A STUDY OF INDIVIDUAL INTERNET DEPENDENCY
AS AN EXTENSION OF SOCIAL SUPPORT

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HO-JIN YOON

Dr. Wayne Wanta, Thesis Supervisor

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The undersigned, appointed by the Dean of the Graduate School, have examined the thesis entitled

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Presented by Ho-Jin Yoon

A candidate for the degree of Master of Arts in Journalism

And hereby certify that in their opinion it is worthy of acceptance.

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Professor Wayne Wanta

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Professor Glenn Leshner

_____

Professor Mike McKean

_____

Professor Mitchell McKinney

This thesis is dedicated to my parents, Kang-No Yoon and Bong Koo, who have wholeheartedly supported me all the way since I was born. Without their love and encouragement, my studies could not be completed. Also, this thesis is dedicated to my younger brother, Tae-Jin Yoon.

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Ho-Jin Yoon

Dr. Wayne Wanta, Thesis Adviser

ABSTRACT

This current study aims to define and describe the relationship between individuals' Internet dependency and social support as they function in one specific information environment. How the immigrants' acculturation attitude affects their Internet dependency was also examined. A sample of 158 East-Asian and 160 American college students completed a survey measuring (a) Internet dependency, (b) social support, and (c) acculturation attitude (only for the East-Asians).

No correlation was found between social support and Internet dependency across the samples. The dependency typologies the East-Asians developed the most often were social understanding and solitary play. The interaction of acculturation attitude and social support was not found, but acculturation attitude was positively correlated with Internet dependency. Finally, this present research suggests that the index assessing media dependency should be revised in order to measure individuals' real usages and usage amount of a medium instead of their perception of a medium.

CHAPTER ONE

INTRODUCTION

One pre-eminent question in mass communication research has dealt with the interrelationship between the media and other social forces. McQuail (1972) earlier argued that the form, the strength and the direction of these inter-societal links became crucial areas for exploration. Based on a sociological concept, DeFleur and Ball-Rokeach (1975) and Ball-Rokeach and DeFleur (1976) approached the issue and developed a mass communication theory that attempted to make explicit the importance of inter-societal relationships as the basis of a media effects model.

One key starting point to deal with the issue is to understand how an individual's information environment is structured in a social system (Fry, 1981). A certain individual, a group, or a population demonstrates different inclinations and reactions toward different types of media and media information; thus, media effects vary depending on those factors. Even in the same social setting, the environment may have different meanings to each individual depending upon a variety of factors such as an individual's social status

or demographic characteristics (Ball-Rokeach, 1985). Therefore, it is important to examine how the components of the information environment relate and interrelate with one another (Ball-Rokeach, 1975).

The primary concern of this current study is to define and describe the relationship between individuals' Internet dependency and social support as they function in one specific information environment. In other words, this present study aims to explain how the social support an individual receives from society correlates with the level and the type of an individuals' dependency on the Internet. More specifically, the immigrants' dependency on the Internet in the U.S. is of a major interest because their media use or dependency is assumed to be different from that of the Americans.

The differences of individuals' information environment have been explicitly revealed between native habitants and immigrants (Kim, 1976; Ball-Rokeach, Kim, & Matei, 2001). Previous studies (Ball-Rokeach, Kim, & Matei, 2001; Matei & Ball-Rokeach, 2003) found that the Internet plays a role of weakening immigrants' belongingness to a host community, and that short-term immigrants tend to use the Internet more than long-term immigrants or native residents in a metropolitan city in the U.S.

None of the studies, however, fully demonstrated the multiple aspects of immigrants' information environment. For example, Ball-Rokeach, Kim, & Matei (2001) focused on the immigrants' belongingness to the host society, which provided only a partial explanation of immigrants' information environment. Thus, to provide a better

explanation of the relationship between the characteristics of immigrants' information environment and their dependency on the Internet, this present study decided to introduce the concept of social support and communication-acculturation theory (Kim, 1980) as well as individual media dependency. Given the better portrayal of immigrants' social resources and their information environments, a better understanding will be achieved concerning why immigrants are more likely to depend on the Internet than American residents.

Therefore, findings from this current study are expected to aid understanding of immigrants' Internet dependency and its pattern in a small town or rural area in the U.S. Also, this study will examine which of three media dependencies typologies—social understanding, action orientation, and solitary play—immigrants develop.

Finally, the significance of this study may be seen from intensifying or weakening individual media dependency theory by providing information for understanding similarities between individuals in media dependencies (Ball-Rokeach, 1985). Also, if a new application of a sociological concept into the dependency study is effective to define a situation where a dependency on a medium is developed, it is expected to enrich the repertoire of measurements assessing media dependency.

CHAPTER TWO

LITERATURE REVIEW

This present study employed individual media dependency (IMD) theory as its theoretical framework. It is a micro-perspective of media system dependency (MSD). Thus, for better understanding of the current study's theoretical basis, the cores of both MSD and IMD need to be elaborated first. Then the trend of past dependency studies will be briefly discussed. The characteristics of the immigrants' information environment, which this current research assumes leads immigrants to depend on the Internet, will be also explained by both communication-acculturation (Kim, 1980) and individual media dependency theory (Ball-Rokeach, 1985). The present study experimentally introduces social support theory as an extension of individual media dependency theory. Therefore, social support theory also will be examined. In addition, why social support theory may be an appropriate concept that could explain the immigrants' dependency on the Internet will be argued.

Media System Dependency

Drawing upon classical sociological theories about the nature of the emerging industrial society (Merskin, 1999), the MSD approach eschews the dichotomous debate of "media strong/media weak" effects by focusing instead on the dependency relations that individuals develop with the mass media (Alman, 1993). MSD was a macro explanation of why mass media have profound effects in some situations and not in others. In attempting to resolve the issue of media effects, media system dependency theory emphasized the interaction between individuals and sociological factors. MSD conceptualized mass media as an integral component of a tripartite interaction among the societal system, media system, and audience (Ball-Rokeach, 1985; Ball-Rokeach & DeFleur, 1976; DeFleur & Ball-Rokeach, 1989). The basic idea is that these three components are linked to each other in a state of "system" dependency. Thus, media system dependency theory posited that "as modern societies become more complex, direct experience with their interpersonal network for information is limited; people may become dependent on the media for contact with societal institutions" (Ball-Rokeach, 1985). It further assumed that the impact of media messages on audience perceptions is a function of how dependent audiences are on mass media as sources of goal satisfaction. In this formulation, the term media system dependency was defined as "a relationship in which the satisfaction of needs or the attainment of goals by one party is contingent upon the information resources of another party—those resources begin the capacities to (a) create and gather, (b) process, and (c) disseminate information" (Ball-Rokeach, 1985, p.

6). This relationship varies according to the stability of social institutions and the perceived or real availability of media information (Ball-Rokeach, 1976; Ball-Rokeach, 1985; Lowrey, 2004).

Media dependency is likely to be correlated with media exposure in that exposure is a precondition of dependency, but simple exposure does not necessarily develop into an individual's dependency on media (Ball-Rokeach, 1985). In many cases, exposure lacks the relationship that is found in the dependency pattern. Thus, ongoing dependencies and dependency coupled with exposure (an interaction effect) may provide a more appropriate basis for predicting media impact than exposure per se (Ball-Rokeach, 1985; Grant, Guthrie, & Ball-Rokeach, 1991).

Individual Media Dependency

With the empirical demonstration of Ball-Rokeach, Rokeach, and Grube's (1984) quasi-experimental field research on long-term effects on television viewers' political behaviors and beliefs, Ball-Rokeach (1985) aimed to show that the dependency relationship also has consequences for individuals. Therefore, a sociological approach of the micro-level variables to analyze how people come to be dependent on the mass media was suggested and posited as the Individual Media Dependency (IMD).

