rather than the result of a sum of individual factors. Individual differences alone do not fully explain dependency relationships (DeFleur & Ball-Rokeach, 1989). Indeed, Ball-Rokeach (1998) has argued that by just discussing individual effects, media system dependency theory is not applicable.

Variance in dependencies can be influenced by several factors. MSD relations, between macro levels as well as between individuals and macro levels, undergo changes in structure (asymmetric vs. symmetric), intensity and scope (Ball-Rokeach et al, 1990) leading to a variation in dependencies.

### Individual-level Dependencies and Usage

According to MSD theory, when a dependency is activated, usage commences through arousal and involvement (DeFleur & Ball-Rokeach, 1989, p. 312). When activated, higher levels of dependency lead to a greater degree of cognitive arousal (attention) and affective arousal (liking). Arousal leads to greater involvement in information processing. The more information is processed, the greater the probability of cognitive, affective, and behavioral effects (DeFleur & Ball-Rokeach, 1989). If a dependency is not activated, usage does not continue. Usage is related to dependency, but usage is not sufficient to define a dependency. In other words, dependency is positively correlated with media use, which mediates the effects of a dependency. This relationship helps explain why certain individuals selectively expose themselves to mass media messages and not others.

Shortly after media dependency was first developed in 1976, successive applications of the theory measured “dependency” partly or entirely as exposure time. “Dependency” was captured in measures such as days per week an individual uses a medium (Becker, Sobowale & Casey, 1979; Becker & Whitney, 1980) or frequency of medium use (Miller & Reese, 1982).

Ball-Rokeach, Rokeach and Grube (1984) developed an 11-item scale to measure television dependency. The questions probed how important individuals found television for

satisfying specific dependencies of understanding, orientation, and play (Figure 1). Television use, or exposure time, was correlated with dependency. Those who watched a low amount of television had a significantly lower dependency on the medium. Grant (1998) followed up on this scale with an 18-item scale, designed for application across mediums. It featured three questions for each of the six categories of dependency (Table 1) so that each category can be viewed on its own. As with Ball-Rokeach, Rokeach and Grube (1984), total dependency was a sum of all questions.

Table 1: Typology of Individual media system dependency Relations

	Understanding	Orientation	Play
Personal	Self-understanding e.g., learning about oneself and growing as a person	Action orientation e.g., deciding what to buy, how to dress, or how to stay slim	Solitary play e.g., relaxing when alone or having something to do by oneself
Social	Social understanding e.g., knowing about and interpreting the world or community	Interaction orientation e.g., getting hints on how to handle new or difficult situations	Social play e.g., going to a movie or listening to music with family or friends

Both the scale developed by Grant (1998) and the one by Ball-Rokeach, Rokeach and Grube (1984) capture a more detailed conception of “dependency” than previous conceptions. These scales queried what specific goals, as conceived as fundamental human needs, were activated by the available medium or media resource. These scales capture a more quality-based measurement of the relationship of the individual to the media than those relying on conceptions of usage (Becker, Sobowale & Casey, 1979; Becker & Whitney, 1980; Miller & Reese, 1982).

Although dependency might lead to usage, amount of usage itself does not tell the whole story. By comparison, these dependency measures capture the reasons why an individual uses the media or medium in question.

Multiple successive studies found that media use was correlated to dependency, mediating degree of effect, but was not involved in the definition of dependency. Ball-Rokeach, Rokeach and Grube (1984) determined a television program designed to persuade viewers was more watched by dependent individuals, leading to cognitive effects. Greater analysis found that television dependency was more predictive of whether an individual watched the television program than weekly television consumption (p. 99). Individuals who “tuned in” were more likely to be seeking understanding from this educational television show, as compared to habitual television watchers who were heavier entertainment consumers. Finally, individuals who watched the program uninterrupted experienced greater effects than both interrupted viewers and control groups. Grant, Guthrie and Ball-Rokeach (1991) found that dependency on television was correlated with media usage, partly through parasocial interaction, leading to media effects. Skumanich and Kintsfather (1998) extended this model, adding an additional factor, teleparticipation, mediating both usage and parasocial interaction. Teleparticipation describes the desire for individuals to be part of events without having to be present at them. In both cases (Grant, Guthrie & Ball-Rokeach, 1991; Skumanich & Kintsfather, 1998), dependency on the mediums led to use and successive dependency on the specific media resource (television shopping). Research by Halpern (1994) found dependencies were correlated with media use, such as exclusive use of media by opposition parties. Morton and Duck (2000) found that homosexual male attitudes towards safe sex habits were a function of dependency moderated by degree of media usage.



## Dependency Dimensions and Categories

Each dependency category captures a different goal for individuals across personal and social dimensions (Table 1). Personal dependency dimensions are those that are accomplished alone, or are oriented around factors related directly to the individual. Social dimensions are accomplished in the presence of others, or to better facilitate interaction.

“Understanding” dependencies develop when individuals come to rely on information resources to learn and know more about themselves and others. The personal dimension, “self-understanding,” captures how individuals come to learn more about themselves, their beliefs, and behavior. The social dimension “social understanding” captures how individuals learn more about other people and cultures (DeFleur & Ball-Rokeach, 1988).

When an individual looks repeatedly to media resources for guidance on how to act, this is termed an “orientation” dependency. This category also has a personal dimension, “action orientation,” capturing the ways individuals conduct themselves to operate in ways that are personally meaningful to them. Some examples of action orientation behaviors are of a political nature, such as voting, while others are of a medical nature, such as exercising. The social dimension, “interaction orientation,” captures the ways individuals decide how to respond to other people, and what socially-established norms are for interpersonal situations (DeFleur & Ball-Rokeach, 1988). An individual dependent on the television for interaction orientation might look to news or talk shows to inform them on how to act in unfamiliar situations.

The final dimension, “play,” encompasses situations where enjoyment is the key motivation. The personal dimension, “solitary play,” refers to situations where individuals become attracted to media for aesthetic, entertainment, or relaxation reasons. Other individuals

may be present in a group setting, but enjoyment might be more of a personal one. By comparison, “social play” refers to situations where individuals are attracted by the presence of others for friendship or romance (DeFleur & Ball-Rokeach, 1988).

### Individual Factors Moderating Intensity of Dependencies

As previously stated, dependencies vary primarily based on the influence of macro media entities. However, they also vary in a lesser degree based on individual differences. Individual differences are sources of direct variation in dependencies, which indirectly mediate use, leading to effects (Ball-Rokeach, 1998). MSD considers valid individual differences if they capture, “meaningful distinctions between individuals with respect to their a) personal goals, b) perception of the utility of media resources, and c) access to alternative information resources” (Ball-Rokeach, 1998, p. 20). Other individual factors, such as demographics, are considered as lesser influences on dependencies, and studies have provided no clear consensus on whether race, gender, income, age, and education capture differences in dependencies.

### Demographic Factors

In MSD, demographic differences have been found to be weak sources of individual variation in dependencies. Grant, Guthrie, and Ball-Rokeach (1991) found significant but weak correlations between television shopping dependency and education, and television shopping dependency and income. Grant (1994) found several demographic variables were significantly related to intensity of dependency relations for newspapers, radio, magazines, and television. However, the significant correlations were weak, and little variance was explained by

demographic factors alone (p. 791). Bentley's (2000) dissertation on habitual newspaper readers found weak but significant correlations between dependency and age and income, but did not find correlations between dependency and education or gender. Yang and Patwardhan (2004) rejected hypotheses that age and education had a correlation with Internet use. Lowrey (2004) found no support for income or education factors on dependency relations, but did find significant support for age. Hindman (2004) did not examine dependencies directly, but rather through the expression of cognitive effects. He found no relationship between support for the president and gender, education, age, or income pre-September 11, and a relationship between only support for the president and income post-September 11. Yoon (2006) found no significant results for dependency variance based on gender.

In sum, previous studies have found relationships between dependencies and income (Grant, Guthrie & Ball-Rokeach 1991; Lowrey, 2004), age (Lowrey, 2004) and education (Grant, Guthrie & Ball-Rokeach 1991). But some of these studies contradict others, as they also found weak or no relationships between overall demographics (Grant, 1994) as well as specific demographic factors of age (Bentley, 2000), income (Bentley, 2000), age (Yang & Patwardhan, 2004), education (Bentley, 2000; Lowrey, 2004; Yang & Patwardhan, 2004), gender (Bentley, 2000; Yoon, 2006) and income (Lowrey, 2004).

Researchers indeed found that demographic factors such as gender, age, race, and income can be related to minor variations in dependency or use of television (Grant, Guthrie & Ball-Rokeach 1991; Grant, 1994) and the Internet (Lowrey, 2004; Yang & Patwardhan, 2004; Yoon, 2006). However, there is no consensus about what demographic factors have the most impact. These findings are in line with MSD theory, which states that demographic factors do not have

as strong an effect on dependency relations as macro relations, and vary according to the media in question and the context of macro relations (DeFleur & Ball-Rokeach, 1988).

### Psychological Factors

Psychological factors can be considered as a source of individual variation, so far as they affect personal goals and perception of utility of media resources (Ball-Rokeach, 1998). Finn (1997) performed a review of relevant literature on the subject, and then surveyed university students' use of mass media. He found a significant correlation between extroversion and agreeableness and a preference for non-mediated interpersonal activities such as conversation. Weaver (2000) stated that personality traits affect media use, suggesting the need for increased investigation. "Given that the selection and use of the mass media has become... an integral part of most individuals' social environment... the expectation that personality characteristics should be directly linked to our orientation toward and perceptions of the mass media seems prudent" (p. 236). In one study of personality and its relationship to Internet dependency relations, Paul, Shim and Wang (2004) found partial support for a relationship between dependency and neuroticism, and significant support for a relationship between dependency and psychoticism measures.

### The Internet

The Internet provides, at minimum, a role of dissemination (DeFleur & Ball-Rokeach, 1989). MySpace is a website used primarily on an Internet-connected computer. Therefore any

individual who interacts on MySpace is subject to factors related to using a computer on the Internet. Ball-Rokeach (1998) concludes on the topic of MSD on the Internet, “The interpersonal network, whether interacting in place or cyberspace, is likely to retain its discursive power but that power is likely to remain constrained by asymmetric macro producer-consumer relations” (p. 32). In other words, interpersonal networks may still be constrained by macro level forces.

Non-addictive but dependent use of the Internet has been suggested by several studies that do not incorporate MSD but conceive of a similar repeated need to use the Internet. Kubey, Lavin and Barrows (2001) found problematic habitual Internet use to be related with both affective and cognitive effects, particularly with regard to synchronous communication. One study by the university of Southern California’s Digital Future Project (2005), found that not only had the Internet reached 78.6% of Americans, but also the Internet is the technology they are least willing to give up. When individuals were asked what technology they would be most willing to give up, 39.4% responded with “cell phone” and 32.7% with “television.” Only 27.8% said they would be willing to give up Internet access first. Using qualitative analysis of autobiographical essays, McMillan and Morrison (2006) found a growing dependency by young individuals on the Internet for a variety of social activities, from “managing their daily lives to building and maintaining virtual communities” (p. 73). Here a dependency was not conceived as in MSD theory, but similar to specific dependency dimensions of interaction orientation and social understanding: “Informants reported that they depended on the Internet and related technologies to help them define themselves and their communities” (McMillan & Morrison, 2006, p. 87).

To ensure Internet-based resources are in fact, mass resources, the current study will first examine, in top-down fashion, whether the Internet can be considered a mass medium. This will

lead to a discussion of the relationship of micro to macro relationships over the Internet, and lead into the specific online resource, MySpace.

### *The Internet as Mass Medium*

The Internet is the medium that facilitates use of MySpace by individuals. Because MSD describes the relationship of individuals to mass media resources, to discuss the Internet under this theory the Internet must first be theorized as a mass medium. Previous to the advent of the Internet, there were multiple studies that pointed towards the need for a more interactive, responsive, bidirectional medium. As Tomita (1980) noted, there existed a lack of mass communication resources facilitating interaction for between 10 and 10,000 individuals in a time frame of 1 hour to 24 hours (p. 52). This “media gap” describes asynchronous, small-to-large-group interactions, the type of interaction online social resources such as websites and message boards encompass. Neuman (1991) did not hypothesize the role of the mass media would necessarily diminish, and in fact, “the new developments in horizontal, user-controlled media that allow the user to amend, reformat, store, copy, forward to others, and comment on the flow of ideas do not rule out mass communications, Quite the contrary, they complement the traditional mass media...” (p. 8).

The Internet is currently very popular among Americans; Internet resources are available to and used by the majority of Americans (Madden, 2006). As of late 2005, 73% of American adults were online, up from 50% in 2000 and 14% in 1995 (Madden, 2005). The Internet has also

been quickly adopted; It has been observed to rival the television's rise in adoption (Hannemyr, 2003), from 10% in 1950 to 90% in 1959 (Putnam, 2001).

The Internet has been designated a status as “mass medium” by leading scholars in a variety of disciplines. Morris and Ogan (1996) stated interest in examining the Internet as provider of a mass medium, based on traditional definitions of a “mass audience” and “mediating technology.” Flanagin and Metzger's (2001) analysis found that not only was the Internet a resource with information giving and retrieval functions similar to traditional mass media, but “conversation features of the Internet aligned with mediated interpersonal technologies (the telephone and electronic mail)” (p. 153). Croteau and Hoynes (2002) list four primary differences between traditional conceptions of a mass medium and the Internet: the line between individual and mass audience is blurred (it is no longer a “one to many” relationship); media consumers are not truly anonymous; the distinction between producer and receiver isn't as clear; and communication isn't one-way. McQuail (2005) similarly notes that “uses of the Internet are often clearly not mass communication,” citing, among other factors, its flexibility in use, accessibility to individuals as communicators, lack of regulation, and lack of definition of the medium as a whole (p. 40). However, he goes on to say its “chief characteristics” can be considered a mass medium. Bargh and McKenna (2004) cite the Internet as a “mass medium” but also cite “novel features” of anonymity and the ability to meet in groups (p. 573). These statements indicate that many researchers tend to classify the Internet as a mass medium, despite some differences in its use as compared to traditional mass mediums.

In sum, the Internet can be seen as filling a space missing in traditional channels of mass media (Neuman 1991; Tomita 1980); has been repeatedly classified by scholars as a mass medium (Croteau & Hoynes, 2002; Flanagin & Metzger, 2001; McQuail 2005; Morris & Ogan,

1996); and is very popular and has been rapidly adopted (Hannemyr 2003; Madden 2005; Madden 2006; Putnam 2001). Finally, several studies have already considered the Internet under MSD, demonstrating that dependency on the Internet can be investigated (Kim, Jung, Cohen, & Ball-Rokeach, 2004; Lowrey, 2004; Patwardhan & Yang, 2003; Yang & Patwardhan, 2004).

This paper also defines the Internet as a mass medium, but under the requirement that an examination is first conducted for how fundamental differences between the Internet and traditional mass media channels affect the producer-consumer relationship. These different factors on the Internet from above include a lack of regulation, the dissolution of producer-receiver roles allowing “consumers” to create media content, and that the Internet is no longer a one-to-many relationship.

#### *Social Uses of Internet Resources*

Although some have found evidence of use of the Internet replacing existing media usage (Lee & Leung, 2006), most scholars agree that the Internet supplements behaviors and usage habits. That is, use of the Internet can co-exist with use of other forms of media consumption and interaction without conflict. Stempel III, Hargrove and Bernt (2000) found no difference between local news viewing and network news viewing between Internet users and non-users. Additionally, Internet users were more likely to be newspaper readers and radio listeners. Green et al. (2005) found that students did not substitute Internet use for non-school related activities.

Despite convergent technologies and similar social interaction, a variety of formats to communicate online will likely continue to exist. Rettie (2003) found that four different technologies (email, Instant Messenger, text messages and mobile phones) played different



communication roles. Flaherty, Pearce and Rubin (1998) found evidence to suggest that online interaction offers benefits that face-to-face communication does not. Leung (2001) identified the intrinsic motives of the text-based chat program ICQ as mostly social and specifically composed of inclusion, affection, sociability, and escape. Stafford, Stafford and Schkade (2004) identify three motives for using the Internet: two are process and content related, similar to traditional television, and the last is a new social gratification. This new dimension consists of items familiar to face to face interaction but not to mass communication: “chatting,” “friends,” “interactions,” and “people.”