The basic assumption of individual media dependency is that individuals' media behavior is affected by the individual motivations to satisfy fundamental human goals; thus, goals are considered the key dimension of individual motivation underlying

individual media dependency (Ball-Rokeach, 1985).

Typologies of IMD

       The three fundamental human motivation goals, which are assumed to be exhaustive, but not mutually exclusive, were retrieved as followings: understanding, orientation, and play (Ball-Rokeach, Rokeach, & Grube, 1984; Ball-Rokeach, 1985). Each of these three major categories is further divided into a self-versus-social focus. Thus, individual media dependency eventually consists of 6 dependency typologies in total (3 (understanding, orientation, play) x 2 (self, social)).

       Self-understanding is the process of interpreting one's own beliefs, behaviors, and self-concept, whereas social understanding is comprehension of the nature of other individuals, cultures, and world events. Action orientation has to do with the guidance of specific behaviors such as eating, dressing and voting; interaction orientation involves ways of behaving toward others, including those people with whom one may have close contact (e.g., family, friends, colleagues) as well as those who may be unfamiliar (e.g., people of other cultures or socioeconomic groups). Solitary play refers to using media alone for stimulation or relaxation, and social play involves the media-focused recreation one participates in with others. The type and intensity of dependency may vary by medium, media genre, and particular genre contents.

Determinants of IMD

As noted, individual goals are key understanding points of individual media dependency. Variations in personal goals, however, are usually the result of social and environmental changes (Ball-Rokeach, Rokeach, & Grube, 1984; Ball-Rokeach, 1985). What govern individuals' dependencies on media, thus, are social environs, which people do not have a control of, rather than individuals' personal motivations (McQuail, 1972; Ball-Rokeach, 1985).

For instance, people would exhibit different media dependencies depending upon the surrounding social environs that may have different meanings and effects to them even though they have the same personal goal hierarchy and live in the same society. Ball-Rokeach (1985), thus, conceptualized a set of four intervening conditions that direct individuals' media dependencies: (1) the ambiguity and the threat present in individuals' social environs, (2) the activities of the media system, (3) the interpersonal networks, and (4) the structural locations of the individual.

Social environment is a general term intended to encompass "all environs that may bear upon individuals' understanding, orientation, or play goals whether they be international, national, community, or interpersonal" (Ball-Rokeach, 1985). Social environs may become ambiguous or threatening because, as a result of large social disruptions, they cannot be interpreted. Examples of social contexts that could create ambiguity include unexplainable events, novel situations, situations of role conflict and culture shock (Merskin, 1999).

Media system activities, through its social construction of reality activities and products, fundamentally shapes the audience's perceptions concerning the degree of ambiguity and threat in those social environs that are beyond its capacity to observe directly or indirectly through interpersonal reports. Unlike interpersonal networks, media activity, however, is considered to be tricky in that individuals can choose what messages they will expose themselves to or avoid (Ball-Rokeach, 1985). Ball-Rokeach (1985), therefore, argued that structural dependencies upon the media system that are logically prior to individual media-system dependencies place the media in the position of being an essential link between individuals and their social environs.

Among the four determinants, interpersonal networks are emphasized as a key intervening variable between the media system and the individuals. The basic assumption in this regard is that the "agenda" of interpersonal discourse shapes the individual's media dependency relation by affecting the individuals' personal goals (Ball-Rokeach, 1985). In turn, the agenda of interpersonal discourse is, to some degree, shaped by the message foci of the media system. Thus, when the communication focus of one's interpersonal networks change, one will probably change his/her attention priorities in order to maintain an effective and satisfying interpersonal association.

Structural location is referred to as having several indirect effects on individuals' media dependencies. Blumler and McQuail (1969) claimed that structural location should affect the individual's goal priorities and media behavior. All the conventional stratification variables, such as class, status, and power, and their consequences for

proximity to "where the action is" are included in structural location. In other words, depending on an individual's socio-demographics as well as the location of which particularly salient social environs that surround them, individuals' priorities of concerns and thereby the substance and the intensity of media dependency should be governed.

The four conditions with which individuals develop dependencies on a certain medium should be thought of collectively as a process of how people are dependent on mass media rather than equally independent dimensions or indicators directing an individual's dependency. Ball-Rokeach (1985) expected that most individuals would experience heightened dependency on the media system's information resources when salient aspects of their environs are ambiguous-insufficiently predictable or interpretable-particularly when the media system is perceived to be the primary information system available.

Dependency Studies in the Past

The dependency on mass media has been conceptualized as either an independent or a dependent variable: as a syndrome of individual, positional, and structural characteristics (as cited in Rosengren, 1986) leading up to more or less intensive and extensive use of mass media, or as the effects and consequences of such use (Rosengren & Windahl, 1972; Windahl et al., 1984).

A number of studies have explored media dependency in times of social disruptions or uncertainty pervaded in society. Combined with other theories such as

cultivation, these studies have typically focused on the degree of dependency, effects from dependency, and differentiation of both dependency and its effects according to media type (Lowrey, 2004). Therefore, it was strongly recommended that research on dependency theory should explore media dependencies outside of natural or human disasters, abrupt social upheaval (such as war) and other more obvious conditions (Fry, 1981).

Meanwhile, individual media dependency and its effects are often tested in the context of demographic and social factors (Lowrey, 2004). Studies have shown that media dependency is moderated by social resources and social location as was posited by individual media dependency. Although there is some evidence that social location is important in defining individual dependencies, this aspect of the MSD theory is comparatively underdeveloped. Therefore, it has been recommended that more research needs to focus on dependencies on media in the context of daily lives (Fry, 1981).

Immigrant's Information Environment and Dependency

As noted, many dependency studies conceived the events where a high-level tension was raised. This kind of situation itself tends to bring significant social attention to individuals in society. That is, issues such as social conflict (Fry, 1981), social disruption (Lowrey, 2004), or natural disaster (Hirschburg, Dillman, & Ball-Rokeach, 1987; Turner & Paz, 1986) predispose individuals' dependency on the mass media because the issues highly elevate tensions in communities, which concerns people;

therefore, people are finally induced to rely on TV, radio, newspaper, etc. to resolve the heightened ambiguity or threats caused by the issues.

This present study, however, does not conceive a temporary high-tense situation. Rather, a low-tense and pervasively ambiguous situation is conceived because it presumably characterizes the environment where immigrants experience the loss of their existing interpersonal networks, language barrier, and cultural shocks (Kim, 1976, 1977a, 1980). Therefore, a more coherent understanding of immigrants' communication environment and its relation to group processes was needed. Relevant media dependency studies and acculturation research helped address the relationship between immigrants' media dependency and their social resources.

Interpersonal Networks

Individual media dependency theory focuses on interpersonal networks claiming that it is an intervening condition on which the individual shows dependencies on mass media when they cannot satisfy their goals for information with their functional alternatives to mass media for the information (Ball-Rokeach, 1985; Rubin & Windahl, 1986). DeFleur and Ball-Rokeach (1975) constructed their media dependency model on the assumption that accessibility of different channels of information would affect a person's ability to gain needed information. They argued that interpersonal sources of information were restricted in complex and heterogeneous societies, a situation which would lead to increased dependency on the inherently more accessible media channels.

Similarly, Tichenor, Donohue and Olien (1980) found that people tend to be isolated from each other in conflicting situations. For instance, Fry (1981) found that influential community residents are likely to use interpersonal sources and be only moderately dependent on media for information; however, when the personal social network proves less reliable as an information source, influential community members relied more heavily on mass media for the relevant information. The restricted interpersonal contact, therefore, necessitates a reliance on media sources to keep abreast of the progress of the conflict.