In addition to the Internet being a mass medium, Internet resources are often used for social reasons. Stafford, Stafford & Schkade (2004) identified socialization as a key dimension of Internet use, concluding, “...social gratifications are worth considering as a key benefit sought by consumers using the Internet. Chatting and interacting with people over the Internet seems to characterize this usage dimension...” (p. 277). Robinson, Kestnbaum, Neustadt and Alvarez (2000) found in a national survey that Internet users had no less social activity than non-users. Indeed, in many cases involving online communities, use of social Internet resources mirrored real-life communication habits. Haythornthwaite, Wellman and Garton (1998) describe interactions in virtual communities as “show[ing] behaviors consistent with off-line communities” (p. 212). When performing a review of existing literature on computer-mediated communication by young individuals, Tyler (2002) concluded, “...the use of the Internet does not shape psychological well-being in any way that is different from the influence of social interaction via other modalities” (p. 197). That is, people interact on the Internet in ways similar to the ways they interact in real life.

People use the Internet for social reasons, and may be motivated to interact on the Internet for similar reasons as in real life. Furthermore, scholars have theorized about how socialization on the Internet even extends an individual's ability to socialize. Research in computer-supported social networks (CSSN) suggests that interpersonal networks are more widespread when given agency through the Internet (Wellman, Salaff, Dimitrova, Garton & Gulia, 1996). Problematic Internet use may even be related to social activities online (Caplan, 2005).

College-age American adults are leading the way in using Internet resources, as a full 88% of Americans aged 18-29 use the Internet (Madden, 2006). With the increased interest from younger demographics, it doesn't seem out of place to suggest that the creation and maintenance of online friendships is a skill learned during teenage years or early adulthood, creating dependencies that are pronounced during college. Gross, Juvonen and Gable's (2002) study of the communication habits of adolescents demonstrated that a group of 7<sup>th</sup> graders used the Internet to discuss typical topics such as "friends," "boredom," and "boyfriend/girlfriend stuff." The most popular motive was "to hang out with a friend." With this information the researchers concluded, "...on-line communication appears to be similar in several ways to traditional means of youth social interaction" (Gross, Juvonen & Gable, 2002, p. 86). Wolak, Mitchell and Finkelhor (2003) echo this finding by observing, "Forming online relationships might be one of the most generally appealing aspects of Internet use among young people, given that forming relationships is a developmental imperative of adolescence" (p. 106). Gross (2004) found that on average, both gendered adolescents reported using the Internet to communicate with friends over chat and e-mail about, "fairly ordinary yet intimate topics" (p. 633). In sum, the popularity of the Internet is due at least in part to social resources. The Internet may even extend the abilities of

individuals to socialize. Finally, adults and younger individuals tend to use these resources for similar reasons as offline resources.

### *Macro Level Constraints on the Internet*

The differences in how the Internet works as a mass medium and offers social resources describe why macro level constraints may not be as pronounced on the Internet as in other mediums in the United States, such as television or radio. Economic and advertising relationships differ greatly on the Internet in the United States. There is also limited government regulation of Internet usage in the country; government efforts such as the Patriot Act do not typically impede the use of the Internet by individuals. Due to more content being provided by consumers, particularly in online social interaction, there is less structural hierarchy. All these structural differences equate to a less asymmetrical relationship and therefore less powerful media entities.

The wealth of resources on the Internet means that gaining Internet access allows access to multiple alternative media sources. The presence of a variety of options means individuals are less of a “captive audience” in comparison to cases where use of certain media or mediums is constrained by social stigma (Morton & Duck, 2000) or government intervention (Halpern, 1994). The presence of many resource options is one reason the Internet may not constrain the consumption habits of individuals.

People socialize on the Internet through individual-to-individual or individual-to-group relationships. In many of these cases, such as chat rooms and message boards, consumers themselves create the “content” being consumed. Macro entities may attempt to provide media

outlets for these activities, and therefore control them. However, given the abundance of online resources that provide similar activities online, they will not be in charge of unique resources.

Certain situations on the Internet could arise where dependency on Internet resources increases; threats found to increase intensity of dependency include natural disaster (Ball-Rokeach & Cantor, 1986), terrorist attack (Kim, Jung, Cohen, & Ball-Rokeach, 2004; Lowrey, 2004), and a comprehensive list of “a variety of man-made and natural hazards at both the individual and the society level” (Loges, 1994, p. 11). This study investigates habitual use of a specific Internet-based resource rather than a study in response to an unexpected event. Therefore, there are likely macro influences that occur over time that are not going to be captured by a single survey, and become visible only during certain times, such as crisis or natural disaster.

Moving from the macro level effects on to the micro level, this paper examines other factors affecting use of Internet-based resources. These factors come from an interaction between the individual and the tools used to access the Internet, namely difficulty or ease of using a computer. They are considered because they affect the “perception of the utility of media resources” (Ball-Rokeach, 1998, p. 20) on the Internet for a large number of individuals in the United States.

### MySpace

MySpace is a popular type of “social networking” website (Metz, 2006). Studies that have looked at these “social networking” websites often focus on mapping of online networks (Heer & Boyd, 2005), type or meaning of online social networking interactions (Backstrom,

Huttenlocher, Kleinberg & Lan 2006; Boyd, 2004; Boyd & Heer, 2006; Donath & Boyd, 2004), or how they relate to real-life representations (Labrune & Mackey, 2006). In each case, the primary activity on MySpace was hypothesized as making or maintaining networks of friends.

However, there has been comparatively little research on the driving forces behind habitual use of MySpace. To understand why individuals use the Internet-based social resource MySpace, this chapter will examine the MySpace-specific dependency, use, and psychological factors that affect dependencies, specifically extroversion and self-disclosure. Such factors are relevant as far as they affect the individual's personal goals and perception of utility (Ball-Rokeach, 1998).

MySpace is a valid subject for examination using a mass media theory, as it is a specific media resource on the Internet, a mass medium. Previous research has been conducted on dependency on specific media resources such as television shopping channels (Grant, Guthrie & Ball-Rokeach, 1991; Skumanich & Kintsfather, 1998), traffic reporting (Ball-Rokeach, Hale, Schaffer, Porras, Harris & Drayton, 1999), "those sources of information that have been produced by and for the gay community" (Morton & Duck, 2000, p. 444), and online news resources (Yang & Patwardhan, 2004). Additionally, dependency on the Internet as a medium has been suggested as problematic to capture in a survey due to the large variety of roles it plays in individuals' lives (Grant, 2006).

Ball-Rokeach (1998) has suggested that resources on the Internet are a valid resource for investigation of MSD relations, even if the producer-consumer relationship differs from traditional media (p. 27). Additionally, as previously discussed, Internet resources are often used to achieve social goals. It has been predicted that there is a social and economic need for a new form of mass media for small group interaction (Neuman 1991; Putnam, 2001; Tomita 1980)

such as that facilitated by MySpace. When discussing the social communities forming online and the activities they conduct as part of media convergence, Jenkins (2006) observed, “rather than talking about personal media, perhaps we should be talking about communal media – media that become part of our lives as members of communities” (p. 245).

### *Multimedia and Social Forms of Expression on Myspace*

“Lurkers” are traditionally defined as individuals who view discussions but do not participate. Therefore, non-members may provide benefits to online forums (Rafaeli, Ravid, & Soroka, 2004). However, non-members are not able to fully participate in a website such as MySpace, which requires registration to become fully involved in the resources MySpace offers. Web users initially go to the website either deliberately or through web surfing. Next, to be able to view other accounts, a user needs to create a profile. After creating a profile, users can use the resources on the website to interact with others. This profile is de facto searchable, therefore a user cannot view the images of other users, or “use” the majority of features on MySpace without also having the option of being searched and viewed.

A profile includes a variety of media, such as pictures, a list of connections to other users on a “friends list,” information such as birth date and favorite bands, as well as other features such as a blog. As shown in Figure 1, a profile allows members to provide information about themselves for viewing by any other member. A user’s main page features several methods to keep track of visitors and ways to post new content. “Profile views” is a counter that keeps track of how many people have viewed the user’s page. Most active users include their own images in the “gallery.” There is the option of using the blog feature to inform others about the user’s daily

life. Mass messages similar to message board postings can be sent. Users leave “testimonials” for other users and in turn receive them on their own pages. Testimonials are partly a personal message for that individual, but also a public message viewable by any visitors.



Figure 1: Sample MySpace User Profile



Movies, pictures, and sounds are frequently incorporated into a MySpace page. Many external websites exist for the specialized purpose of informing visitors how to customize their MySpace pages, such as “Pimp MySpace” (<http://www.pimpmyspace.org>) and “Your Cool Profile” (<http://www.yourcoolprofile.com>). Modifying images and other digital content has proven popular among younger demographics (Frank, 2004; Lenhart & Madden, 2005). Kapoor, Konstan and Terveen (2005) found that the posting of photos online, combined with short reminders, resulted in an increased number of participants uploading their own pictures. That is, the multimedia feature of the photo contributed to new users uploading photos of them. Walther, Slovacek and Tidwell (2001) yielded data to indicate, “in new, unacquainted teams, seeing one’s partner promotes affection and social attraction” (p. 105).

### Computer-Mediated Communication

Computer-mediated communication (CMC) provides a background on how use of multimedia components on MySpace impacts which personalities will find certain online communication resources useful. Short, Williams and Christie (1976) described “social presence theory,” or the salient knowledge a medium passes as being additive from the number of available “cues.” These cues can be any channels that provide information, such as visual or audible. The interaction with the highest degree of “social presence” is face-to-face (FTF) communication. The more salient a medium, the more effective it was generally seen to be (Williams & Christie, 1976).

Researchers in following decades worked with and reacted against this view to create several subsequent theories. Media richness theory (Daft & Lengel, 1984) took the same stance

as social presence theory. CMC at the time was considered a “lean” medium (fewer cues) due to being exclusively text. Tu (2000) found different usage habits and effects from different types of CMC (email, message boards, etc.). The “text-only bias” of CMC was criticized by Soukup (2000), who claimed there had yet to be a coherent model of multimedia interaction online.

The effects stemming from text-based CMC partly come from how individuals can “hide” behind their words. This is often called “anonymity,” referring to the way users are visually anonymous, although it is also used to refer to use of an alias (Joinson, 2003). This hiding is one of the driving factors behind eliciting social interaction from introverted individuals. There is evidence that “hyperpersonal” interaction even coaxes a greater degree of self-disclosure out of people in certain low-cue interactions (Walther, 1996). However, when studies investigated the effect of being seen (non-visually anonymous) and lacking a pseudonym, “hyperpersonal” effects diminished (Walther, 1999; Joinson, 2003).

The multimedia nature of MySpace is conceived in this study as diminishing the capacity for visually “anonymous” communication due to the high degree of personal information required by MySpace. Although pseudonyms can be created on MySpace, this study does not specifically address this factor. Even if a pseudonym were used, MySpace would still require of their creators’ participation in the predominantly social activities on the website.

### *MySpace and Dependency*

MSD states that when a dependency is activated through exposure to a media or medium, usage commences. Studies found that media use is correlated with media dependency (Ball-Rokeach, Rokeach, & Grube, 1984; Grant, Guthrie and Ball-Rokeach, 1991; Halpern, 1994;

Kim, Jung, Cohen, & Ball-Rokeach, 2004; Lowrey, 2004; Morton & Duck, 2000). To be “on” MySpace, that is, an active member, requires usage of the website. Although “lurkers” may exist, the current study investigates registered members as compared to non-members. Without registering, individuals don’t gain access to the full range of features MySpace offers, and usage is limited. Therefore, it is hypothesized that MySpace dependency is positively related with MySpace use.

**H1: Increased dependency on MySpace is positively correlated with MySpace usage.**

As previously discussed, dependencies vary across two dimensions (personal and social) and three categories (understanding, orientation, and play). These divisions describe the relevance and importance of media to specific goals in the lives of individuals. Examining the participant responses to each dependency category across two dimensions would provide information on why individuals are habitual MySpace members.

**RQ1: What are the responses in each dependency category (understanding, orientation, and play) across social and personal dimensions?**

Results from previous studies provide no consensus on what demographic factors influence dependencies (Bentley, 2000; Grant, 1994; Grant, Guthrie & Ball-Rokeach 1991; Hindman, 2004; Lowrey, 2004; Yang & Patwardhan, 2004; Yoon, 2006). Therefore, a research question was formulated to address how demographics affect relations between individuals and media in this context. Minor variances in dependency may potentially be explained by

demographics. However, certain differences will not be visible due to the convenience sampling of college undergraduates used in this study and are therefore not included; education and income will be assumed to be relatively stable across the sample population, as undergraduate students are in the same educational program and most do not yet have a full-time job. Age will be included because the university provides classes for working adults; university enrollment statistics show that 23% of undergraduates are over the age of 25, and the average age of graduate students is over 30 (Ramsey, 2006).

**RQ2: What is the demographic variance of MySpace members across gender, race, and age, and do these differences have a relationship with variance in dependencies or cognitive factors?**

#### *Individual Factors Moderating MySpace Dependencies*

According to MSD, individual dependencies vary according to, “meaningful distinctions between individuals with respect to their a) personal goals, b) perception of the utility of media resources, and c) access to alternative information resources” (Ball-Rokeach, 1998, p. 20). Psychological factors have been theorized as having an effect on media consumption habits (Weaver, 2000), and have been shown to be a statistically significant source of variation in dependencies (Shim & Wang, 2004). As previously mentioned, access to alternative resources is not a relevant area of discussion on the Internet, as an Internet connection by definition provides access to alternative resources. Therefore, psychological variation between individuals that describes the differences in personal goals and perception of utility of media resources.

## Computer Self-efficacy

Self-efficacy is a cognitive ability defined as the belief in one's capability to organize and execute a particular course of action (Bandura, 1997). Specifically as concerns the Internet, computer self-efficacy is defined as the "belief in one's actions on the computer" (Barbeite & Weiss, 2004, p. 3). In other words, individuals who have a high degree of computer self-efficacy find computers useful tools. Eastin and Larose (2000) found traits of computer self-efficacy to have a strong positive correlation with Internet use and self-disparagement to have a strong negative correlation with Internet use. Internet self-efficacy was found to be negatively related to self-disparagement, meaning those who are more confident in using the Internet are less likely to be self-disparaging. Several other factors were found to be significant, but weaker, sources of variation that influenced self-efficacy. Eastin and Larose (2000) concluded self-efficacy and self-disparagement as possible factors in explaining the "digital divide," as conceived by Norris (2001). That is, who uses Internet resources is dependent on an individual's ability to use computers without nervousness.

In a successive study, LaRose, Mastro, and Eastin (2001) investigated Internet use and found that 60% of variability in Internet use among college students was explained using measures for self-efficacy and self-disparagement. Wang (2001), noting both the increasing use of the Internet and the presence of Internet "addiction," found correlations between Internet dependency and individual characteristics of psychosocial maturity and self-efficacy for the entire convenience sampling. Torkzadeh and Dyke (2001) developed an Internet self-efficacy scale grouped by three factors: browsing, encryption/decryption, and system manipulation. Durndell and Haag (2002) found lower computer anxiety and higher self-efficacy to be

significantly correlated with higher reported use of the Internet and positive attitudes about the Internet in a sampling of East Europeans.

Self-efficacy is belief in one's capability to organize and execute a particular course of action (Bandura, 1997), here used to specifically describe computer use. Computer self-efficacy was found to be a strong predictor of Internet use in multiple studies (LaRose, Mastro & Eastin, 2001; Durndell & Haag, 2002; Wang, 2001; Barbeite & Weiss, 2004).

**H2A: Computer self-efficacy has a positive correlation with intensity of dependency on the website MySpace.**

### Computer Anxiety

Computer anxiety is a psychological trait negatively correlated with Internet use. Although several definitions exist, it is broadly defined as the trait of those whom computer technology makes nervous or anxious (Barbeite & Weiss, 2004; Durndell & Haag, 2002) or a fear of using or the possibility of using computers (Chua, Chen & Wong, 1999). It is not an attitude, but an affective response of some individuals that diminishes their perception of the utility of the computer.

Durndell and Haag (2002) found lower computer anxiety to be significantly correlated with higher reported use of the Internet and positive attitudes about the Internet. Following from research from both computer self-efficacy and anxiety, Barbeite and Weiss (2004) developed scales of self-efficacy and anxiety specifically for computer use, comparing measures

administered online with traditional pen and paper. They found that when using scales specifically created for Internet administration, computer self-efficacy measures were the best predictor of Internet use. Computer self-efficacy was divided into general/beginning activities and advanced activities. Total computer anxiety was factored into anxiety using computer and anxiety in computer-related activities. Both general/beginning and advanced activities were found to be significantly correlated with Internet comfort and use.

Computer anxiety is an affective response of fear of using a computer or thinking about using a computer that has a negative correlation with Internet and computer use (Barbeite & Weiss, 2004; Chua, Chen & Wong, 1999; Durndell & Haag, 2002).

**H2B: Computer anxiety has a negative correlation with intensity of dependency on the website MySpace.**

### Internet Access Speed and Availability

The presence or lack of a medium or media may be a contributing factor to an individual's likelihood of becoming dependent on that medium or media. As DeFleur and Ball-Rokeach (1989) state, one source of variation in individual level dependency is "ease of access to that content" (p. 313). Media dependency leads to its use, and use requires availability. Therefore, the easier a form of media is to access, the greater a chance an individual may become dependent on it. Because MySpace is deployed on the Internet, MySpace members may be more

likely to be comfortable and familiar with using a computer. MySpace is now available on some cellphones, but no statistics are yet available for this new feature.

As previously stated, Internet users are not structurally constrained by macro level processes as in traditional mass media relationships such as television and radio. However, if the Internet does not constrain users by restricting access to alternate media, they may still be constrained by type of connection and the amount of time they have available to use online resources. In MSD theory terms, the presence of a high-speed connection and time to use it would increase an individual's "perception of the utility" of Internet-based resources (Ball-Rokeach, 1998). Very simply, individuals are not likely to become dependent through mediums that they do not have access to. Therefore, speed and availability of the Internet may affect an individual's perceptions of Internet-based resources as being able to satisfy dependencies.

Several studies have found possible effects of connection type and availability on dependency. Although dependency measures were not collected, dependency leads to use. "Use" was consistently measured in these studies as time spent involved in active usage. These studies frequently found a relationship between a high-speed connection and social uses of the Internet, which led to cognitive or affective effects. In a study conducted on the Internet use habits of college undergraduates, Matthews and Schrum (2002) found a relationship between student IM (Instant Messaging) use and difficulty concentrating on academic subjects. They conclude, "we see that intensive Internet use is now the norm and is not responsible for the downfall of academic success, rather whether or not Internet use interferes with academics depends on the individual" (p. 137). That is, certain individuals may have difficulty keeping on task due to the presence of the Internet. Kubey, Lavin and Barrows (2001) found that as self-reported Internet dependency increased, academic performance decreased, particularly when the dependency led



to use of synchronous applications. “Dependency” was here conceived as problematic, heavy use that led to various effects, such as loneliness and depression.

As previously stated, dependency leads to use, so these studies that found use or even problematic use may be indicative of a dependency relation that was not captured by the research instrument. Howard, Rainie and Jones (2001) found that, along with length of experience with the Internet, presence of a home connection was the best indicator of an expert user. Other research points to the impact of a high-speed “always on” connection. In a Pew Center for Internet and American Life report, Horrigan (2006) reported that 40% of users are broadband-connected and are the most “heavily engaged” with the Internet. Grace-Farfaglia, Dekkers, Sundararajan, Peters and Park (2006) found a greater degree of satisfaction among high-speed as compared to dial-up Internet users in an international survey.

Several MSD studies examining Internet use conceive of access as affecting dependency or use. Kim, Jung, Cohen and Ball-Rokeach (2004) found cognitive and affective effects between how Internet high-, low-, and non-connectors responded to the events of September 11, 2001. The researchers used an “Internet connectedness index,” partly a measure of dependency and partly based on usage habits (Jung, Qui & Kim, 2001).

In 2006, the Internet has become even more available to the average American than in previous studies (Madden, 2006). The Internet may be even more available to this undergraduate sampling, as Internet access is widely available through wireless networking, computer labs, and connection at dormitories. With increased availability of competing media, structural constraints are likely to be diminished on the Internet but still present (Ball-Rokeach, 1998). One structural component influencing dependency relations is physical access. Internet connection still varies across America (Madden, 2006). Particularly taking into account the large number of multimedia

forms on MySpace, which take time to download, we expect dependencies to increase based on presence of a faster connection and time available for use (Jung, Qui & Kim, 2001; Horrigan, 2006; Howard, Rainie & Jones, 2001; Kim, Jung, Cohen & Ball-Rokeach, 2004; Kubey, Lavin & Barrows, 2001; Matthews & Schrum, 2003).

**H3A: Increased time on the Internet has a positive correlation with intensity of dependency on MySpace.**

**H3B: Increased Internet connection speed has a positive correlation with intensity of dependency on MySpace.**

### Self-Disclosure

Boyd and Jenkins (2006) describe MySpace and a similar social networking website Friendster as, “where individuals create profiles and link to others (‘friends’) within the system” (p. 1). This study similarly conceives of the primary activities on MySpace as creating profiles with personal information in them, which requires self-disclosure, and making online friends, which is correlated with the psychological trait of extroversion. This fits within MSD theory, as self-disclosure and extroversion can be viewed as “personal goals” (Ball-Rokeach, 1998, p. 20) that affect individual dependency on a particular media resource.

Self-disclosure is an act required by most types of interpersonal relationships. McKenna, Green, and Gleason (2002) define the act of self-disclosure as expression of, “the identity-important yet usually unexpressed aspects of oneself” (p. 11). Archer (1980) identifies self-disclosure more generally as “the act of revealing personal information to others” (p. 183).

Henderson and Gilding (2004) found pre-commitment through self-disclosure (and reciprocal self-disclosure) a factor affecting trust in relationships online. For the purposes of this study, as we are using a mass media model, we interpret “self-disclosure” to more generally refer to the expression of information about one’s self, regardless of intent or degree to which it reflects the individual’s true self. Self-disclosure has been found to be a factor in the longevity of online relationships (Bargh, McKenna & Fitzsimons, 2002; McKenna, Green & Gleason, 2002).

As previously stated, profiles are assembled data about a person that make up an online representation. One psychological factor affecting the ability to create these profiles, essential to participation in MySpace, is self-disclosure. On the topic of MySpace, Stern states, “Our everyday culture definitely celebrates self-disclosure. Kids are picking up on that. It gives them every indication that this is what we value from people” (2006, as cited in Metz, 2006, p. 80).

In the review of CMC research, it was demonstrated that the relationship of self-disclosure to online communication is highly situational and dependent on the total number of available cues. In the case of MySpace, the observed increased number of multimedia cues is here theorized to create a higher-cue environment more satisfactory to those who are comfortable with self-disclosure.

The sparse amount of research conducted on “social networking” websites supports self-disclosure as an activity that either required or endorsed by the website. In one of the few studies specifically examining social networking websites, Gross and Acquisti (2005) discovered the revealing of a variety of information on a similar social networking website, Facebook.com, which focuses on the college demographic. More than 90% of participants posted a profile image, along with more than half posting information such as birthday, home town, address,

Instant Messenger screen name, high school, dating interests, relationship status, relationship partner, political preference, interests, and favorite media habits.

There has been more research into forms of self-expression on websites generally than on “social networking” websites specifically. Websites are much older than “social networking” websites, therefore there has been more time to conduct research on them. But because MySpace is a specific type of website, these areas of research are technologically similar, particularly as they concern younger demographics that are attracted to the Internet generally and MySpace specifically.

Dominick (1999) discovered a similar degree of self-presentation on web pages as in interpersonal communication. Döring (2002) found current theories about the motives behind personal web page creation could be divided into three categories: identity, self-presentation, and those related to CMC. Papacharissi’s (2002) investigation of individual motives for creating web pages focused on what personal traits, social contexts, and psychological factors affected media selection and use. This study found the most popular motives were information and entertainment, with self-expression and communication with friends and family as moderately salient. Given these data, Papacharissi (2002) suggested “the uses of personal home pages could also be understood as part of an effort to sustain a mode of social existence” (p. 362). Stern (2004) showed that in a sampling of adolescent web pages, 94.4% incorporated a descriptive biography, and other information such as hobbies (76%), media use (73.8%), and school (64.8%). Intimate topics were less frequently mentioned than non-intimate (but still personal), and differences in disclosure by gender were primarily substantive and not stylistic. Examined as a body of work, the above research shows individuals do frequently self-disclose on web pages for a variety of purposes, often recreational.

Lurkers may provide benefits to online forums (Rafaeli, Ravid, & Soroka 2004) but MySpace members are by definition searchable and their actions visible. Due to MySpace having a greater number of cues than text-only CMC and not encouraging anonymity, the website would seem to attract those comfortable with the act of self-disclosing information about themselves. This disclosure is particularly visible through multimedia forms such as pictures (Gross & Acquasiti, 2005) as well as their social connections themselves (Donath & Boyd, 2004), i.e. the number of friends created online.

#### **H4A: Self-disclosure has a positive correlation with MySpace dependency.**

#### Extroversion

One of the primary personality traits is extroversion, a trait dichotomous with introversion and exhibited by those seeking meaning in life outside themselves (Jung, 1976). It was included in Eysenck's EPQ-R scale (Eysenck & Eysenck, 1985), and is the personality trait most closely related to desire for socialization. Extroverts are described as sociable, lively, active, assertive, carefree, dominant, venturesome and sensation-seeking (Eysenck & Eysenck, 1985, p. 15). They are concerned with their appearance to the outside world and how others interpret them.

Paul, Shim and Wang (2004) used a personality test developed by Eysenck (1985) to examine overall television dependency. They found no support for a relationship between television medium dependencies and extroversion. However, as previously stated, social uses of

the Internet are very popular, and have been shown to be part of what attracts people to it. Additionally, in the case of the Internet, it is likely that the increased availability of multiple media sources, as well as the many different roles the Internet can play, means that the medium as a whole does not inherently appeal to a certain personality type. Grant (2006) similarly cautions against “measuring dependency upon the Internet in general. There are so many differences between Web surfing, shopping, games, news sites, email, etc. that there is a danger that a survey might not capture all of these different applications and the degree to which a person depends upon the Internet to fulfill their personal goals...” (p. 1). Wolfradt and Doll (2001) reported extroversion as predicting communication motives, and neuroticism as predicting entertainment and interpersonal communication among adolescents.

Peter, Valkenburg and Schouten (2005) created a model for psychological motives of Internet use which included self-disclosure and frequency of Internet use to describe the formation of online relationships by both introverts and extroverts. Their results and others (McKenna, Green, & Gleason, 2002) suggest that introverts and extroverts use online resources differently. Extroverts use the Internet to increase their social circle, so that the “friend-rich get richer” (p. 29) while introverts, who also report some usage, report greater loneliness. Caplan (2005) reported a link between preference for online social interaction and problematic Internet use.

The exact nature of the resource in question affects whether introverts or extroverts find it useful. Amichai-Hamburger, Wainapel and Fox (2002) found introverts locate their “real” selves through reduced-cues interaction, while extroverts found it through traditional high-cues communication. Extroverts have been shown to avoid text-based social resources (Hamburger & Ben-Artizi, 2000). Weaver (2000) observed that television viewing motives for companionship

were negatively correlated with extroverted tendencies. Extroverts were among, “those who strongly rejected the notion that television can serve as an adequate substitute for interpersonal interactions” (p. 241). Amiel and Sargent (2004) found that extroverts rejected the use of the Internet for social outlets, which echoes the results found by Finn (1997) with regard to television. However, Amiel and Sargent looked at the entire Internet. As previously stated, it may be problematic to examine the entire Internet medium as inherently fostering one type of dependency (Grant, 2006), and MySpace is a higher-cues environment that requires increased self-disclosure.

As previously discussed, on the Internet socialization motives may be similar to those in real life (Gross, Juvonen and Gable, 2002; Haythornthwaite, Schiano et al., 2002; Tyler, 2002) or even extended from real life (Leung, 2001; Stafford, Stafford & Schkade; Wellman et al, 1996; Wellman and Garton, 1998). These findings were mirrored across studies of adolescents (Gross, Juvonen & Gable, 2002; Madden, 2006; Wolak, Mitchell & Finkelhor, 2003). Social presence theory (Short, Williams, and Christie, 1976), media richness theory (Daft & Lengel, 1984) and “hyperpersonal” effects (Walther, 1996) all showed that interaction online is situational and highly based on task, number of available cues and/or visual anonymity. MySpace is a higher-cue environment, does not display the kind of “text bias” many CMC studies do (Soukup, 2000), and has no specific task.

Previous research suggests that extroverts tend to not be attracted to the social uses of resources that are a “poor substitute” for face-to-face interaction (Amiel & Sargent, 2004; Amichai-Hamburger, Wainapel and Fox, 2000; Finn, 1997, Hamburger & Ben-Artizi, 2000; Weaver, 2000). However, as previously stated, the activities on MySpace are highly social, and may require self-disclosure. If introverts are not comfortable with the interaction on the website,

it may affect their “perception of the utility of media resources” (Ball-Rokeach, 1998, p.20).

Therefore, extroverts may be more likely to become dependent on the website than introverts.

**H4B: Extroversion has a positive correlation with MySpace dependency.**

*Factors in Repeated Use*

As previously examined, one attraction on MySpace is the creation of lists of friends. This list is publicly viewable, and shows which members are “connected” to whom. Adding a friend to this list starts when one of the individuals sends a “friend request” to another individual. She or he responds to this “friend request” with either a positive or negative response. If the response is positive, the individuals are each added to the other individual’s “friend list.” This exchange presents one activity on MySpace is the creation of online friends. Although these online friends are not necessarily the same as real-world “friendships,” they do present a primary social activity for members. This “friends list” also presents a quantifiable piece of data that approximates the number of people on MySpace an individual has created social bonds with.

Backstrom, Huttenlocher, Kleinberg and Lan (2006) found that in a study across multiple social networking websites, including the website “Livejournal,” that number of friends who were already members was a factor in an individual’s decision to join that particular website. The current study uses this same factor of number of friends online, except captured by number of friends in a “friends list,” and conceived as a factor in continued dependency, not just initial joining. Many MSD studies have conceived of dependencies as leading to habitual, repeated use, which mediate effects (Ball-Rokeach, Rokeach, & Grube, 1984; Grant, Guthrie and Ball-



Rokeach, 1991; Halpern, 1994; Kim, Jung, Cohen, & Ball-Rokeach, 2004; Lowrey, 2004; Morton & Duck, 2000). Several have included mediating social factors leading to use (Grant, Guthrie & Ball-Rokeach, 1991; Skumanich & Kintsfather, 1998).

Grant, Guthrie and Ball-Rokeach (1991) found support for a dependency on shopping networks on the television. Television dependency led to television shopping dependency, which, through social factors (parasocial interaction) led to television shopping viewing (use). Skumanich and Kintsfather (1998) expanded on this model to include a cyclical component, “purchasing,” which was a factor in dependency (Figure 2). This study models itself off these results.

The model created by Skumanich and Kintsfather (1998) describes a dependency which, through social interaction, leads to use and subsequent effects (the act of purchasing), which contribute to continued dependency. This study applies this model to MySpace, where a dependency (on MySpace), through social interactions, leads to use and subsequent effects (the act of making friends), which contribute to continued dependency. Much as “purchasing” is the primary activity in television shopping resulting from use, meeting friends and making connections is the primary activity on MySpace resulting from use.