In the meantime, the interactive theory of communication-acculturation elaborates immigrant's information environment (Kim, 1980). The motivation for acculturation was defined as the immigrant's desire to learn about, participate in, and be oriented toward the host cultural system (Kim, 1980). For the immigrant, even merely handling the transactions of daily living requires the ability to detect similarities and differences within the new surroundings of the host society (Kim, 1980). Because of their restricted interpersonal relationship and limited accessibility of ethnic information sources in the host society, immigrants use the host society's mass media as their socialization or acculturation tool (Kim, 1980). Television was a medium on which migrant workers were highly dependent when they socialized to the U.S. cultures (Alman, 1993). Of relevance here is the fact that immigrants are exposed to fewer alternative information sources because of their relocation and their short residency. Therefore, in a new cultural setting, the immigrants' pursuit of information through the mass media is a part of their

behavioral changes that help them cope with the stressful situation caused by their limited access to direct information sources and interpersonal networks.

Availability of Ethnic Information and the Internet

In addition to the limited interpersonal networks, immigrants are supposed to experience the limited sources of their ethnic information. Rubin and Windahl (1986) argued that dependency on a specific medium follows from the perceived lack of available functional alternatives and restricted motives for media use. Dependency on a socializing agent—the media are certainly one—would be low when the number of available resources are high, and that dependency would be high when available resources are few (Rosengren, 1986).

Halpern (1994) showed that "access to functional alternatives for information is related to an individual's personal access to resources while he explored the role played by alternatives to the government controlled press in Chile" (p. 51). A separate study showed access to functional media alternatives decreases dependency on mainstream media in China (Sun, Chang, & Yu, 2001).

Data provided by four Syntopia surveys examined the role of the Internet in society and community life and found that the Internet use is associated with increased community and political involvement (as cited in Matei & Ball-Rokeach, 2003). There are signs, however, that, although in many instances the medium is a facilitator of strong social bonds, in others it fosters weak social ties (Matei & Ball-Rokeach, 2003). Matei

and Ball-Rokeach (2003) pointed out that many of these previous surveys and studies did not include an immigrant population; therefore, the Internet's role of enforcing social ties may not be generalized to immigrants in the U.S. Thereafter, they suggest that in the immigrants' information structure the Internet plays a role of hampering communication linkages to local community and organization in the U.S.

This may be seen to be in line with the acculturation findings that immigrants are more likely to use their ethnic media when they are available in their information environment. Earlier, Ziegler (1983) indicated, as one of three functions of the foreign language press in the U.S., that the ethnic media sources serve as an outlet for news about the home country that would otherwise be unavailable. Hwang and He (1999) found in their studies of media uses and acculturation among Chinese immigrants in the U.S. that the availability of Chinese-language media hampers the impact of English media use on the immigrants' acculturation in addition to the influence of the host mass media (Kim, 1976, 1977a, 1980). Melkote and Liu (2000) also showed that Chinese students and scholars depend upon Chinese ethnic Internet contents to not only ease their cultural shock but also obtain a source for valuable tips on living in the host country. But Chinese students and scholars' use of the Internet was limited to obtaining practical information such as drinking, dressing, eating, and shopping rather than to adopt some of the norms and values of salient reference groups of the new society.

Throughout acculturation research, it is notable that immigrants show a strong tendency to use their ethnic media when they are available regardless of their

acculturation attitude. And the introduction of the Internet into the immigrant's information environment seems to imply availability of their ethnic information sources, especially in a rural area or a small town in the U.S. where the media information sources for minority groups are scarce. It is, therefore, assumed that immigrants would tend to be dependent on the Internet for ethnic information although immigrants' acculturation attitude should affect their media use and dependency on the Internet.

Social Support and Dependency

Due to the sociological characteristics of the individual media dependency theory, many dependency studies adopted sociological concepts to measure people's socio-demographic factors and communication networks, which expectedly affect their dependency on media (Lowery, 2004). For example, to measure the interaction between individuals' media dependency and their social environs, Fry (1981) introduced community participation; Ball Rokeach, Kim, and Matei (2001) and Ball-Rokeach and Matei (2003) used belonging index; Lowrey (2004) employed social capital; and Morton and Duck (2000) adopted social identity theory.

But assessing the nature of an interpersonal communication network and its effectiveness in providing needed information is complex (Fry, 1981). Also, none of the sociological concepts mentioned above particularly shed light on the characteristics of immigrants' information environment. The use of partial dimensions of individuals' social resources with the concepts might not have a problem in examining a particular

issue or case. This present study, however, needed a broader index to better measure the multiple aspects of individuals' social resources because immigrants' information environments reflect on their daily lives, not only during a specific social conflict or disruption.

Individual dependency theory indicates that an individual's stress reduction behaviors by seeking information are a predisposition of media dependency (Ball-Rokeach, 1985; Merskin, 1999). In this regard, Cohen and Hoberman's social support index (1983), Interpersonal Support Evaluation List (ISEL), is well focused on measuring an individual's stress reduction behaviors; therefore, it seems appropriate to assess the immigrants' information circumstances. Also, after examining 20 other researchers' social support measurements, Cohen and Wills (1985) claimed that studies showing consistent buffering effects of stressful life events were those done by S. Cohen and Hoberman (1983).

The stress individuals feel in their daily lives may depend upon their social resources; for example, how stable are the interpersonal relationships or networks each individual has in society? (Cohen & Hoberman, 1983; Cohen & Wills, 1985). The support measure–the Interpersonal Support Evaluation List (ISEL)—consists of four dimensions, each of which provided 12-item scales: (1) tangible (instrumental) support, (2) appraisal (informational) support, (3) belonging (social companionship), and (4) self-esteem support.

Tangible (instrumental) support is the provision of financial aid, material

resources, and needed services. These may help reduce stress by direct resolution of instrumental problems or by providing the recipient with increased time for activities such as relaxation or entertainment. Informational support is help in defining, understanding, and coping with problematic events. It has also been called advice, appraisal support and cognitive guidance. Belonging or social companionship dimension indicates spending time with others in leisure and recreational activities. This may reduce stress by fulfilling a need for affiliation and contact with others. Esteem support is information that a person is esteemed and accepted (Cobb, 1976; Wills, 1985). Self-esteem is enhanced by communication to persons that they are valued for their own worth and experience and are accepted despite any difficulties or personal faults.

The ISEL was developed to cover the domain of socially-supportive elements of relationships which college students—the sample this present study considered—might be expected to experience (Cohen & Hoberman, 1983). But social support has never been fully employed in any dependency study. Also, it may have a defect in that the belonging subscale was moderately correlated with both tangible and appraisal subscales (Cohen & Hoberman, 1983). But, because of the relevance of other similar sociological concepts used in the previous studies, the application of social support to this present dependency study will not be problematic. In addition, Cohen & Hoberman (1983) showed that the ISEL was a reliable measure of social support and that its subscales evidence reasonable independence from one another. For the purpose of this present study, three out of four social support dimensions were opted to portray the social support resources of the East-

Asian students and the American counterparts because the self-esteem dimension measures individuals' self-evaluation rather than the perceived availability of support for them.

CHAPTER THREE

HYPOTHESIS

Previous research revealed that the immigrants' information environment has two major characteristics: restricted interpersonal networks and limited availability of ethnic media channels. This present study, thus, aims to examine how this unique communication environment will affect the immigrants' dependency on the Internet—an outlet for their ethnic information—in a small town in the U.S.

The East-Asian—Korean, Japanese, and Chinese—immigrants feel most detached from the host society in the U.S. (Ball-Rokeach, Kim, Matei, 2001; Matei & Ball-Rokeach, 2003). Therefore, to clearly show the presumed difference of informative resources of an individual, this present study chose to compare two different groups—the East-Asian students and the American counterparts. Each population's information environment was equally manipulated by the social support index. Thus, this present research has three hypotheses as follows:

H1: The East-Asians will have less social support than the Americans.

H2: The East-Asians show stronger dependency on the Internet than the Americans.

H3: The more social support, the less likely individuals are to be dependent on the Internet, regardless of nationality.

The typology of individual media dependency is also of major concern. MSD theory recognized that media are not the only sources of goal satisfaction and that people embedded in social networks may focus on certain aspects of the media for their media-related expectations (Ball-Rokeach et al., 1984). For example, in conflicted situations such as a political turmoil (Halpern, 1994), terrorism (Lowrey, 2003), or natural disaster (Hirschburg, Dillman, & Ball-Rokeach, 1987; Turner & Paz, 1986), the most salient dependency typologies were found to be social understanding and action orientation.

Although the immigrants' information environments are not as highly conflicted as a certain social event or natural disaster would be, Melkote and Liu (2000) showed that social understanding and action orientation typologies were also salient in immigrants' dependency on the Internet when they acculturate themselves to the host society. No studies, however, specifically examined play typology even though the immigrants' lonely situation would cause that to be salient in their dependency on media (Nordlund, 1978). Thus, this present study suggests research questions regarding the dependency typologies as follows:

RQ1a: Of all three dependency typologies—social understanding, action orientation, and solitary play—which will be more prominent in the East-Asians' Internet dependency?

RQ1b: How will the pattern of dependency typologies be different between the East-Asians and the Americans?

This present research examines the possibility that immigrants' acculturation attitude will be a factor that may increase or decrease their social support and accordingly affect their dependency on the Internet. The assumption behind this is that some immigrants, who have a strong desire for learning and practicing the American norms and cultural conventions, may build solid interpersonal networks. Acculturation studies also suggest that some immigrants will show strong acculturation tendency toward the host society and culture (Kim, 1977a; Alman, 1993).

When it comes to an acculturation agency, television was the most preferred before the Internet was introduced (Alman, 1993), but recently the immigrants acculturating themselves to the host society have come to use the Internet more often (Melkote & Liu, 2000). Therefore, it seems that how the immigrants' acculturation attitude affects their dependency on the Internet is unpredictable. This present study finally suggests its last research question as follows:

RQ2: As associated with social support, will acculturation attitude increase or decrease the East-Asians' dependency on the Internet?

CHAPTER FOUR

METHOD

Data Collection

One online survey questionnaire (See Appendix for a complete version of questionnaire) was created in a professional online survey Web site. The data were collected via the listserv of four international student organizations (Chinese, Japanese, Koreans, and Taiwanese) and five departments (journalism, communication, engineering, chemistry, and physics department) at the University of Missouri-Columbia, MO.

The city of Columbia was chosen because it is a small university city where (1) ethnic information sources for East-Asians are scarce, and (2) most immigrants are international students, who may have the characteristics of short-term immigrants in the U.S.

Eligible respondents were strictly limited to students enrolled in the university. School staffs, faculty or visiting scholars were not included. The justification of the sample selection was made based on the fact that one of the major independent variables,

social support index (Cohen & Hoberman, 1983), had been developed particularly for college students. This current study clearly recognizes that the college student sample is a highly educated population compared to a general population. In addition, it is not a random sample, a factor that may limit the generalizability of findings. It is believed, however, that the unique characteristics of the short-term immigrants' information environments will be well detected throughout the international students' daily lives because of their short-term residency. Therefore, the East-Asian student sample and its counterpart, American students, were considered appropriate for tests of the theoretically based predictions.

Of the 824 East-Asians who were contacted—Chinese, 366; Japanese, 22; Korean, 334; and Taiwanese 102—a total of 158 participated in the survey. The response rate for the East-Asians, therefore, was 19.1 percent. Of the 737 American students contacted, 160 American students participated for a response rate of 21.7 percent. The total sample size finally was 318 for the overall response rate of 20.4 percent.

Measures

Both the East-Asian and American respondents were asked to complete an identical survey questionnaire measuring (a) individual dependency on the Internet, (b) social support, and (c) general demographic information. But East-Asian participants had to respond to additional questions dealing with (d) acculturation attitudes, which were not applicable to Americans.

Dependent Variable

  Internet Dependency. The dependent variable, Internet dependency, was operationalized by an index of three dependency typologies—social understanding, action orientation, and solitary play (Ball-Rokeach, 1984; Morton & Duck, 2000). Each of these three typologies was measured by two items; thus, the dependency index was finally measured by six items. They were all assessed through "degree of perceived helpfulness," which was based on one initially developed by Ball-Rokeach et al. (1984) and used in a number of prior studies of media dependency (Loges, 1994; Morton & Duck, 2000).

  On a 5-point scale (1=extremely unhelpful and 5=extremely helpful), respondents indicated how helpful the Internet was in their lives. For example, two items assessed "social understanding." They are: (1) "How helpful do you think the Internet is in understanding what is happening in the world?" and (2) "How helpful do you think the Internet is in understanding group conflicts in my community and nation?" Another two items assessed "action orientation." They are: (3) "How helpful do you think the Internet is in deciding what to buy and where to buy it?" and (4) "How helpful do you think the Internet is in deciding whom to vote for?" And, the last two items assessed "solitary play" by asking (5) "How helpful do you think the Internet is in relaxing when you are alone?" and (6) "How helpful do you think the Internet is in having something to do when nobody else is around?"

  The six items were tested for reliability (Cronbach's α = .71). To form a

composite index of individuals' Internet dependency, the mean of the responses to the items was taken, with higher scores indicating a stronger dependency on the Internet. Three sub-indexes were also created for the three dependency typologies.

Independent Variables

Demographic Information. Respondents indicated their nationality, current university degree status, gender, and length of stay in Columbia. This information described the sample and was used as independent variables. Respondents indicated their nationality according to five options: United States, China, Japan, Korea, and Taiwan. The nationality item was eventually recoded as "group" variable, which fell into two categories—Americans and Asians. The current university degree status meant the degree in which respondents were currently enrolled as in the university and had the seven following options: freshman, sophomore, junior, senior, master's, doctoral, and other. Respondents who were in "other" were not included in the analysis. Gender was coded as (1) male and (2) female. "Length of stay in Columbia" was a continuous measure of years of residence in the neighborhood.

Social Support. On a 5-point scale with 18 items adopted from the Interpersonal Support Evaluation List (ISEL) (Cohen & Hoberman, 1983), the perceived availability of social support was assessed. The revised ISEL consisted of three dimensions—tangible, belonging, and appraisal—each of which was measured by six items; thus, social support was finally measured by 18 items in total. The items stated certain situations in life, and

participants accordingly rated each statement from 1 to 5 (1=strongly disagree and 5=strongly agree). For example, in the tangible social support dimension, respondents were asked about their material support such as "I don't know anyone at school or in town who would get assignments for me from my teachers if I was sick," and "I know someone who would give me some old dishes if I moved into my own apartment," and so on. In the belongingness dimension, the individuals' companionships and involvement in community or neighborhood were measured with items such as "There are people at school or in town who I regularly run, exercise, or play sports with," and "I belong to a group at school or in town that meets regularly or does things together regularly," and so on. In the appraisal dimension, the informational support of respondents was measured with items such as "I know someone who I would feel perfectly comfortable with talking about any problems I might have adjusting to college life," and "There isn't anyone at school or in town who I would feel perfectly comfortable with talking about my feelings of loneliness and depression," and so on.