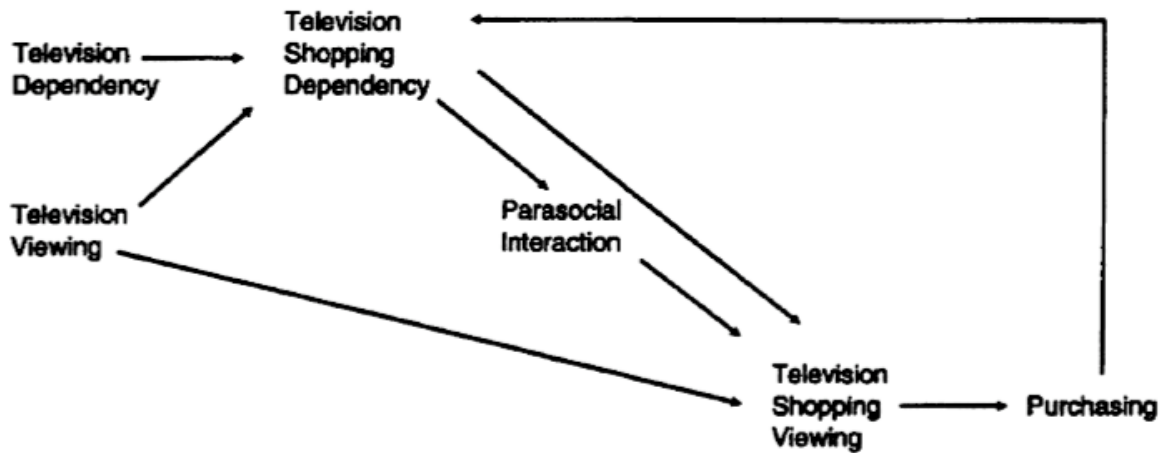


Figure 2: Revised Extended Individual Media Dependency Model for Television Shopping, taken from Skutmanich and Kintsfather (1998, p. 212).

**H5: MySpace use is positively correlated to number of MySpace friends.**

**H6: Number of MySpace friends is positively related to MySpace dependency.**

### Use of Related Technologies

Rogers (1995) describes the adoption of interrelated categories as a “technology cluster.” A technology cluster “consists of one or more distinguishable elements of technology that are perceived as being closely interrelated” (Rogers, 1995, p. 15). Usage stems from a dependency but is not predictive of it. Therefore, finding a usage pattern of other socially enabling technologies would hint at a possible area of future investigation with MSD. High technology clusters have been found with innovations such as cell phones (Reagan, 1987) and personal

computers (Lin, 1998). Using clustering to examine similar technologies on the Internet has been found to be appropriate, given the large variety of innovations online (Prescott & Slyke, 1997).

Most technologies included in the research measures have been found to have social dimensions. Text messaging was found to correlate with maintaining individual friendships and membership in peer groups (Boneva et al., 2006) and for direct, immediate, casual contact (Schiano et al. 2002). Online chatting has been found to be primarily social and its use related to email and cellular phone use (Leung, 2001). Email, one of the first online technologies, is still a popular use of the Internet for person to person contact (Nielsen, 2006; Schiano et al. 2002). Cellphones facilitate person-to-person interaction and were shown to be connected in clusters to online chatting (Leung, 2001). In an interview about social networking websites, Jenkins (Boyd & Jenkins, 2006) describes younger, technology-savvy individuals as, “looking for ways to leave their mark on the world and they are seeking places where they can socially interact with minimal adult interference” (p. 5).

MySpace members, if found to be inherently more social, may also use similarly “socially-enabling technologies” such as cell phones, text messaging, and email. “Socially-enabling technologies” refers to specific technologies (hardware devices or software programs) that have found to be effective at connecting people. These technologies don’t need to facilitate identical types of interaction to be in the same technology cluster. For instance, email is asynchronous (different-time) but would be considered as a socially-enabling technology along with cell phones, which connect people synchronously. The primary nature of the innovation, connecting people for interpersonal communication, is more important than the specificities of what kind of network this technology creates or type of social interaction it engenders.

**H7: MySpace members are more likely to use other socially-enabling technologies.**

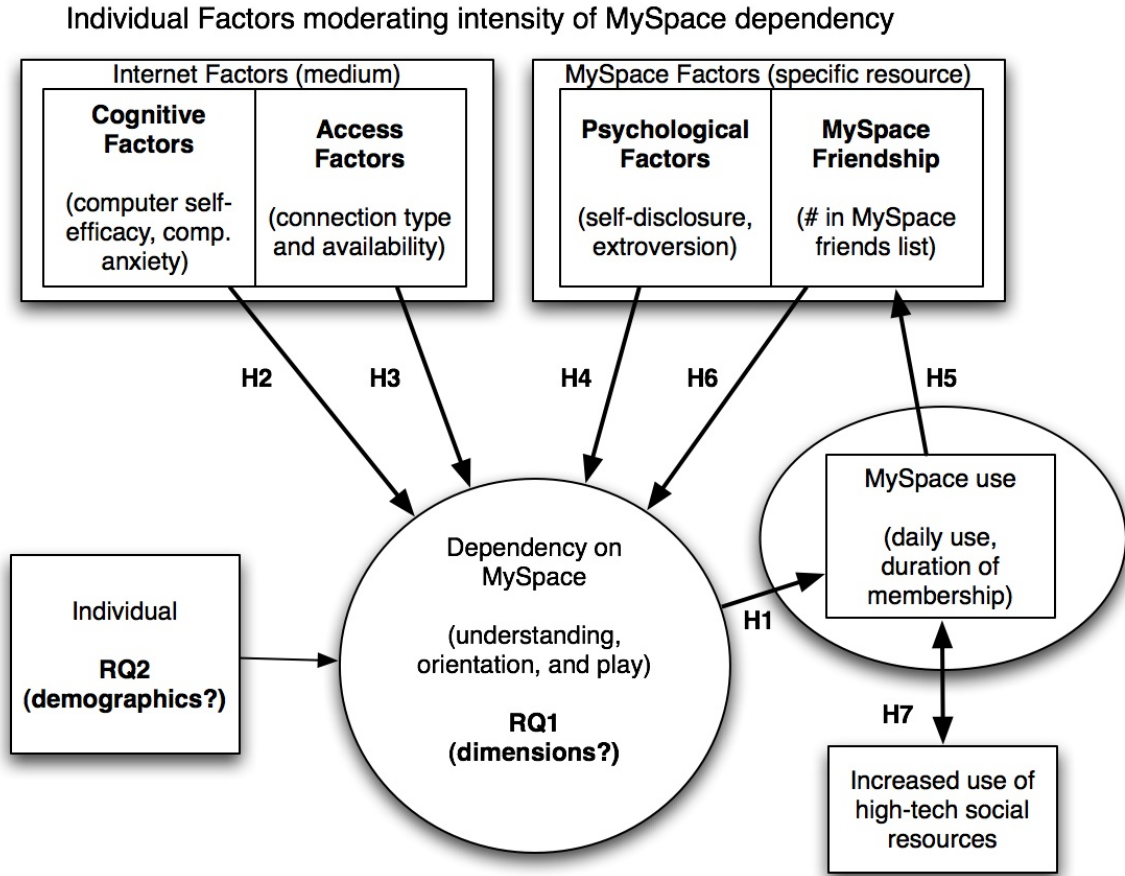


Figure 3: Complete MySpace MSD Model with Hypotheses

Figure 3 shows the model incorporating MySpace use, Internet medium factors, resource factors, number of MySpace friends, and use of other technological innovations.

## CHAPTER THREE: METHODOLOGY

### Administration and Sampling

After IRB approval (Appendix C), an 89-question survey was administered to a convenience sampling of college undergraduates ages 18 and older. Participants were recruited from undergraduate classes in the Nicholson School of Communication and in the Art department, and were offered no incentive for participation. Access to the student populations was obtained through contacts with fellow researchers and faculty members. In accordance with IRB standards, the director for each department gave written consent to the research.

The researcher administered the survey at the beginning of a class session. The professor performed a short introduction to the researcher as a graduate student who is collecting information for his thesis on how students use the Internet. MySpace or social networking websites were not mentioned, as to not prime the subjects; the students would first be filling out responses that do not specifically involve these resources.

Responses did not collect any identifiers about the students, such as name or university ID. The survey was administered with a waiver of consent, meaning that no signatures were collected. Surveys were collected as students finished, and no record was kept of the connection between student and survey.

There was a verbal as well as written statement (Appendix B) that there was no expectation of participation. The teacher left the room for the duration of the session, and remained outside the classroom until the surveys were passed in. This was to avoid giving the

impression that students are required to participate as part of their class grade. Potential subjects were informed that they must be over the age of 18 to participate.

A total of 401 undergraduates participated in the study. Although this is a pilot study, analyses were performed to determine whether the demographics of the sampling closely match those of the university demographics for enrolled undergraduates. The restriction of using only adult subjects is due to the difficulty in getting consent from underage students who are living apart from their parent or guardian.

### Instrument

The survey instrument contains four questions on demographics, one question on real-life friendship, three questions on MySpace use, 18 questions on MySpace dependency (Grant, 1998), 20 questions on use of specific social and personal technologies, 6 questions on Internet use, 10 questions on introversion/extroversion (Eysenck, 1984), 10 questions on self-disclosure (Wheless, 1976), and 16 questions on computer efficacy and computer anxiety (Barbeite & Weiss, 2004).

Responses to the four demographic questions and one real-life friendship question are, “What is your age in years?” ( $M = 19.66$ ,  $SD = 2.73$ ), “Please circle your expected year of graduation from UCF” (with options of “2007,” “2008,” “2009” and “2010”), and “On average, how many friends do you see or talk to (in person or on the phone) per day” ( $M = 9.28$ ,  $SD = 10.86$ ).

Table 2 compares frequencies of gender response against university enrollment statistics (Ramsey, 2006). Overall gender frequencies were not identical to, but comparable with, university enrollment statistics.

Table 2: Overall gender frequency compared to university 2005 enrollment statistics

	MySpace Study	university Enrollment
Male	42.4%	44.4%
Female	57.6%	55.6%

Table 3 shows response frequency by race compared to university statistics (Ramsey, 2006). university statistics did not offer an option of “multiracial.”

Table 3: Frequency of Responses to select the “race that most accurately describes you” as compared with university undergraduate enrollment statistics for 2005.

Response	Survey Frequency	University Frequency
Black or African-American	5.1	8.6
American Indian or Alaskan Native	0	.4
Asian or Asian-American	3.2	
Native Hawaiian or other Pacific Islander	.3	5.3 <sup>1</sup>
White or Caucasian	75.0	68.2
Hispanic or Latin-American Ethnicity	9.5	13.0
Multiracial	5.9	<sup>2</sup>
Other	.8	3.3
Non-Resident Alien	<sup>3</sup>	1.2

<sup>1</sup> university undergraduate enrollment statistics recorded both Asian and Pacific Islander as “Asian-Pacific Islander.”

<sup>2</sup> university undergraduate enrollment statistics do not capture “Multiracial” as an option.

<sup>3</sup> Survey did not capture “Non-Resident Alien.”



Technological factors were taken from six questions on “time available for Internet use” and “connection type” at work, school, and home. Responses from the three questions on “time available for Internet use” were summed (Table 4) to create a new variable, “total Internet availability.”

Table 4: Questions on Internet availability

Question	N	Mean	SD
6. On average, how many hours are you free to do what you want on a computer connected to the Internet per day at school?	323	.93	2.83
7. On average, how many hours are you free to do what you want on a computer connected to the Internet per day at work?	387	3.67	4.93
8. On average, how many hours are you free to do what you want on a computer connected to the Internet per day at home?	388	7.19	5.56
Total Internet Availability	278	8.29	4.28

The three questions focusing on “connection type” ask for responses to the following statements: “I have the following primary connection at work,” “I have the following primary connection at school,” and “I have the following primary connection at home” (Table 5). The subject was asked to circle one of five response items, “none,” “dial-up modem,” “DSL/cable,” “high-speed wireless,” or “high-speed Ethernet.” Responses of “none” were given a value of 1, responses of “dial-up modem” were given a value of 2, responses of “DSL/cable,” “high-speed wireless,” or “high-speed Ethernet” were given a value of 3, and responses of “I don’t know” were assigned a missing value. Responses from the three questions on “connection type” were summed to create a new variable, “total Internet connectedness.”

Table 5: Questions on Internet connection type

Question	N	Mean	SD
9. I have the following primary connection at work.	353	1.43	1.0
10. I have the following primary connection at school.	313	2.90	.43
11. I have the following primary connection at home.	392	2.96	.25
Total Internet Connectedness	284	7.39	1.16

*Note: A response of “None” was given a value of 1 and “Dial-up modem” a value of 2. “DSL/cable,” “High-speed wireless,” and “High-speed Ethernet” were each given values of 3.*

The specific technology items ask about participants’ use of recent technological innovations. Responses to the 10 questions addressing the frequency of social technology use, free response questions excluded, were summed (Table 6) to create a new variable, “total social technology use.” The 10 questions addressing use of primarily non-social technology use were summed (Table 6) to create a new variable, “total non-social technology use.”

Table 6: Questions on frequency of technology use

Social technologies questions	Mean	SD
12. I chat with people online using a program such as AIM (AOL Instant Messenger).	3.36	1.47
14. I use text messaging on my cell phone.	3.31	1.47
17. I send email.	4.00	1.01
18. I post or read message on online discussion boards.	2.84	1.40
24. I write on my own blog or leave public comments on a blog.	2.39	1.47
25. I play games where I interact or play with other people online.	2.14	1.45
27. I take digital pictures and send them to friends and family.	3.15	1.34
28. I use the website Facebook.	3.25	1.72
29. I make movies of me and my friends and post them on a blog or website such as YouTube.	1.35	.83
30. I use other “social networking” websites similar to MySpace and Facebook, such as Friendster.	2.30	1.72
Total social technology use ( $\alpha = .60$ )	28.08	6.58
Other technologies questions	Mean	SD
13. I download music or images to my cell phone.	1.58	.96
15. I put music on a MP3 player such as an iPod.	3.31	1.63
16. I download music or movies to my computer.	3.45	1.43
19. I read news on a website such as CNN or OrlandoSentinel.com.	2.41	1.33
20. I post or read online reviews of products and services.	2.35	1.23
21. I look up directions on Mapquest or a similar website.	3.35	1.06
22. I use a laptop computer.	3.89	1.67
23. I search for things online using a search engine such as google.	4.73	.55
26. I bid on or sell items on ebay or other auction website.	1.83	1.12
31. I use a PDA (personal digital assistant).	1.15	.63
Other technologies total ( $\alpha = .58$ )	28.05	5.55
Social and other Technologies total ( $\alpha = .71$ )	56.12	10.28

*Note: Questions were answered on a 5-point likert scale in response to, “please circle a response to indicate how frequently you use these products, features, or software, from 1 (never) to 5 (very frequently).”*

The scale measuring extroversion was modified from the E questions from Eysenck’s revised version of the P scale (1984). Eysenck reported a Cronbach’s alpha of .88 for males and

.84 for females. Questions were altered to the first person and from a question to a statement. For analysis, negatively-skewed questions measuring extroversion were reversed, and the 10 questions measuring extroversion summed (Table 7) to create a new variable, “total extroversion.”

Table 7: Questions on Extroversion

Question	Mean	SD
32. I enjoy meeting new people.	4.18	.89
33. I am a lively person.	3.96	.91
34. I like lots of excitement around me.	3.74	.97
35. I keep in the background in social occasions (negatively-skewed).	2.66	1.10
36. I can get a party going.	2.15	1.18
37. I don't go out of my way to make new friends (negatively-skewed).	2.67	1.16
38. I take the initiative in social situations.	3.15	.96
39. I have trouble letting myself go and enjoying myself at a party (negatively-skewed).	2.57	1.12
40. I'm a talkative person.	3.41	.983
41. I am mostly quiet when around other people (negatively-skewed).	2.94	1.19
Total ( $\alpha = .90$ )	35.32	7.55

*Note: Questions were answered on a 5-point likert scale in response to, “please answer how accurately the following statements describe you, from 1 (not at all accurately) to 5 (very accurately).”*

The items for self-disclosure were modified from a scale by Wheelless (1976). Only amount of self-disclosure was used. For analysis, negatively-skewed questions measuring self-disclosure were reversed, and the 10 questions measuring extroversion summed (Table 8) to create a new variable, “total self-disclosure.”