The 18 items were a mix of positive and negative statements. The nine negative items were recoded into the same way positive statements were scored. To form a composite index of social support, the mean of the responses to the items was taken, with higher scores indicating a stronger social support. The Cronbach's α was .87.

Acculturation Attitude. To measure East-Asians' acculturation attitude, three items were adopted from Kim's (1980) acculturation research. Kim (1980) noted that these three questions were considered to provide a reasonable basis from which the

immigrants' acculturation motivation could be estimated although they were shown to be relatively low-correlated due to the difficulty of testing the complex psychological state through simple self-report questions (p. 72). On a 5-point scale (1=strongly disagree and 5=strongly agree), participants were asked about (1) the level of interest and desire to learn the host norms and culture, (2) the level of interest and desire in making friends with Americans, and (3) the level of interest and desire in learning current events in the U.S. To form a composite index of acculturation attitude, the mean of the responses to the items was taken, with the higher mean indicating a stronger acculturation attitude. The Cronbach's α was .86.

Two independent-samples *t* tests were performed in order to assess whether the East-Asian students have less social support than the American counterparts and whether the East-Asians show stronger dependency on the Internet.

Then data were analyzed through three separate multiple hierarchical regressions to examine whether social support would be a predictor of the dependent variable (individuals' Internet dependency). Three demographic variables—gender, university status, length of stay in Columbia—were considered factors that may influence individuals' social support and, in turn, the individuals' Internet dependency. Thus, for the entire sample, Internet dependency was regressed on the demographic variables, group and social support. To construct hierarchical regression equations, demographic information was controlled in the first block and group and social support entered in the second. Second, to compare the difference between two groups, Internet dependency was

regressed on gender, university status, length of stay in Columbia and social support. Since the sample was split into two, the group variable was removed from the regression. The demographic variables were entered first and social support entered second.

One independent-samples *t* test was performed to examine which dependency typology the East-Asians will show more explicitly among the three typologies and whether there was a difference in the pattern of dependency typologies between groups.

Finally, for the East-Asian-only sample, to assess the interaction of acculturation attitude and social support in predicting individuals' Internet dependency, acculturation attitude was additionally entered in the second block with social support following demographic information in the first block. The interaction term of social support and acculturation attitude was entered in the third.

Regression Assumption Check

Overall, there were few missing values. Data were checked for regression assumptions. Three outliers outside standard residual ±3 were detected: two East-Asians and one American. Excluding the outliers substantially improved centered leverage level and Cook's distance. Also, the probability plot indicated that the residuals were closer to the 45 degree line, which is perfectly normal (Little & Rubin, 2005). The Durbin-Watson coefficient fell between 1.5 and 2.5 indicating independence of observations. N varied depending on each research question and hypotheses because the number of valid data in each variable differed.

CHAPTER FIVE

RESULTS

Participants

After the regression assumption check, the total participants for analyses were 315 with 159 Americans and 156 East-Asians (71 Chinese, 2 Japanese, 62 Koreans, and 21 Taiwanese). For the entire sample, female participants accounted for 55.6 percent with 175, and male was 42.9 percent with 135. Five East-Asians were missing in this question. The ratio of male and female participants in the East-Asian sample was almost equal while the American participants were overwhelmed by the 100 female participants. Master and doctoral students were 210 persons altogether accounting for 66.9 percent of the total participants. The American sample had master students as its majority with about 31 percent while the East-Asian sample had doctoral students as its majority with about 49 percent. Length of stay in Columbia was proportionately distributed regardless of the groups. Average length of stay in Columbia for the Americans was 3.03 years. For the East-Asians, it was 2.78 years.

Table 1

Summary of the Participants according to Nation

	Persons (*N* = 315)	Percent
US	159	50.5
China	71	22.5
Japan	2	0.6
Korea	62	19.7
Taiwan	21	6.7

Table 2
Summary of the Participants according to Gender

	Asia (*N* = 156)		US (*N* = 159)	
	Persons	Percent	Persons	Percent
Male	76	48.7	59	37.1
Female	75	48.1	100	62.9
Missing	5	3.2	0	0.0

Table 3
Summary of the Participants according to University Degree Status

	Asia (*N* = 156)		US (*N* = 159)	
	Persons	Percent	Persons	Percent
Freshman	4	2.6	15	9.4
Sophomore	3	1.9	17	10.7
Junior	3	1.9	17	10.7
Senior	15	9.6	31	19.5
Masters	52	33.3	50	31.4
Doctoral	75	48.1	29	18.2
Missing	4	2.6	0	0.0

Table 4
Summary of the Participants according to Length of Stay in Columbia

| Years | Asia (*N* = 156) | | US (*N* = 159) | |
	Persons	Percent	Persons	Percent
1	41	26.3	40	25.1
2	41	26.3	39	24.5
3	28	17.9	20	12.6
4	18	11.5	23	14.5
5	14	9.0	10	6.3
6	14	9.0	27	17.0

TESTS OF HYPOTHESES

Social Support and Internet Dependency between Groups

H1 predicts that the East-Asians will have less social support than the Americans, and H2 predicts that the East-Asians will show stronger dependency on the Internet. Two separate independent-samples *t* tests were conducted to compare the mean scores of social support and of Internet dependency between the groups.

Table 5

Means and Standard Deviations on Social Support and Internet Dependency for the Americans and the East-Asians

	Social Support***		Internet Dependency*	
	Asia ($N = 156$)	US ($N = 159$)	Asia ($N = 156$)	US ($N = 159$)
Mean	3.25	3.75	4.71	4.32
SD	.52	.81	.51	.50

Note. Significance of Mean Difference (* $p < .05$, *** $p < .001$)

As Table 5 shows, H1 was strongly supported. The results showed a significant difference between the means of the two groups ($t(313) = -5.62$, $p < .001$) in terms of social support. The mean of social support of the East-Asians was significantly lower (M = 3.25, SD = .52) than the mean of the Americans (M = 3.75, SD = .81).

H2 also received strong support with a significant difference between the means of the two groups ($t(313) = 1.61$, $p < .05$) regarding Internet dependency. The mean of Internet dependency of the East-Asians was significantly higher (M = 4.71, SD = .51)

than the mean of the Americans (M = 4.32, SD = .50). Thus, it was found that the East-Asians showed stronger dependency on the Internet than the Americans. As H1 and H2 were supported, it was learned that the East-Asians have less social support and are more dependent on the Internet.

Social Support as a predictor of Internet Dependency

H3 fundamentally asks if social support is correlated with individuals' Internet dependency. It predicts that the more social support, the more likely people are to be dependent on the Internet regardless of nationality.

Table 6

Summary of Multiple Hierarchical Regression Analysis Predicting Internet Dependency on the Demographics and Social Support (Entire Sample)

Step	Predictors	Internet Dependency ($N = 310$)		
		R^2	R^2ch	β
1	Gender	.012	.012	.032
	Status			.007
	Columbia			-.104
2	Group	.023	.011	-.117
	Social Support			.054

* $p < .05$, two-tailed.

As Table 6 shows, the regression model at step 1 was not significant ($F(3, 306) =$ 1.26, $p > .05$) with an R^2 of .012. Test of regression coefficients showed that significant main effect was not found for the demographic variables. At step 2, the inclusion of social

support and group variable as predictors of the Internet dependency did not improve the

significance of the regression model ($F(5, 304) = 1.45$, $p > .05$) with an R^2 of .023. It was

found that neither of the variables was a significant predictor of Internet dependency.

The findings indicated that there was no correlation between social support and

Internet dependency. Therefore, H3 was not supported. A further investigation, however,

examined the possible difference between two groups regarding a correlation between

social support and Internet dependency.

Between-groups

After the two groups were split, the same multiple hierarchical regressions were

performed for each group on the same variables excluding the group variable. As Table 7

shows, a significant regression equation was not found for either sample.