Table 8: Questions on self-disclosure

Question	Mean	SD
42. I do not often talk about myself (negatively-skewed).	2.94	.96
43. My conversations about myself and how I feel last a long time.	2.43	.93
44. I don't give my opinion" (negatively-skewed).	1.86	.87
45. I don't have conversations about myself and how I feel (negatively-skewed).	2.23	1.02
46. I talk about myself a lot.	2.21	.94
47. Only rarely do I express my feelings about myself (negatively-skewed).	2.6	1.07
48. I often express my feelings about myself.	2.96	1.05
49. I never tell people what I really think (negatively-skewed).	1.97	.90
50. I always give my opinion.	3.42	.96
51. I always tell people what I really think.	3.33	.97
Total self-disclosure ( $\alpha = .78$ )	32.79	5.56

*Note: Questions were answered on a 5-point likert scale in response to, "please answer how accurately the following statements describe you, from 1 (not at all accurately) to 5 (very accurately)."*

The 16 items for computer self-efficacy (CSE) and computer anxiety were taken, without alteration, from a scale by Barbeite and Weiss (2004). The four categories are "CSE for general/beginning activities," "CSE for advanced activities," "Anxiety using computers," and "Anxiety in computer-related activities." Barbeite and Weiss found alpha values for each category ranging from .76 to .90.

The 8 items measuring "CSE for general/beginning activities" and "CSE for advanced activities" (Table 9) were summed to create a new variable, "total computer self-efficacy."

Table 9: CSE (beginning and advanced level) questions

Question	Mean	SD
52. I feel confident making selections from an on screen menu.	4.14	.97
53. I feel confident using the computer to write a letter or essay.	4.72	.58
54. I feel confident escaping or exiting from a program or software.	4.65	.69
55. I feel confident calling up a data file to view on the monitor screen.	4.41	.94
56. I feel confident troubleshooting computer problems.	3.62	1.27
57. I feel confident understanding terms/words relating to computer hardware.	3.66	1.28
58. I feel confident explaining why a program (software) will or will not run on a given computer.	3.17	1.37
59. I feel confident writing simple programs for the computer.	2.19	1.31
Total CSE ( $\alpha = .86$ )	30.58	6.17

*Note 1: Questions were answered on a 5-point likert scale in response to, “please answer how accurately the following statements describe you, from 1 (not at all accurately) to 5 (very accurately).”*

The 8 items measuring “anxiety using computers” and “anxiety in computer-related activities” were summed to create a new variable, “total computer anxiety” (Table 10).

Table 10: Computer anxiety (using computers and in computer-related activities) questions

Question	Mean	SD
60. Working with a computer would make me very nervous.	1.57	.97
61. I get a sinking feeling when I think of trying to use a computer.	1.19	.57
62. Computers make me feel uncomfortable.	1.18	.56
63. Computers make me feel uneasy and confused.	1.21	.60
64. Learning computer terminology makes me nervous.	1.38	.80
65. Thinking about prepackaged (software packages) for a computer makes me uncomfortable.	1.28	.70
66. I get a sinking feeling visiting a computer store.	1.24	.65
67. I feel uneasy and confused taking a class about the uses of computers.	1.38	.83
Total ( $\alpha = .92$ )	10.45	4.61

*Note: Questions were answered on a 5-point likert scale in response to, “please answer how accurately the following statements describe you, from 1 (not at all accurately) to 5 (very accurately).”*

Questions 68 asks, “Are you a registered user of the website MySpace?” If the answer was no, the survey was concluded. If the answer was “yes,” the participant answered questions 69 – 89. Questions 69 – 71 ask about the participant’s MySpace friends list, history, and use (Table 11).

Table 11: Questions on MySpace history and use

Question	Mean	SD
69. How many friends do you have on your MySpace friends list?	170.72	386.84
70. How long have you been a member of MySpace? (in months)	14.34	10.46
71. On an average day, how many hours do you actively use MySpace? (have the web page open and are using it)	1.32	2.22

Surveying individuals is one method to collect information about dependencies. Ball-Rokeach (1998) states, “Individuals’ relations with the media are inferred from individual’s self-reports.... These self-reports are tracers, not direct observations, of individuals’ MSD relations” (p. 30). The 18 items for MySpace dependency were taken from a scale designed by Grant (1998). This scale was designed for application and reliability across a variety of mediums. It is identical to the one used by Patwardhan and Yang (2003), who reported a total (summed from the 18 questions) Cronbach’s alpha of .88 using this scale to measure Internet dependency. Grant (1998) reported slightly higher Cronbach’s alpha values when applying this scale to newspaper (.93), radio (.93), magazine (.92) and television (.93) dependencies.

Questions 72 – 89 on “MySpace dependency” were categorized into the three categories of dependency of orientation, understanding, and play, each with social and personal dimensions. The nine items for the “personal” dimension (“Action orientation,” “Self-understanding,” and “Social play”) were summed (Table 12) to create a new variable, “total personal dependency.” The nine items for the “social” dimension (“Interaction Orientation,” “Social understanding,” and “Social Play”) were summed to create a new variable, “total social dependency.” “Total personal dependency” and “Total social dependency” were summed to create a new variable, “total MySpace dependency.”



Table 12: Dependency Questions

Understanding category questions	Mean	SD
72. Stay on top of what is happening in the community (social).	2.12	1.14
74. Gain insight into why you do some of the things that you do (personal).	1.79	1.05
78. Find out how the country is doing (social).	1.34	.77
79. Imagine what you'll be like as you grow older (personal)	1.34	.83
84. Observe how others cope with problems or situations like yours (personal).	1.80	1.16
85. Keep up with world events (social).	1.33	.74
Understanding category total ( $\alpha = .81$ )	9.71	4.13
Orientation category questions	Mean	SD
75. Discover better ways to communicate with others (social)	2.57	1.34
76. Decide where to go for services such as health, financial, or household (personal).	1.23	.67
81. Figure out what to buy (personal).	1.27	.709
82. Think about how to act with friends, relatives, or people you work with (social).	1.72	1.07
87. Get ideas about how to approach others in important or difficult situations (social).	1.54	.96
88. Plan where to go for evening and weekend activities (personal).	2.61	1.36
Orientation category total ( $\alpha = .78$ )	10.96	4.40
Play category questions	Mean	SD
73. Unwind after a hard day or week (personal).	2.28	1.24
77. Relax when you are by yourself (personal).	2.48	1.25
80. Give you something to do with your friends (social).	2.83	1.33
83. Have fun with family or friends (social).	2.57	1.38
86. Be part of events you enjoy without having to be there (social).	1.80	1.11
89. Have something to do when nobody else is around (personal).	3.11	1.39
Play category total ( $\alpha = .89$ )	15.12	6.19
Total MySpace personal dimensions	17.84	7.05
Total MySpace social dimensions	17.93	6.88
Total overall MySpace dependency ( $\alpha = .93$ )	35.73	13.47

*Note: Questions were answered on a 5-point likert scale in response to, "In your daily life, how important is MySpace to" each statement, with responses from 1 ("Not at all important") to 5 ("Very important").*

## CHAPTER FOUR: FINDINGS

Hypothesis H1 was that dependency on MySpace was correlated with MySpace usage. Results for hypothesis H1 were attained by performing a bivariate correlational analysis on “MySpace usage” and “Total MySpace Dependency.” Hypothesis H1 was supported,  $r(303) = .43$ ,  $p < .01$ , indicating a moderate relationship.

Research question RQ1 examined the responses in each dependency category (understanding, orientation, and play) across two dimensions (social and personal). Results for Research Question RQ1 were attained by reporting the three categories of dependency (understanding, orientation, and play) across two dimensions (social and personal). Table 13 shows play dimensions rated highest, followed by social orientation. There was no significant difference between means for personal understanding, social understanding, and personal orientation.

Table 13: Mean results for dependency categories of understanding, orientation, and play across two dimensions

	Understanding	Orientation	Play	Total per Dimension
Personal	4.9 (SD = 2.4)	5.1 (SD = 2.0)	8.0 (SD = 3.4)	18.1 (SD = 6.9)
Social	4.8 (SD = 2.1)	5.9 (SD = 2.8)	7.3 (SD = 3.2)	18.0 (SD = 7.1)
Total per Category	9.8 (SD = 4.1)	11.0 (SD = 4.4)	15.3 (SD = 6.2)	

Research question RQ2 examined whether dependency had a correlation with with differences in race, gender, and age. Several analyses were conducted and a significant difference was discovered in total dependency between males and females. These results were attained by performing a t-test on “total dependency” using gender as a grouping variable. Levene’s test indicated equality of variances. Results revealed a statistically significant difference between total dependency for males (N = 120, M = 33.8, s = 1.23) as compared to female (N = 180, M = 37.5, s = 1.0),  $t(298) = 2.31, p < .05$ . However, the only single dependency category that was significantly different between males and females was “solo play.” Results revealed a statistically significant difference between solo play dependency for males (N = 120, M = 7.1, s = .3) as compared to female (N = 181, M = 8.6, s = .25),  $t(299) = 4.0, p < .001$ .

There were also several differences found in cognitive factors between genders (Figure 4). Females (N = 231, M = 11.3, s = .34) were more likely to be prone to computer anxiety than males (N = 169, M = 9.6, s = .30),  $t(398) = 3.7, p < .001$ . Males (N = 168, M = 32.5, s = .46) rated higher in computer self-efficacy than females (N = 230, M = 28.7, s = .38),  $t(396) = 6.5, p < .001$ . Females (N = 231, M = 36.2, s = .50) rated higher in extroversion than males (N = 170, M = 34.5, s = .56),  $t(399) = 2.27, p < .001$ . Females (N = 228, M = 33.6, s = .35) also scored higher in self-disclosure than males (N = 170, M = 32.0, s = .44),  $t(396) = 2.8, p < .05$ .

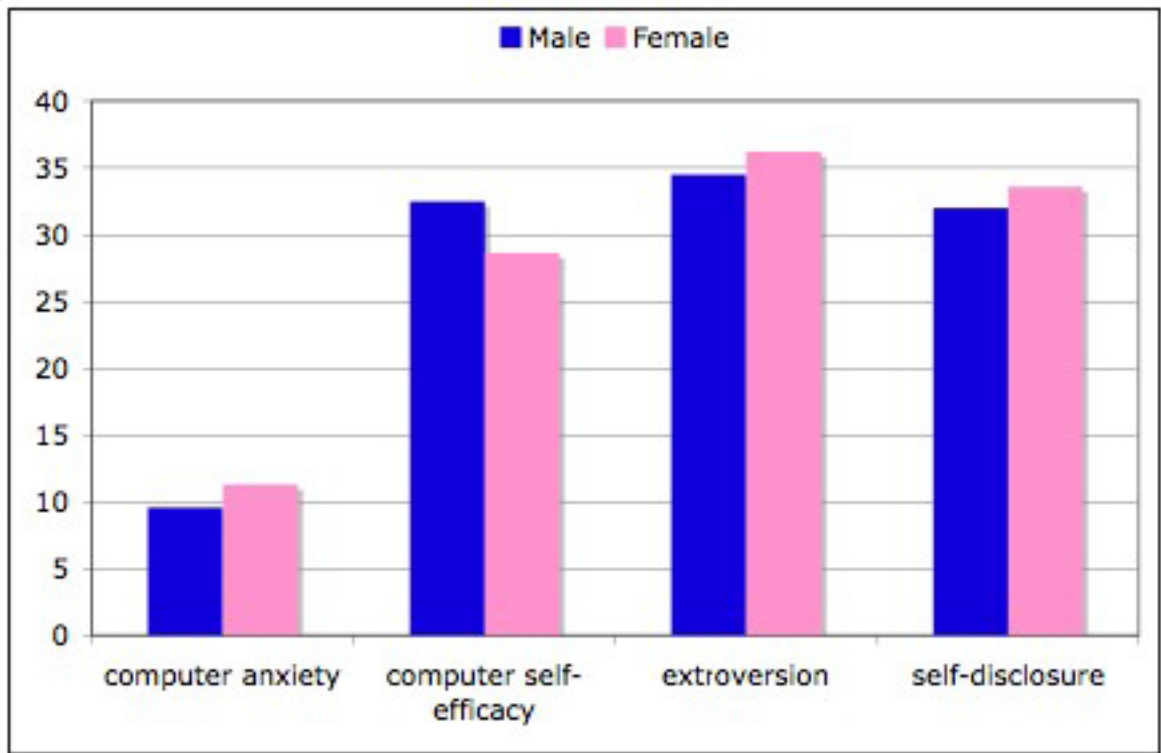


Figure 4: Gender Differences in Cognitive Factors

The gender makeup of MySpace members was also investigated. To examine the genders of MySpace members as compared to non-members, a weighted variable was created to normalize the female-skewed sampling. Results using this weighted variable revealed that females were more likely to be MySpace members, while males were more likely to be non-members (Table 14).

Table 14: Weighted gender frequency of MySpace members compared to non-members

	MySpace Members	Non-members
Male	47.9	56.6
Female	52.1	43.4

Overall results in gender differences indicated that females are statistically significantly more computer-anxious, have less computer self-efficacy, are more extroverted, and self-disclose more easily. They also had significantly greater overall dependency as well as solo play specifically. Females made up a greater percentage of MySpace members and males a greater percentage of non-members when the gender skew was taken into account.

An analysis of variation was run on the mean dependency by race (Table 15). Analysis did not reveal a statistically significant difference,  $F(6, 285) = 1.57, p = .157$ .

Table 15: Total Dependency by Response to select the “race that most accurately describes you.”

Response	N	Mean	SD
Black or African-American	15	40.87	15.75
Asian or Asian-American	9	35.84	14.10
White or Caucasian	216	35.11	12.98
Hispanic or Latin-American Ethnicity	27	37.72	13.70
Native Hawaiian or other Pacific Islander	1	52.00	.00
American Indian or Alaskan Native	0	-	-
Multiracial	21	33.32	15.27
Other	3	50.18	13.09

*Note: Sample size was 0 for participants selecting an answer of “American Indian or Alaskan Native,” and was omitted from analysis.*

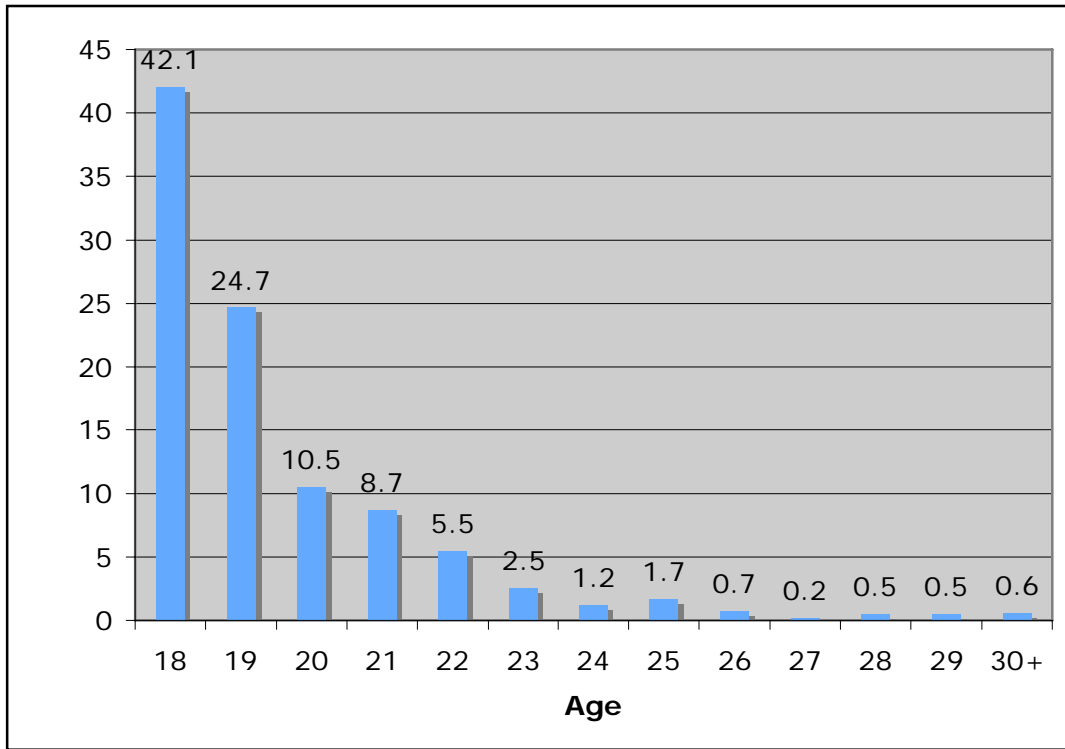


Figure 5: Age Distribution

As expected, this sampling was skewed towards younger individuals; there was no correlation between age and dependency. The age distribution of this study (Figure 5) shows that nearly half of participants were 18 years of age, and only a small percentage was over the age of 23.