Table 7

Summary of Multiple Hierarchical Regression Analysis Predicting Internet Dependency on the Demographics and Social Support (Americans vs. East-Asians)

Step	Predictors	Internet Dependency (Asia) (N = 150)			Internet Dependency (US) (N = 158)		
		R^2	R^2ch	β	R^2	R^2ch	β
1	Gender	.014	.014	.002	.021	.021	.089
	Status			.022			-.073
	Columbia			-.121			-.053
2	Social Support	.015	.001	.024	.027	.006	.078

* $p < .05$, two-tailed

At step 1, for the East-Asians, the demographic variables were not significant predictors ($F(3, 147) = .71, p > .05$) with an R^2 of .014. A significant regression equation was not found at step 2 ($R^2\text{ch} = .001, F\text{ch}(1, 146) = .081, p > .05$), either. None of the variables showed a significant main effect in the tests of the regression coefficients.

For the Americans, the demographic variables could not be used to predict individuals' Internet dependency ($F(3, 155) = 1.08, p > .05$) with an R^2 of .021. The inclusion of social support also failed to increase the significance of the equation ($R^2\text{ch} = .006, F\text{ch}(1, 154) = .95, p > .05$) accounted for in the variance with an R^2 of .027.

In summary, social support can not be used to predict an individual's Internet dependency for both groups. Therefore, it was learned that social support is not correlated with Internet dependency across the samples.

Typologies of Dependency

RQ1a asks which of the three dependency typologies—social understanding, action orientation, and solitary play—will be more prominent in the East-Asians' dependency on the Internet. RQ1b examines the between-group difference concerning the prominence of dependency typologies. An independent-samples *t* test was conducted.

As the Table 8 shows, the East-Asians scored highest in social understanding typology with 4.42, followed by solitary play with 4.40 and action orientation with 3.94. The Americans also showed the same order as the East-Asians did. Between two groups, a significant mean difference was found in two typologies—social understanding (*t* (313)

= 3.29, $p < .001$) and solitary play ($t(313) = 2.99$, $p < .01$), but not in action orientation

($t(313) = .23$, $p > .05$).

Table 8

Means and Standard Deviations on the Dependency Typologies of the East-Asians and the Americans

	Asia ($N = 156$)		US ($N = 159$)	
	Mean	SD	Mean	SD
Understanding	4.42***	.51	4.20***	.67
Orientation	3.94	.64	3.92	.73
Play	4.40**	.62	4.16**	.77

Note. Significance of Mean Difference (* $p < .05$, ** $p < .01$, *** $p < .001$)

As Figure 1 shows, the mean of the understanding typology of the East-Asians was significantly higher (M = 4.42, SD = .51) than the mean of the Americans (M = 4.20, SD = .67). Also, the mean of the solitary play typology of the East-Asians was significantly higher (M = 4.40, SD = .62) than the mean of the Americans (M = 4.16, SD = .77). But the mean of the action orientation typology of the East-Asians (M = 3.94, SD = .64) was not significantly different from the mean of the Americans (M = 3.92, SD = .73). The findings, therefore, indicated that, compared to the Americans, the East-Asians use the Internet more for social understanding and solitary play.

Figure 1. Dependency Typologies of the Americans and the East-Asians
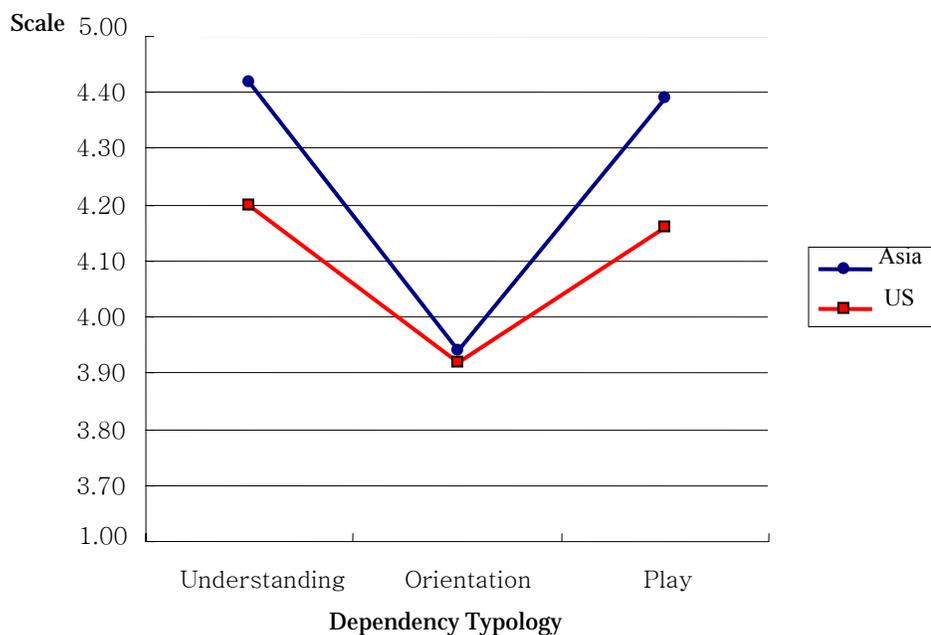
Acculturation, Social Support, and Immigrants' Dependency

On the assumption that the East-Asians with strong acculturation attitudes will

have more social support and, therefore, will be less dependent on the Internet, the

interaction of acculturation attitude and social support was examined. A multiple

hierarchical regression was conducted only for the East-Asians with the demographic

variables entered first, acculturation and social support entered second, and the

interaction term of acculturation attitude and social support entered last.

The first model was not statistically significant ($F(3, 147) = .71$, $p > .05$) with R^2

of .014. The demographic variables did not predict Internet dependency as it was not in

the previous regressions across the samples. But the inclusion of social support and acculturation attitude as predictors resulted in a significant increment of R^2 ($R^2 = .077$, R^2ch $= .063$, Fch$(2, 145) = 4.94$, $p < .05$).

Table 9

Summary of Multiple Hierarchical Regression Analysis Predicting Internet Dependency on an Interaction of Social Support and Acculturation Attitude (East-Asians)

Step	Predictors	Internet Dependency ($N = 150$)		
		R^2	R^2ch	β
1	Gender	.014		.002
	Status			.022
	Columbia			-.121
2	Social Support	.077	.063	.004
	Acculturation			.26**
3	Social Support × Acculturation	.077	.00	-.119

$* p < .05$, two-tailed, $** p < .01$, two-tailed, $*** p < .001$, two tailed

Tests of the regression coefficients revealed a significant main effect for acculturation attitude (β $= .26$, $t(145) = 3.13$, $p < .01$), but not for social support (β $= .004$, $t(153) = .044$, $p > .05$). At the final step, the inclusion of social support × acculturation attitude interaction failed to increase R^2 (R^2ch $= 0$, Fch$(1, 144) = .055$, $p > .05$).

An interaction of acculturation attitude and social support was not found in predicting Internet dependency. While social support was not statistically significant, interestingly acculturation attitude was a significant predictor of Internet dependency.

As Figure 2 shows, a positive correlation was found between acculturation

attitude and Internet dependency. In other words, the stronger acculturation attitude individuals have, the stronger dependency they show on the Internet.

Figure 2. Standardized Coefficients of Social Support and Acculturation Attitude (East-Asians)
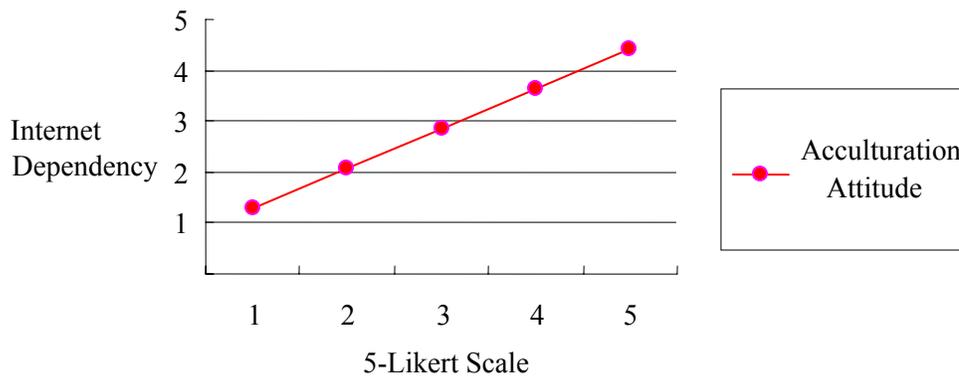
CHAPTER SIX

DISCUSSION

This present research aimed to examine the immigrants' dependency on the Internet and its pattern in a relation to information environment and perceived availability of social support. Earlier Matei and Ball-Rokeach (2003) described the Internet as a medium disengaging Asian immigrants from the host community and referred to a "magnifying glass effect" in order to explain the immigrants' use of the Internet—strengthening the level of social anchoring to geographic communities for those already prepared for a rich social life and weakening the anchoring among people with frail social ties (Matei, 2001). They used a belonging index to examine the immigrants' connectedness to the host local community. This current research, however, considered the belonging index a biased term enunciating that immigrants must belong to the host community. Also, such a limited measurement cannot sufficiently reflect immigrants' interpersonal networks and information environment. Thus, to provide a proper theoretical explanation of how Internet-dependent immigrants become, the social support

concept was introduced as an extension of the IMD.

The findings showed that the East-Asians and the Americans exhibit a significant difference in the level of social support and Internet dependency. The East-Asians have less social support and show stronger dependency on the Internet than the Americans. Social support, however, was not correlated with Internet dependency across the samples. These findings look contradictory. But we should note that the first finding was about the mean difference of each variable between the two groups while the second resulted from the regression analyses, which aims to reveal a relationship between variables. In other words, although it is certain that the East-Asians have less social support and stronger dependency on the Internet, the lack of social support does not necessarily lead the East-Asians to a stronger dependency on the Internet. Other factors are at work here.

Nevertheless, it is noted that, in an informal focus group interview before this present research was conducted, most international students said that they sometimes felt lonely and were using the Internet more often than ever. Therefore, it is possible that some methodological problems may have prevented this present research from revealing a correlation between social support and Internet dependency. Also, this discussion leads us to the long-time criticism on the dependency theory.

The measurements such as "perceived helpfulness of a medium" and "ISEL (Interpersonal Support Evaluation List)" might have been problematic. "Perceived helpfulness of a medium" was designed to assess people's perception on a medium rather than their real usage a medium. Therefore, there is a possibility that the survey

participants' perception on their Internet use may have not reflected their real usage patterns of a medium in their life accurately. For example, the participants may have thought they were evaluating overall helpfulness of the Internet in their daily life, not speculating on their real usage of the Internet. In this sense, the measurement was particularly problematic because this present research sample, university students, whom the previous studies showed are high Internet users, might have perceived the Internet "very helpful" in most cases. In other words, the participants might have evaluated the "absolute" helpfulness of the Internet, not the "relative" helpfulness of it in comparison with other media. That is, the measurement fails to allow the participants to report their Internet preference and usages relative to other mass media. The reason the measurement, "perceived helpfulness of a medium," has not been a problem in other dependency studies may be because the studies conceived a very specific event or issue as their research setting. But, if a dependency study is conducted in a daily situation, the measurement is not effective as shown in this present research. The measurement, therefore, would be better if it assessed how long per day people are connected to the Internet, which medium they would use first if they urgently need information on some things, and so on.

In the meantime, it is also possible that social support, the main independent variable, was a problem. ISEL(Interpersonal Support Evaluation List) may have been too broad to draw a relationship between Internet dependency and social support when it is considered that Matei and Ball-Rokeach's (2003) belonging index—a sub-dimension of

social support—had been found as a significant predictor of Internet dependency. ISEL is a measurement index designed to assess individuals' psychological stress reduction behaviors (Cohen & Hoberman, 1983). This measurement potentially may have difficulty differentiating those who have very limited interpersonal networks but a few very solid relationships from those who have ample social networks but do not have a confidant relationship. For example, a married international student tends to have fewer friends or colleagues but they may not feel stress from the limited interpersonal relationship because they have a confidant relationship from their marital life. On the other hand, some active international students may feel a high level of loneliness or stress in spite of their energetic social activities with a variety of people if they have few confidant relationships. In this sense, ISEL might have not been sophisticated enough to differentiate these kinds of individuals.

Beyond the methodological problems, why a correlation between social support and Internet dependency was not found may be seen from the shortcomings of the dependency theory. Individual media dependency theory has received a theoretical criticism: "Do MSD and IMD theories work for dependencies on mass media in a daily situation?" Many scholars have claimed that researchers should not take a dependency relationship in the media environment for granted (Merskin, 1992) because a dependency relationship may not exist in a daily normal situation. A daily situation does not predispose a dependency relationship between individuals and media whereas a highly conflicted situation does. As noted, this current research did not conceive a specific

turmoil or event causing a high ambiguity in society unlike most of the previous

dependency research in the past. Thus, in everyday normal situations, the respondents

may have thought of self-imagined problems or situations when filling out the survey

questions regarding Internet dependency.

In addition, Ball-Rokeach (1985) claimed that people tend to develop a

dependency on a certain medium when a problem is salient or ambiguous to them. It also

could be interpreted that when there is no salient issue clearly perceived by people, they

would maintain their media use habits, not developing dependency on a certain medium.

Ball-Rokeach (1985)'s dependency theory mainly focused on the individuals'

instrumental use of media. Rubin and Windahl (1986) recognized this theoretical

limitation and claimed that dependency may result when individuals "ritualistically" use

communication channels as well as when instrumentally seeking information to satisfy

their needs. That is, people may use a certain medium habitually, and therefore their habit

unconsciously directs their media use and in turn their media use becomes their ritual.

Bentley (2000) found that individuals' reading habits not only correlate with how

important they think reading newspapers is, but remain a significant predictor of their

choice of a certain newspaper. This suggests that we should critically think that a

dependency relationship with media is governed by our media use habit to some extent.

Therefore, this theoretical problem suggests that, if an individual's dependency on media

is contingent on situations, dependency studies should include media preference or habit

as an independent variable predicting dependency on a certain medium.

When it comes to individuals' usage type of the Internet, the East-Asians used the Internet more intensively than the Americans for the purpose of comprehending and interpreting the world around them. In addition, they spent more time using the Internet to relieve loneliness and solitude. The East-Asians may not have sufficient direct information sources such as colleagues or friends because of their limited interpersonal networks; thus, they could not help but use the Internet for those purposes that satisfy what they lack. In the meantime, both the East-Asians and the Americans scored least in the action orientation typology among three typologies. It may be because this present research did not conceive a specific issue or disruption as a research setting where people are expected to take a specific action such as problem solving.

The findings suggest that understanding and orientation, previously known as the most prominent dependency typologies throughout past studies, are not always so. The dependency typologies people develop may differ depending on a situation.

As for the interaction of acculturation attitude and social support, the interaction was not found to have any effects here, but acculturation attitude alone was found to be useful to predict the East-Asians' Internet dependency. The findings suggest, therefore, that the immigrants' Internet use is not restricted to seeking their ethnicity. Rather, the Internet seems to facilitate their efforts of acculturating themselves into the host society. In other words, the immigrants actively use the Internet adjusting to the new society in order to obtain information they could not receive from their fragmented interpersonal networks—weak social support—in the new environment. Therefore, although Matei and

Ball-Rokeach (2003) claimed that the Internet disengages immigrants from the host society, the Internet rather seems to bridge a gap between the immigrants and the host society.