Hypothesis H2A was that computer self-efficacy was positively correlated with intensity of dependency on MySpace. Results for hypothesis H2A were attained by performing a t-test on “total computer self-efficacy” using the response to “Are you a member of MySpace?” as a grouping variable. Levene’s test indicated equality of variances. Results failed to find a statistically significant difference between total self-efficacy measures for members (N = 306, M

= 10.3,  $s = .24$ ) as compared to non-members ( $N = 94$ ,  $M = 11.5$ ,  $s = .62$ ),  $t(398) = 2.1$ ,  $p = .084$ .

Hypothesis H2A was not supported.

Hypothesis H2B was that computer anxiety was negatively correlated with intensity of dependency on MySpace. Results for hypothesis H2B were attained by performing a t-test on “total computer anxiety” using the response to “Are you a member of MySpace?” as a grouping variable. Levene’s test indicated equality of variances. Results failed to find a statistically significant difference between computer anxiety measures for members ( $N = 30.4$ ,  $M = 30.4$ ,  $s = .34$ ) as compared to non-members ( $N = 94$ ,  $M = 30.0$ ,  $s = .72$ ),  $t(396) = .535$ ,  $p = .625$ .

Hypothesis H2B was not supported.

Hypothesis H3A was that amount of time available to use the Internet was positively correlated with intensity of dependency on MySpace. Results for hypothesis H3A were attained by performing a t-test on “total Internet availability” using the response to “Are you a member of MySpace?” as a grouping variable. Levene’s test indicated equality of variances. Results failed to find a statistically significant difference between total Internet availability for members ( $N = 210$ ,  $M = 8.3$ ,  $s = .27$ ) as compared to non-members ( $N = 72$ ,  $M = 8.1$ ,  $s = .58$ ),  $t(280) = .312$ ,  $p = .756$ . Hypothesis H3A was not supported.

Hypothesis H3B was that the summed speed of available connections was positively correlated with intensity of dependency on MySpace. Results for hypothesis H3B were attained by performing a t-test on “total Internet connectedness” using the response to “Are you a member of MySpace?” as a grouping variable. Levene’s test for equality of variances was rejected. Results failed to find a statistically significant difference between availability to use the Internet for members ( $N = 141$ ,  $M = 7.5$ ,  $s = .10$ ) as compared to non-members ( $N = 47$ ,  $M = 7.7$ ,  $s = .17$ ),  $t(186) = .701$ ,  $p = .484$ . Hypothesis H3B was not supported.

Hypothesis H4A was that MySpace members were more likely to be extroverted. Results for hypothesis H4A were attained by performing a t-test on “total extroversion” using the response to “Are you a member of MySpace?” as a grouping variable. Levene’s test for equality of variances was rejected. Results showed a statistically significant difference between extroversion measures for members ( $N = 307$ ,  $M = 36.1$ ,  $s = .43$ ) as compared to non-members ( $N = 94$ ,  $M = 33.3$ ,  $s = .77$ ),  $t(399) = 3.19$ ,  $p < .005$ . Hypothesis H4A was supported.

Hypothesis H4B was that MySpace members were more likely to self-disclose personal information. Results for hypothesis H4B were attained by performing a t-test on “total self-disclosure” using the response to “Are you a member of MySpace?” as a grouping variable. Levene’s test for equality of variances was rejected. Results showed a statistically significant difference between self-disclosure measures for members ( $N = 305$ ,  $M = 33.4$ ,  $s = .31$ ) as compared to non-members ( $N = 93$ ,  $M = 31.2$ ,  $s = .56$ ),  $t(396) = 3.39$ ,  $p \leq .001$ . Hypothesis H4B was supported.

Hypothesis H5 was that MySpace use was correlated with number of MySpace friends created. Results for hypothesis H5 were attained by performing a bivariate correlational analysis on “MySpace usage” and “Number of MySpace Friends.” Hypothesis H5 was supported,  $r(297) = .226$ ,  $p < .01$ , indicating a weak relationship. Hypothesis H5 was MySpace friends were correlated with MySpace dependency. Results for hypothesis H6 were attained by performing a bivariate correlational analysis on “Number of MySpace Friends” and “Total MySpace Dependency.” Hypothesis H6 was supported,  $r(294) = .178$ ,  $p < .01$ , indicating a weak relationship.

Hypothesis H5 was that MySpace members were more likely to use technologies that had a primarily social dimension. Results for hypothesis H7 were attained by performing a t-test on



“social technology use” using the response to “Are you a member of MySpace?” as a grouping variable. Levene’s test for equality of variances was rejected. Results showed a statistically significant difference between social technology use for members ( $N = 307$ ,  $M = 29.6$ ,  $s = .34$ ) as compared to non-members ( $N = 94$ ,  $M = 23.7$ ,  $s = .69$ ),  $t(399) = 8.356$ ,  $p \leq .001$ . Hypothesis H7 was supported.

The MySpace MSD model was revised to reflect supported and unsupported hypotheses (Figure 7). Hypotheses H2A, H2B, H3A and H3B failed to find significant results. All other hypotheses were supported.

Individual Factors moderating intensity of MySpace dependency

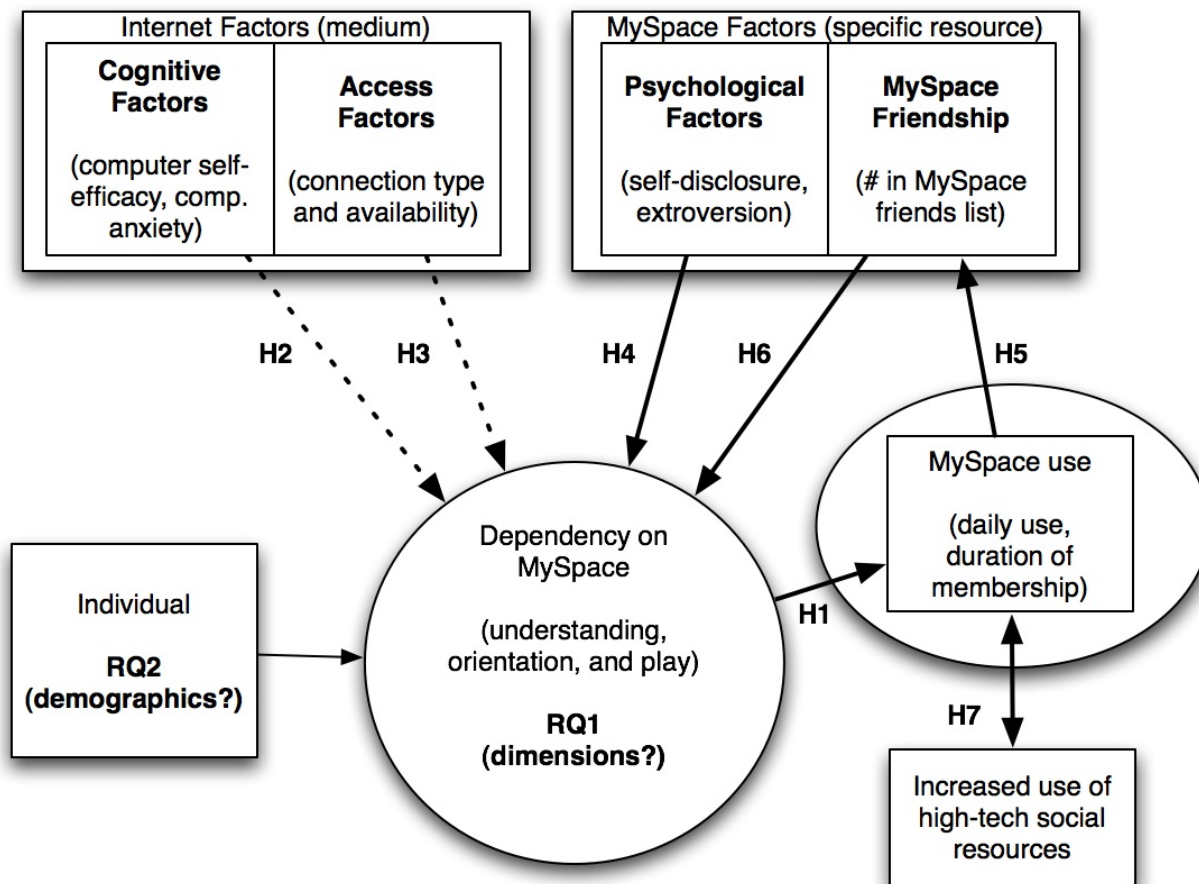


Figure 6: Complete MySpace MSD Model

NOTE: Supported Hypotheses = solid line, Unsupported Hypotheses = dotted line.

## CHAPTER FIVE: DISCUSSION AND LIMITATIONS

This chapter will interpret this study's findings in light of previous research, particularly CMC and other social uses of Internet resources. Avenues of research suggested by these interpretations will be suggested to further illuminate the role of MySpace in the modern communication environment. Methodological limitations of this study will also be discussed.

### Dependency and Use

MySpace dependency led to use, which in turn led to affective effects, namely, creating online friendships. MySpace members in this sampling actively used the website for an average of 1.3 hours per day. Some of the 1.3 hours per day may be performed multitasked with other activities. Still, considering that outside of school, teenagers average 10.26 hours per week of social activity (Lenhart, Madden & Hiltin, 2005), this number is high indeed.

Dimensions of MySpace dependency were highest in both solitary and social play, as well as interaction orientation (Table 13). MySpace members are likely to pursue social activities with regard to how they orient their interactions with others, but are more dependent on solo play on MySpace than group play. MySpace members may incorporate play activities in their daily life to accomplish tasks other than purely recreational. As DeFleur & Ball-Rokeach (1989) state, play is "also a way in which we become social" (p. 306). This conception of play as a productive activity in mass media is similar to the "play theory" developed Stephenson (1967). Play theory was developed previous to DeFleur and Ball-Rokeach (1975) and discusses the valid role of

entertainment in modern society. However, it is subjective, not sociological, and does not discuss dependencies between media producers and consumers.

Lower scores for understanding may be explained by the sampling. In a learning institution, students are likely to have enough outlets for understanding dependencies in the classroom, but perhaps too few for play. Action orientation was rated higher than solo orientation, but personal play rated higher than social play. These responses all but canceled each other out, evening out total social and play responses. This suggests that social dimensionality of MySpace dependency may not be universal across categories, but related to the dependency category itself.

Macro forces, such as the company who runs MySpace and Internet service providers, still potentially control access and availability of online social networking websites. Factors related to use of the medium (Internet) were found not to be significant, but factors related to use of the specific media resource (MySpace) have been supported. This suggests that macro forces are either acting in ways not within this paper's conception of the online media system, are dormant, or are working in subtle ways outside ways measurable using self-reported dependency as "tracers" (Ball-Rokeach, 1998, p. 30).

Ball-Rokeach (1998) explains why she believes the relationship of individuals to the Internet will still carry some impact from traditional media relationships: "The entry of the Internet is not tabula rasa; rather, it occurs in context of the established media system with all of its asymmetric producer-consumer relations, that privilege producers over consumers" (p. 31). This study provides evidence to suggest the contrary. What is currently happening with the Internet is that a major shift is indeed underway, with individuals increasingly taking on roles of producing content. MySpace is one example of an online resource being composed primarily of

the sum of its members. Effects may indeed stem from interaction in such an environment. However, they may not be primarily the result of macro entities, which is stated in the definition of MSD (DeFleur & Ball-Rokeach, 1976).

Part of MSD's theoretical roots stems from the idea that as society developed, fundamental dependencies for understanding, orientation, and play became estranged from face-to-face interaction (DeFleur & Ball-Rokeach, 1988, p. 307). Instead of communicating with each other, individuals began to reference mass communication for information. Perhaps technology is to the point where for certain applications, the medium itself is unconstrained enough to operate more as a "global village" or "digital public." That is, social networking websites may act to connect people, thus reducing dependence on omni-directional mass media.

Discussion of online interpersonal groups is highly relevant to MSD's sociological roots, even if it conflicts with some of its central tenets as described above. Ideally, a mass media conception of dependency on interpersonal groups should be evaluated to be able to properly analyze the impact of online groups in the online mass media environment. Neil Postman (1993) stated, with regard to how technology was incorporated into society, "technological change is not additive; it is ecological" (p. 18). Ball-Rokeach agrees with this direction: the MSD theorist is predisposed to an evolutionary, not revolutionary, perspective vis-à-vis new communication and information technologies, a view consistent with relevant history" (p. 32). The question posited by both MSD's acceptance of change and the lack of incorporation of interpersonal networks in the developed theory is: does the theory have the capability to encompass the direction the Internet is taking?

### MySpace Friendships and Repeated Use

That real-world extroversion and self-disclosure each had a significant relationship with degree of MySpace dependency has definite implications for both CMC and investigation into social networking websites. MySpace attracts extroverts, which indicates that individuals are attracted to social activities on social networking websites for similar reasons to real world, face-to-face relationships. Already research has been conducted on the extent (Donath & Boyd, 2006; Heer & Boyd, 2005) and strength or quality (Labrune & Mackey, 2006) of friendships on social networking websites. Precisely how the act of acquiring MySpace friends relates to real-world friendships is an area of investigation that holds promise: Are these friend networks partly composed of real-world friendships, or primarily composed of friends members do not see on a daily basis?

The mean size of a member's "friend list" was 170.72 ( $N = 295$ ,  $SD = 386.84$ ). This is higher than the average range of friends in an American teen's Instant Messenger "friend list," of between 51 and 100 entries (Lenhart, 2006). This may indicate that "friendships" on MySpace are easier to collect, or Instant Messenger friends relate more strongly to real-life friendships. Although no specific hypotheses or research questions were formulated, responses to the question "On average, how many friends do you see or talk to (in person or on the phone) per day" were collected.

Post-hoc analysis showed no significant difference in response between MySpace members and non-members (Table 16), despite MySpace members being more extroverted and more likely to self-disclose information. Additionally, the high maximum value along with high standard deviation in Table 16 shows a wide variance in how students in this sampling view the

concept of a “friend.” The implications of this finding are uncertain, but seem to indicate a difference in how individuals view the concept of “friendship.” These differences may be cultural, or may relate to aspects of their personality, such as extroversion. Introverts may opt to use online resources to make friendships, but prefer to use low-cues modes that require less self-disclosure, such as chat, and prefer to make fewer but stronger relationship bonds. MySpace may indeed provide a way to let the “friend rich get richer” (McKenna, Green, & Gleason, 2002, p. 29), and the maintenance of these relationships reduces the need for daily contact through other mediums or media resources.

Table 16: Number of Friends Seen or Talked to per Day by MySpace Membership

	N	Number of Friends	Minimum	Maximum	SD
Members	300	9.57	0	100	11.43
Non-Members	95	8.35	0	50	8.78

The factor of a “friends list” was found in this study to be a factor in MySpace dependency. These results echo those of Backstrom, Huttenlocher, Kleinberg and Lan (2006), who found that not only was the number of friends who were in the social network a factor in membership, but also “how crucially those friends are connected to one another” (p. 44). In other words, if a member of an offline friends network sees and hears about other friends being online, she or he is more likely to join than an individual with no friends yet online.