Limitations

This current research failed to find a relationship between social support and Internet dependency. In addition to the sample bias, both methodological and theoretical problems were diagnosed here in this chapter.

In order to clearly show a dependency relationship in a daily situation, the dependency measurement this current research employed should have been revised by focusing more on individuals' actual usages of a certain medium and their media preference in comparison with other mass media. In addition, the social support index should have been pilot-tested and revised before the research was initiated. Thus, future research could be conducted for refining these two variables in a relation to Internet dependency. Also, variables such as English proficiency or confidence in English, sociability, personality, etc., should be considered factors influencing Internet dependency in future studies.

This present research actually aimed to demonstrate why immigrants or international students tend to increase their Internet use in the U.S. For this end, a longitudinal method could have been more effective in tracking the change of media use of international students. Because of time constraint and difficulty in selecting samples, a

cross-sectional method was chosen instead. Therefore, it is suggested that future studies should focus on the causal relationship between the immigrants' social support and their Internet dependency by demonstrating how they change their media use pattern as their social environs change.

This present study failed to show that social support is an appropriate concept to reveal the international students' Internet dependency. The results, however, found that the solitary play dependency typology, which was often ignored by the past dependency studies, is prominent in the immigrants' Internet use. In addition, by showing that the international students use the Internet to acculturate themselves to the host society, it suggests that the Internet is not a medium disengaging the immigrants from the host local community in the U.S. More importantly, this present research provided constructive criticism and discussion on individual media dependency theory itself and its possible measurement problems.

Appendix 1: Recruiting Email

Folks,

Here's a formula: Your 10 minutes = My graduation

Indeed, I KNOW you're tired of exams and it's not such a good timing to ask you to do a favor for me.

You may think you will memorize tons of stuffs by deciding not to blow your 10 minutes for an unknown researcher's survey. I have NO DOUBT you can make it!

But, I also know you're generous and of beautiful mind. Please, refresh your tired brain by taking a study break and filling out a fun survey—it's real fun, I promise—for 10 minutes.

Thank you!!

Click here: http://FreeOnlineSurveys.com/rendersurvey.asp?sid=9lfe69i7tf3i6tl149380

Appendix 2: Consent Form

Thank you for having an interest in this study.

By clicking and going to the next page, you will consent to participate in this survey.

Your participation is absolutely voluntary and will be kept to be anonymous. All the information you provide here are also confidential. This survey does not have anything to do with your student organization or department. Therefore, your consent or refusal to participate in this survey will not affect your standing or grades at your student organization or department.

You may decline to answer any question or withdraw at any time if you don't feel comfortable with it. Participants must be at least 18 years old or older.

If there is any question, please feel free to contact the researcher, Ho-Jin Yoon, at 573-771-4321 or email to hjyc33@mizzou.edu or contact MU campus IRB at 483 McReynolds Hall, 573-882-9585, or email to umcresearchirb@missouri.edu.

Appendix 3: Survey Questionnaire

Part 1. You'll be asked about how helpful you think the Internet is in your life. Place an "X" in the space which most closely corresponds to the following questions.

1. How helpful do you think the Internet is in understanding what is happening in the world?

Extremely Unhelpful _____ : _____ : _____ : _____ : _____ Extremely Helpful
                                1   2   3   4   5

2. How helpful do you think the Internet is in understanding group conflicts in your community and nation?

Extremely Unhelpful _____ : _____ : _____ : _____ : _____ Extremely Helpful
                                1   2   3   4   5

3. How helpful do you think the Internet is in deciding what to buy and where to buy something?

Extremely Unhelpful _____ : _____ : _____ : _____ : _____ Extremely Helpful
                                1   2   3   4   5

4. How helpful do you think the Internet is in deciding whom to vote for?

Extremely Unhelpful _____ : _____ : _____ : _____ : _____ Extremely Helpful
                                1   2   3   4   5

5. How helpful do you think the Internet is in relaxing when you are by yourself?

Extremely Unhelpful _____ : _____ : _____ : _____ : _____ Extremely Helpful
                                1   2   3   4   5

6. How helpful do you think the Internet is in having something to do when nobody else is around?

Extremely Unhelpful _____ : _____ : _____ : _____ : _____ Extremely Helpful
                                1   2   3   4   5

Part 2. You'll be asked about your personal life. Place an "X" in the space which most closely corresponds to the following questions.

7. I know someone who would give me some old dishes if I moved into my own apartment.

Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                1   2   3   4   5

8. If I wanted a date for a party next weekend, I know someone at school or in town who would fix me up.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                1   2   3   4   5

9. I know someone at school or in town who would bring my meals to my room or apartment if I were sick.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                1   2   3   4   5

10. I don't know anyone who would give me some old furniture if I moved into my own apartment.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                1   2   3   4   5

11. I don't know anyone at school or in town who would loan me their car for a couple of hours.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                1   2   3   4   5

12. I don't know anyone at school or in town who would get assignments for me from my teachers if I were sick.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                1   2   3   4   5

13. There are people at school or in town who I regularly run with, exercise with, or play sports with.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                1   2   3   4   5

14. I can get a date who I enjoy spending time with whenever I want.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                1   2   3   4   5

15. If I decided at dinner time to take a study break this evening and go to a movie, I could easily find someone to go with me.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                1   2   3   4   5

16. I belong to a group at school or in town that meets regularly or does things together regularly.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
1   2   3   4   5

17. Lately, I often feel lonely, like I don't have anyone to reach out to.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
1   2   3   4   5

18. I don't often get invited to do things with other people.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
1   2   3   4   5

19. I know someone who I would feel perfectly comfortable with talking about any problems I might have adjusting to college life.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
1   2   3   4   5

20. I know someone who I would feel perfectly comfortable with talking about any problems I might have meeting people.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
1   2   3   4   5

21. There isn't anyone at school or in town who I would feel perfectly comfortable with talking about difficulties with my social life.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
1   2   3   4   5

22. There isn't anyone at school or in town with whom I would feel perfectly comfortable talking about my feelings of loneliness and depression.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
1   2   3   4   5

23. I don't know anyone at school or in won who makes my problems clearer and easier to understand.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
1   2   3   4   5

24. Lately, when I've been troubled, I keep things to myself.
Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
1   2   3   4   5

Part 3. Nationality

25. What is your nationality?
    ☐ American   (skip to Q30)
    ☐ Chinese   (continue to Q26)
    ☐ Japanese   (continue to Q26)
    ☐ Taiwanese   (continue to Q26)
    ☐ Korean   (continue to Q26)
    ☐ Other (_____) (continue to Q26)

Part 4. As an international student, you'll be asked about your attitude toward American society. Place an "X" in the space which most closely corresponds to the following questions.

26. I have a strong interest and desire in learning the American societal norms and cultures.
    Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                                 1   2   3   4   5

27. I have a strong interest and desire in making friends with Americans.
    Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                                   1   2   3   4   5

28. I have a strong interest and desire in learning current events in the U.S.
    Strongly Disagree _____: _____: _____: _____: _____ Strongly Agree
                                   1   2   3   4   5

Part 5. Demographics

29. How long have you been staying in Columbia?   (_____ year(s))

30. What is your gender?
    ☐ Male   ☐ Female

31. What is your current university status?
    ☐ Freshman   ☐ Sophomore   ☐ Junior   ☐ Senior
    ☐ Master's   ☐ Doctorate   ☐ Others

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