Ball-Rokeach (1998) described interpersonal networks as “relatively powerful sources of variation in individual MSD relations” (p. 21). In this study, successive effects resulting from use

were not investigated, other than use of similar technologies and creation of online friends. Yet there are likely agenda-setting and other effects traceable to online groups.

The weak correlation between number of MySpace friends and dependency was partly due to the presence of a minority of members (9%) who reported an average daily MySpace usage of 0 hours. This finding could be due to several factors. First, the survey could simply have not captured the low amount individuals use the website, or the question was not worded in a way that the participant understood. Additionally, these members who did not use the website daily also had on average significantly fewer MySpace friends ( $N = 26$ ,  $M = 64.4$ ,  $s = 12.98$ ) compared to members who used the website daily ( $N = 265$ ,  $M = 182.8$ ,  $s = 24.9$ ). Members who were not daily users also reported less MySpace dependency ( $N = 27$ ,  $M = 22.3$ ,  $s = 1.2$ ) compared to members who used the website for more than 0 hours per day ( $N = 266$ ,  $M = 37$ ,  $s = .8$ ). These are logical results when viewed in the context of the MySpace model (Figure 6) of dependency leading to use and effects (making friends); if an individual reports no use, she or he should also report less dependency and fewer effects.

What these results also may indicate is that individuals became dependent on MySpace, leading to use, but at some point the website fell out of favor, and the individuals consciously or unconsciously terminated their use. In MSD theory, it would be appropriate to suggest that they simply became dependent on other forms of social resources, either online or otherwise. They may have encountered a new social networking website, such as Facebook, and began a dependency relationship with that new website. As many of these websites are similar, they likely satisfy similar dependencies. Longitudinal research that captures dependency on multiple media or mediums over time would be needed to fully explore this area. A well-designed



longitudinal study with multiple points of data collection over time would also go further to attributing causality to the related factors discovered in this study.

### Demographic Differences: Age, Gender, and Race

The lack of relationship between age and dependency in this sampling does not necessarily imply that age is not a factor in dependency across the general population, because these differences were not visible in this sampling. The aforementioned results on dependency and ease of Internet use suggest that college-age individuals do not have difficulty using the Internet, and use MySpace for 1.3 hours daily. According to MSD, use mediates effects (DeFleur & Ball-Rokeach, 1988), therefore younger populations may be susceptible to certain effects to a greater degree than older populations. To directly address some issues concerning harm to underage individuals, it would be beneficial to conduct research specifically on adolescent populations who use MySpace, or across a wider population to capture use across a range of ages.

These results raise questions about potential impact of MySpace on younger individuals. The current popularity of the website has caused some controversy in light of underage individuals using the website. A bill is currently under consideration that would limit the nationwide access of minors to social networking sites and other online social resources (Deleting Online Predators Act of 2006, H.R.5319, 109th Cong., 2006). In response, Boyd and Jenkins (2006) described the controversy about MySpace stemming from, “not as a result of anything new that MySpace and the other social software sites contribute to teen culture but

simply from the fact that adults can no longer hide their eyes to aspects of youth culture in America that have been there all along” (p. 2).

The limiting of access to certain age demographics raises an interesting research possibility. If minors were prohibited from using MySpace, then access to these resources would be difficult to attain. The connection of certain users to the Internet would not be as free from macro media forces as exists now. In this case, this survey would provide one baseline for measuring successive dependencies in a constrained environment. It's unclear how individuals would respond to this situation, but they may revert to face-to-face interaction, or merely shift dependency to the next social innovation that facilitates interaction between an individual and groups of friends.

These results show that MySpace attracted more female members from the sampling than males. The significant difference in overall dependency between genders (Figure 4) may very well relate to the psychological factors of self-disclosure and extroversion that are also higher in female participants. If females create and maintain friendships in a different way than males, they could perceive MySpace as more useful to satisfy dependencies. This would again indicate that relationships on the Internet created through higher-cues websites are more true to face-to-face interaction. However, like younger Americans, female participants may be more vulnerable online due to their greater MySpace dependency than males.

Discussion of racial differences is difficult due to the low response rate for non-Caucasians as compared to university statistics. Results suggest the need for a larger sample size. This is an area for improvement in future studies and could be addressed with a sample set that captures a larger, more diverse population.

Medium Factors: Connection type, connection availability, computer self-efficacy and computer anxiety

The relationships between dependency and Internet connection type and availability were not supported. The response rate to the questions of Internet availability and connection type may not be reliable. For the three questions on Internet availability, a majority, 69.8%, of undergraduates answered that at work they did not have an Internet connection, didn't know" whether they did, or left the answer blank. This suggests that most students surveyed were not employed or did not have a connection at work. The survey instrument also did not capture if students lived on campus, in which case the distinction between "school" and "home" connection is not relevant and potentially confusing to participants. Participants even selected multiple values, for instance, to indicate both a "high-speed wireless" and "DSL/cable" connection; the "DSL/cable" connection describes how the connection arrives at the location, while "high-speed wireless" describes how the individual connects with his or her laptop to the cable or DSL modem. In this case, the issue did not result in invalid responses, because typically both results were combined into the same category, "high-speed connection." Still, out of the total sampling of 401 participants, only 186 (46%) filled in acceptable values for Internet connection type for work, home, and school.

Regarding Internet availability, more than a quarter (27%) of students responded with values adding up to more than 20 hours, or blank responses, for Internet availability at home, work or school. For these reasons the valid response rate for questions of Internet availability was also low. It is unclear the exact implications of these responses. There is the possibility that these students keep their computer turned on to act as a server, such as for instant messaging or file sharing, and are in fact connected almost 24 hours a day at these locations. This suggests a

small minority of computer users who engage in file sharing or are expert users who may, for instance, prefer to keep their computer on so they will always appear as “online” in Instant Messenger programs. Another explanation for the low valid response rate for both Internet connection type and availability may be due to the survey instrument itself. Such a low interpretable response rate to a single set of questions indicates that these questions may need to be re-worded and the constructs re-examined to ensure reliable responses.

Questions of instrumentation aside, there were other conclusions to be drawn when looking at the interaction in our sampling between the medium (Internet) and an individual’s psychological makeup. The results of no significant differences between computer self-efficacy and computer anxiety measures suggest that the Internet imparts even fewer controlling effects on its users than expected. Participants did not overall find that computers induced any anxious effects and also were confident that their computer usage would result in desired outcomes. This is likely due again to the convenience sampling.

Along with having low computer anxiety and high computer self-efficacy, the sample student population was well-connected at home. A large majority, 95.5%, indicated a high-speed connection at home, while 1% of students gave a response of not having a home Internet connection, and 2.2% indicated a home connection of “dial-up modem.”

These data in tandem suggest that college students may be able to access Internet resources more “transparently,” that is, with fewer effects resulting from the medium itself. This may seem to be a positive factor, but again, researchers should be cautious to designate a particular medium inherently “positive” or “negative.” To use one example, one reason email hoaxes are so popular is there is no postal service patrolling for instances of mail fraud. By comparison, social networking websites are similarly un-policed. If younger individuals are

finding the Internet extremely easy to use and they turn to resources to satisfy social dependencies, such as social orientation and play found in RQ1, this suggests that they may use MySpace more than other populations. According to MSD (Ball-Rokeach, 1998), use leads to affective and cognitive effects. Therefore, there is a case to be made for younger individuals being potentially more vulnerable.

### MySpace Factors: Extroversion and Self-Disclosure

In this sampling, those who self-reported themselves as extroverts were more likely to use MySpace. That is, individuals whose personality leans toward the desire to surround themselves with others, rather than be alone, found MySpace useful. The strong response in the category of “personal play” suggests a strong personal dimension to the enjoyment on MySpace. Some important readings can be made from these data. Question #89, “In your daily life, how important is MySpace to have something to do when nobody else is around” was the dependency question with the overall highest response ( $M = 3.11$ ). It is a question that captures a personal dimension of play (Table 12). But it also might have a strong social connotation if individuals are using MySpace for entertainment to interact with other individuals during times they are bored and seek social interaction recreationally.

Extroversion and self-disclosure are not the only factors related to the creation and maintenance of friendships online, but they were selected because they appeared to offer the most direct applicability to capturing the activities on MySpace. Extroversion was selected because it was the personality trait most closely aligned with seeking stimulation and friendship from others. However, it is only one of the so-called “big five” personality traits, the others being

neuroticism, agreeableness, conscientiousness, and openness to experience. Together these factors describe psychological differences between individuals that describe personality, which as previously stated, may affect how individuals use media (Weaver, 2000). Neuroticism in particular was found to be significantly related to overall dependency on the television medium (Paul, Shim & Wang, 2004). If one personality trait influences dependency on MySpace, other personality traits and psychological factors may have relationships with other dependencies.

### Technology Use

Results from questions of use of other technological innovations found that MySpace members used more socially-related technological innovations than non-members. Additionally, MySpace members used more non-social innovations as well; results showed a statistically significant difference between “total non-social technology use” for members ( $N = 306$ ,  $M = 28.2$ ,  $s = .30$ ) as compared to non-members ( $N = 94$ ,  $M = 27$ ,  $s = .64$ ),  $t(398) = 1.96$ ,  $p \leq .05$ .

Reliability analysis revealed an Alpha of .60 for “social” technologies and .58 for “non-social” technologies. The Alpha for total social and non-social technology use (.71) was actually higher than either social or non-social categories alone. This suggests that the separately constructed scales did not capture the “socialness” of the media used. Instead, overall technology use was a more reliable measure.

These results suggest that MySpace members may be part of a “technology cluster” that is larger than expected, encompassing technological innovations in general (primarily social as well as non-social). Deeper analysis on the exact character of innovation in this possible cluster is required. If the dependency on MySpace is primarily related to play, the correlation between

MySpace use and use of other technological innovations may be more related to play than socialization.

Another possibility is that MySpace members are a different category of innovation adopter from non-members. If this is the case, analysis should be conducted into categorizing MySpace members into an adopter category. Rogers (1995) conceives of the classification of innovation adopters into innovators, early adopters, early majority, late majority, and laggards (p. 262). Each category has general “ideal types,” such as an association of “venturesome” with the innovator category. Since we are dealing with a demographic that is young and technologically savvy, the participants are likely in the categories of innovator or early adopter.

Each individual innovation could also be categorized in a particular stage of adoption, and then compared to MySpace membership. Using the example of RSS feeds, users of this technology must be technologically savvy and accustomed to going out and seeking information. Only 9% of overall Internet users say they have a good idea of what an RSS feed is (Lenhart & Fox, 2006), putting this technology firmly within the innovator stage of diffusion of innovations theory. If evidence was compiled to put the users of other highly “innovative” technologies into the same category as MySpace members, this would provide evidence to bolster the argument that MySpace members are an earlier adopter category than non-members.

### Methodological Considerations

This survey is self-reported, and therefore is prone to several drawbacks. Due to using a convenience sampling of younger college students this survey is limited in the kind of inferences it can draw, because it does not represent a representative sampling of Americans. Also, Ball-

Rokeach (1998) states that observed MSD relations indicate, but are not exact representations of, individual's goals. "Individuals' relations with the media are inferred from individual's self-reports.... These self-reports are tracers, not direct observations, of individuals' MSD relations" (p. 30). One appetizing possibility is using data collected directly from MySpace members themselves, such as Backstrom, Huttenlocher, Kleinberg and Lan (2006). These researchers used existing publicly accessible networks on Friendster and LiveJournal as data for analysis of the impact of existing friends on new members. This method offers benefits, such as being able to map friendship connections and retrieving public data with a degree of accuracy not possible with self-reported data.

Other researchers have mapped friend networks using software (Donath & Boyd, 2006; Heer & Boyd, 2005). This method provides an entirely new set of drawbacks, such as the inability to locate a member's true age and the difficulty in getting access and consent to any data not made public. Ideally a hybrid mode of research that connects the online persona with the individual, and provides the benefits of each, would be desirable. A snowball collection could be used to recruit participants, but this also presents issues due to the difficulty in verifying identity online and the lower valid responses in Internet surveys.

MySpace is also only one of many websites devoted to social networking. Friendster is a similar website, while Facebook focuses on college communities. The website del.icio.us is a "social bookmarking" website, where individuals make public a list of website links. Blogs themselves also contain elements of social networking in the way they link to content. These connections could be investigated in a similar way as social networking websites. All these online resources represent areas of future investigation. Overall, more investigation is required from a variety of qualitative and quantitative approaches across different social networking



websites is required to expand the sparse amount of research on the subject.

## CHAPTER SIX: CONCLUSIONS

This study serves as an initial investigation of MSD theory as applied to online social networking websites. The resulting model provides evidence of the theory's applicability, but also raises questions as to its ability to evolve to remain contemporaneous with new uses of the Internet. Several points have been supported by the data, particularly as regards psychological and demographic factors.

The current study found that MySpace was more similar to real-life and easy to use than other forms of CMC, particularly those restricted to text. If individuals begin to use social online resources with increasing frequency, this may very well lead to large-scale effects. Some utopists such as Pierre Levy see the development of the collaborative online environment as the first step in the next in an age of unparalleled freedom. "The most socially useful benefit of computer-mediated communication will be to provide people with the means to combine their mental forces in constructing intelligent communities and real-time democracies" (Levy, 2000). This point of view posits that that online socialization may turn the Internet into a "global village" (McLuhan, 1994). Others believe it will "balkanize" society (Van Alstyne & Brynjolfsson, 1996) by allowing individuals to pursue their own narrow goals. In the latter case, online socialization becomes more restrictive and less a reflection of the "agora" in Greek society.

Although medium-based factors did not have an influence on dependencies, this posits a more sinister possibility: perhaps they are in control of resources that are buried too deeply to be visible using a survey. The conundrum is that media influence is everywhere on the Internet, but invisible: search engines rate websites according to arcane algorithms, news is created, influences traditional media, and then dies a quiet death, and individuals interact virtually with

increasing frequency. These are difficult systems to model, even if there are macro influences and the actions of an individual are more the sum of his or her psychological factors.

To a large degree, individuals are afforded greater power on the Internet. Individuals are most likely to use MySpace for play and interaction orientation, but play is not necessarily non-productive, and even solo play has certain social connotations. If individuals participate in social networking from an early age and use social networking websites 1.3 hours per day, long-term effects of exposure such as cultivation may well be present. Use leads to affective and cognitive effects, which remain to be examined, and may further indicate the context-specific relationship that develops. For instance, agenda-setting and gatekeeping may be roles are likely played by individuals on MySpace. Those in power on MySpace, and most able to contribute to these roles, may indeed be the more popular. If individuals gain influence based purely on amount of time spent on social networking websites, this may prove to be a strike against the idea of a “digital divide” (Norris, 2001).

The majority-female, extroverted, and self-disclosure friendly MySpace may be another strike against the idea of the homogenous Internet, populated primarily by Caucasian males. Extroverts and those willing to self-disclose may be using cutting-edge resources at the expense of introverts, who may see real-world friends diminish in favor of online ones. Or, online networks may be simply reflective of real-world relationships and specific interests. These issues can only be fully examined by researching how identities are created online and how they compare to real-world relationships. Are these indeed weak and convenient “drive-by” relationships (Putnam, 2001), or are they stronger, with the possibility to change real-world socialization?

## APPENDIX A: SURVEY INSTRUMENT

1. What is your age in years? \_\_\_\_\_

2. Please circle your expected year of graduation from UCF:

2007

2008

2009

2010

3. Please circle your gender: MALE FEMALE

4. Please circle the race below that most accurately describes you:

Black or African-American

American Indian or Alaskan Native

Asian or Asian-American (includes Chinese, Japanese, Korean, Filipino)

White or Caucasian

Hispanic or Latin-American Ethnicity

Native Hawaiian or other Pacific Islander

Multiracial, please specify: \_\_\_\_\_

Other race, please specify: \_\_\_\_\_

5. On average, how many friends do you see or talk to (in person or on the phone) per day?

\_\_\_\_\_ friends

The following three questions concern when you are free to use the Internet. Please enter a number or fraction.

6. On average, how many hours are you free to do what you want on a computer connected to the Internet per day at work?

\_\_\_\_\_ hours

7. On average, how many hours are you free to do what you want on a computer connected to the Internet per day at school?

\_\_\_\_\_ hours

8. On average, how many hours are you free to do what you want on a computer connected to the Internet per day at home?

\_\_\_\_\_ hours

The following three questions concern your Internet connection. Please circle one option per question.

9. I have the following primary connection at work:

None  
Dial-up modem  
DSL/cable  
High-speed wireless  
High-speed Ethernet

10. I have the following primary connection at school:

None  
Dial-up modem  
DSL/cable  
High-speed wireless  
High-speed Ethernet

11. I have the following primary connection at home:

None  
Dial-up modem  
DSL/cable  
High-speed wireless  
High-speed Ethernet

**Please circle a response to indicate how frequently you use these products, features, or software, from 1 (never) to 5 (very frequently).**

	Never	-----			Very frequently
12. I chat with people online using a program such as AIM (AOL Instant Messenger)....	1	2	3	4	5
13. I download music or images to my cell phone...	1	2	3	4	5
14. I use text messaging on my cell phone....	1	2	3	4	5
15. I put music on a MP3 player such as an iPod...	1	2	3	4	5
16. I download music or movies to my computer...	1	2	3	4	5
17. I send email...	1	2	3	4	5
18. I post or read messages on online discussion boards...	1	2	3	4	5
19. I read news on a website such as CNN or OrlandoSentinel.com...	1	2	3	4	5
20. I post or read online reviews of products and services...	1	2	3	4	5
21. I look up directions on Mapquest or a similar website...	1	2	3	4	5
22. I use a laptop computer...	1	2	3	4	5

Please circle a response to indicate how frequently you use these products, features, or software, from 1 (never) to 5 (very frequently).	Never ----- Very frequently
23. I search for things online using a search engine such as Google...	1    2    3    4    5
24. I write on my own blog or leave public comments on a blog...	1    2    3    4    5
25. I play games where I interact or play with other people online...	1    2    3    4    5
26. I bid on or sell items on ebay or other auction website...	1    2    3    4    5
27. I take digital pictures and send them to friends and family...	1    2    3    4    5
28. I use the website Facebook....	1    2    3    4    5
29. I make movies of me and my friends and post them on a blog or website such as YouTube	1    2    3    4    5
30. I use other social networking websites similar to MySpace and Facebook, such as Friendster...  If you did not say "never," please list below:  _____	1    2    3    4    5
31. I use a PDA (personal digital assistant)...	1    2    3    4    5



Please circle a response to indicate how accurately these statements describe you, from 1 (very inaccurately) to 5 (very accurately).

	<b>Very Inaccurately</b>	-----	<b>Very Accurately</b>		
32. I enjoy meeting new people.	1	2	3	4	5
33. I am a lively person.	1	2	3	4	5
34. I like lots of excitement around me.	1	2	3	4	5
35. I keep in the background on social occasions.	1	2	3	4	5
36. I have trouble letting myself go and enjoying myself at a party.	1	2	3	4	5
37. I don't go out of my way to make new friends.	1	2	3	4	5
38. I take the initiative in social situations.	1	2	3	4	5
39. I am mostly quiet when around other people.	1	2	3	4	5
40. I'm a talkative person.	1	2	3	4	5
41. I can get a party going.	1	2	3	4	5

Please circle a response to indicate how accurately these statements describe you, from 1 (very inaccurately) to 5 (very accurately).	<b>Very Inaccurately</b>	-----	<b>Very Accurately</b>		
42. I do not often talk about myself.	1	2	3	4	5
43. My conversations about myself and how I feel last a long time.	1	2	3	4	5
44. I don't give my opinion.	1	2	3	4	5
45. I don't have conversations about myself and how I feel.	1	2	3	4	5
46. I talk about myself a lot.	1	2	3	4	5
47. Only rarely do I express my feelings about myself.	1	2	3	4	5
48. I often express my feelings about myself.	1	2	3	4	5
49. I never tell people what I really think.	1	2	3	4	5
50. I always give my opinion.	1	2	3	4	5
51. I always tell people what I really think.	1	2	3	4	5

Please answer how accurately the following statements describe you, from 1 (not at all accurately) to 5 (very accurately).

	<b>Not all</b>	<b>all</b>	-----		<b>Very</b>
	<b>Accurately</b>				<b>Accurately</b>
52. I feel confident making selections from an on screen menu.	1	2	3	4	5
53. I feel confident using the computer to write a letter or essay.	1	2	3	4	5
54. I feel confident escaping or exiting from a program or software.	1	2	3	4	5
55. I feel confident calling up a data file to view on the monitor screen.	1	2	3	4	5
56. I feel confident troubleshooting computer problems.	1	2	3	4	5
57. I feel confident understanding terms/words relating to computer hardware.	1	2	3	4	5
58. I feel confident explaining why a program (software) will or will not run on a given computer.	1	2	3	4	5
59. I feel confident writing simple programs for the computer.	1	2	3	4	5
60. Working with a computer would make me very nervous.	1	2	3	4	5

Please answer how accurately the following statements describe you, from 1 (not at all accurately) to 5 (very accurately).

	<b>Not all</b>		-----		<b>Very</b>
	<b>Accurately</b>				<b>Accurately</b>
61. I get a sinking feeling when I think of trying to use a computer.	1	2	3	4	5
62. Computers make me feel uncomfortable.	1	2	3	4	5
63. Computers make me feel uneasy and confused.	1	2	3	4	5
64. Learning computer terminology makes me nervous.	1	2	3	4	5
65. Thinking about prepackaged (software packages) for a computer makes me uncomfortable.	1	2	3	4	5
66. I get a sinking feeling visiting a computer store.	1	2	3	4	5
67. I feel uneasy and confused taking a class about the uses of computers.	1	2	3	4	5

	Please circle one option for each question	
<p>68. Are you a registered member of the website MySpace?</p> <p>69. <b>If yes, please write below how many friends you have on MySpace.</b> (as measured by the number of people in your friends list)</p> <p>70. <b>If yes, please write below how long you have been a member of MySpace, in months:</b>  _____ months</p>	YES	NO

71. On average, how many hours do you actively use MySpace per day (have the web page open and are using it)?

\_\_\_\_\_ hours

In your daily life, how important is MySpace to:	Not all	all	-----	Very
	Important			Important
72. Stay on top of what is happening in the community?	1	2	3	4 5
73. Unwind after a hard day or week?	1	2	3	4 5
74. Gain insight into why you do some of the things you do?	1	2	3	4 5
75. Discover better ways to communicate with others?	1	2	3	4 5

In your daily life, how important is MySpace to:	<b>Not all all Important</b>	-----	<b>Very Important</b>		
76. Decide where to go for services such as health, financial, or household?	1	2	3	4	5
77. Relax when you are by yourself?	1	2	3	4	5
78. Find out how the country is doing?	1	2	3	4	5
79. Imagine what you'll be like as you grow older?	1	2	3	4	5
80. Give you something to do with your friends?	1	2	3	4	5
81. Figure out what to buy?	1	2	3	4	5
82. Think about how to act with friends, relatives, or people you work with?	1	2	3	4	5
83. Have fun with family and friends?	1	2	3	4	5
84. Observe how others copy with problems or situations like yours?	1	2	3	4	5
85. Keep up with world events?	1	2	3	4	5
86. Be a part of events that you enjoy without having to be there?	1	2	3	4	5

In your daily life, how important is MySpace to:	<b>Not all all Important</b>	-----	<b>Very Important</b>		
87. Get ideas about how to approach others in important or difficult situations?	1	2	3	4	5
88. Plan where to go for evening and weekend activities?	1	2	3	4	5
89. Have something to do when nobody else is around?	1	2	3	4	5

APPENDIX B: WAIVER OF INFORMED CONSENT



## Informed Consent

Dear Student,

I, Andrew Schrock, am a Master's candidate in Communication at the Nicholson School of Communication. Today I am asking you participate in a study. **The purpose of this study is to learn more about how college students use the Internet and other technologies.** The information you provide will be used in a Master's thesis for the Fall, 2006 semester at the Nicholson School of Communication and in any subsequent academic publications.

**You must be 18 years of age or older to participate in this study, and may not have previously participated.** Participation entails completing a single survey, which will be completed today before class. It will take approximately 15 minutes to complete. There are no other requirements for participation, and you will not be contacted again regarding your participation. Your responses will be input and stored anonymously, and your identity will not be revealed in the thesis or any subsequent publication. Your identity will not be matched to the survey at any time. Surveys will be stored in a locked filing cabinet. Once input into digital format, the data will be stored in a password-protected file. Your professor will not be present for the duration of the study and will not be informed as to your participation or non-participation. Individual responses will not be included in the thesis or any ensuing publication.

There are no anticipated risks, compensation or other direct benefits to you as a participant in this survey. Your participation or non-participation on this survey will not affect your grade in this or any other class at UCF. You may discontinue your participation in the survey at any time without consequence. You may choose to skip any questions on the survey you do not wish to answer.

**If you have any questions about this research project, please contact me at (407) 341-0051 or by email at [andrew@schrockmedia.net](mailto:andrew@schrockmedia.net).** My faculty supervisor, Dr. Tim Brown, may be contacted at (407) 823-5273 or by email at [timbrown@mail.ucf.edu](mailto:timbrown@mail.ucf.edu). Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (IRB). Information regarding your rights as a research volunteer may be obtained from:

**IRB Coordinator, Institutional Review Board (IRB)  
University of Central Florida (UCF)  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: (407) 823-2901**

If you agree to voluntarily participate in this research project as described **and are over the age of 18 years of age** please indicate your agreement by completing and returning the attached survey. **Please retain this page for your reference.** Thank you for your participation in this research.

APPENDIX C: IRB APPROVAL FORM



## UCF IRB Protocol Submission Form

Initial       Resubmission of IRB # \_\_\_\_\_

**Please type this form using the MicroSoft Word document.** Expand as needed. Allow a minimum of 2-3 weeks for the approval process. A letter of approval will be mailed to you once approved. Information on this form must match information on the grant application, dissertation or thesis, consent forms or letters, and flyers for recruitment. **There are no deadlines for submission of minimal risk studies as they are reviewed at least weekly.** If it is deemed by the IRB that the study involves greater than minimal risk or extenuating factors, the complete IRB packet must be submitted by the 1<sup>st</sup> business day of the month for consideration at that monthly IRB meeting. At title note if investigator is Student, Masters Candidate or Doctoral Candidate.

**1. Title of Protocol: Factors affecting MySpace Dependency, its use, and use of similar technologies**

**2. Principal Investigator: Andrew Schrock**

Signature:

Name: **Andrew Schrock**

Mr./Ms./Mrs./Dr. (choose one) **Mr.**  
**andrew@schrockmedia.net**

Employee ID or Student PID #: **a1553848**

Degree: **M.A. Candidate**

Title: **Student**

Department: **Communication**

College: **Sciences**

E-Mail:

Telephone: **(407) 341-0051**

Facsimile: **(407) 823-6360**

Home Telephone: **(407) 423-9935**

**Co-Investigator(s): Dr. Timothy Brown**

Signature:

Name: **Tim Brown**

Mr./Ms./Mrs./Dr. (choose one) **Dr.**

Employee ID or Student PID #:

Degree: **Ph.D.**

Title: **Assistant Professor of Radio/Television**

Department: **Communication**

College: **Sciences**

E-Mail: **timbrown@mail.ucf.edu**

Telephone: **(407) 823-5273**

Facsimile: **(407) 823-6360**

Home Telephone:

**3. Supervisor:**

Signature:

Name: **Tim Brown**

**4. Collaborating institution(s) and researcher(s): University of Central Florida**

**5. Dates of proposed project (cannot be retroactive) From: IRB Approval To: 10/30/06**

**6. Source of funding for the project (project title, agency, account/proposal # or “Unfunded”): Unfunded**

**7. Scientific purpose of the investigation:**

Media system dependency theory describes how individuals become habitual users of certain media, such as newspapers and television. Individuals become “dependent” on these media due to both individual differences and the influence of media distributors. MySpace is a popular website where individuals form and maintain friendships through “social networking.” This study examines individual differences related to dependency on MySpace, the influence of online friendships on repeated MySpace use, and what other technologies MySpace-dependent individuals use.

Individual differences consist of demographics, cognitive factors (extroversion, self-disclosure, computer anxiety, and computer self-efficacy) and individual access factors (Internet connection type and speed). Dependent users return repeatedly to create more friendships and maintain the ones they have. These friendships are theorized to be a factor in continued MySpace use. Technology Clusters have been described as groupings of innovations that are adopted by individuals for similar reasons. The frequency of use of similar “social” technologies, such as online chat and cellphones, is investigated. Although use does not alone define a dependency, it may suggest future avenues of dependency research.

**8. Describe the research methodology in non-technical language:**

A single survey will be administered in the classroom environment at the beginning of class. Permission of the professor or instructor to have his or her class used as potential participants will be obtained. The professor will leave the room for the duration of the survey process, to emphasize that the survey is not required for class participation. The questionnaire will then be administered anonymously by the researcher(s).

**9. Describe the potential benefits and anticipated risks and the steps that will be taken to minimize risks and protect participants:**

There are no direct benefits or risks. Participant identity and survey will not be linked, and waiver of informed consent will be used. These measures ensure protection of anonymity and privacy. Subject identity will not be revealed in any resulting papers or publications. Hard copies of the surveys will be stored in a locked filing cabinet, and files containing response data will be stored as password-protected SPSS and Microsoft Excel documents.

**10. Describe how participants will be recruited, how many you hope to recruit, the age of participants, and proposed compensation:**

Participants will be recruited from undergraduates over the age of 18 enrolled in classes in the Fall 2006 semester. A convenience sampling will be taken of specific Art, Communication, and Digital Media classes. Written permission to conduct this study has been obtained from professors for the following classes:

<u>Department</u>	<u>Course</u>	<u>Instructor or Professor name</u>
Communication	SPC 1600	Addie Gurgurich
Communication	SPC 1600	Addie Gurgurich
Communication	SPC 1600	Jacey Brown
Communication	SPC 1600	Jacey Brown
Communication	SPC 1600	Rebecca Yost
Communication	SPC 1600	Rebecca Yost
Art	PGY 2401C	Rebecca Sittler Schrock
Art	PGY 3401C	Rebecca Sittler Schrock
Art	PGY 4420C	Rebecca Sittler Schrock
Art	ART 2820	Jason Burrell
Digital Media	DIG 3001	Jonathon Friskies
Digital Media	DIG 3821	Jeff Wirth

No incentives, such as extra credit or payment, will be offered to participants. We hope to recruit from 250 to 350 total participants.

**11. Describe the informed consent process:**

This research will be performed using waiver of informed consent. The professors will leave the room for the duration of the survey process, as to not give the impression of the survey being required for participation in the class. Students will be informed, both verbally and on the waiver of informed consent page, that filling out a survey indicates consent. The students will then pick up a blank survey and waiver of informed consent page. They will read indicate they have read and understood the document by filling out a survey. The students for their reference will retain the waiver of informed consent page with contact information and study purpose. This survey information page includes contact information for both the supervisor and research assistant. Please see attached consent form and questionnaire.

**12. Describe any protected health information (PHI) you plan to obtain from a HIPAA-covered medical facility or UCF designated HIPAA component:**

None.

**I approve this protocol for submission to the UCF IRB.**

\_\_\_\_\_/\_\_\_\_\_  
Department Chair/Director      Date

**Cooperating Department (Digital Media)**

\_\_\_\_\_/\_\_\_\_\_  
Department Chair/Director      Date

**Cooperating Department (Art)**

\_\_\_\_\_/\_\_\_\_\_  
Department Chair/Director      Date

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