MAKE MORE ROOM FOR TELEVISION:

THE ADOPTION AND USE OF LARGE-SCREEN TELEVISIONS IN THE HOME

by

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(Under the Direction of Dean M. Krugman)

ABSTRACT

The purpose of the study is to examine the impact of large-screen televisions on home viewership and consumption. The research questions covered areas regarding basic conceptualization of the large-screens, characteristics of innovation, media consumption and attention, and family and social contexts within the framework of household centrality of television. The study employed a multi-method approach using focus group interviews and a national online survey. Five focus groups with thirty-six respondents were held as part of the first phase of the project. The second phase of the study used a national online survey yielding N=1328 respondents. The key findings of the study were that large-screen televisions produced a significant change in the home television viewing experience that was matched by greater viewer attention and absorption with the viewing content. Large-screen televisions have both technical and social uses. Large-screen television households represent the premium portion of the home television viewing market and, as such, provide a bellwether for the future U.S. television landscape.

INDEX WORDS: Screens, Television, Media consumption, Household centrality of television, Continuous/discontinuous innovations, Media technology, Use-Diffusion Model of Television

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DEDICATION

To Dr. Dean Krugman for being a first-rate scholar, an outstanding mentor, and a genuine and generous person.

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CHAPTER 1

INTRODUCTION

This study uses focus groups and a survey to investigate the viewing and usage of large-screen televisions in homes. Large-screen televisions have proven to be a viable and high-quality television innovation that continues to gain prominence in the television marketplace. Larger screens coupled with digital reception and wide screens (similar to cinema format) represent a significant change from the past in how television fare is delivered to viewers. This research explores consumer perceptions and conceptualizations of this changing television environment and how it relates to viewing and the role of television within homes.

Changes in the Television Landscape

Prior to the more recent introduction of the Internet, television was clearly the most successful media innovation to arrive and diffuse quickly throughout modern society (Sterling & Kittross, 2002). Although more expensive than the radio, television brought visuals to the radio audience and quickly achieved near-saturation in less than half the time, becoming a dominant medium by the late 1950s (Sterling & Kittross, 2002). With the impact of digital technology as well as screen technology to produce more impressive panels of mega-pixels, the television landscape is undergoing historic and rapid change. Traditional cathode-ray tube television (CRT) has been the television technology used since television's introduction. However, CRT television as a format is declining ("Cathode-ray-tube TV format dying slow, quiet death," 2006).

CRT television has had three very distinct characteristics: 1) It operated using an analog signal of radio frequency waves for transmission 2) Its traditional box shape had a 4 x 3 aspect ratio 3) Its overall size by technical limit was less than 37".

The current television landscape has produced major innovations on all three of these traditional CRT television characteristics:

1) February 17, 2009 was the official date for all U.S. analog television broadcasts to convert to digital transmissions. By government fiat, all remaining analog television owners had to purchase a digital converter box in order to receive over-the-air television broadcasts ("Countdown to last day of analog broadcasts," 2007). Digital transmissions range from High-definition TV (HDTV) to enhanced definition (ED) to standard definition (SD) (*DTV Shopping Guide*, 2007).

2) The 16 x 9 aspect ratio—used on movie screens and in DVDs—has been implemented into both television architecture and programming replacing the 4 x 3 "box" shaped screen. Newer televisions in 2008, particularly the very large screens, were sold only in the wide-screen format. At the time of inspection, only three small CRT televisions (from over 120 televisions on display) were available for purchase at the most prominent U.S. electronics retailer. More premium television content was increasingly available in wide-screen format and became the trend in future television programming (Silva, 2007).

3) Projection model televisions (both front and rear projection) as well as fixed pixel display televisions (plasma and liquid crystal display-LCD) allowed production of televisions larger than 40 diagonal inches (Ostendorp, Foster, & Calwell, 2005). The fixed pixel flat panel displays (plasma and LCD) provided new technology with very thin, flat screens. The televisions could then be mounted on walls and thus save interior space ("Plasma TV, LCD TV,

and DLP TVs from DTV City," 2007). By 2010, the LCD format was projected to control the worldwide market with almost 41 million units sold compared to 15 million plasma units. (Abowd, 2007). Across all television sizes in 2007, LCD unit sales in the Americas were 83% of total television unit volume and 71% of the revenue volume versus plasma television. Revenue share for plasma televisions which operate in the large-screen segment were projected to decline further to about 15% to 20% of the television market (Abowd, 2008).

The combination of digital programming, wider screens, and larger television displays suggested a historic and pivotal entrance into the new era of the 21st Century television industry. Studying the impact of large-screens as a new, distinct television innovation is a timely and relevant contribution to the media consumption literature as well as the broader study of television.

Large-screen Television Market

Sales of large-screen televisions increased dramatically since 2004 (Abowd, 2007; Kanellos, 2006). This was due to many factors that included technological improvements, regulatory mandates, and increasing economies of scale providing more affordable products. Previous cathode ray tube (CRT) technologies limited total screen size to under 37", and the CRT format was declining rapidly in sales ("Cathode-ray-tube TV format dying slow, quiet death," 2006). New rear-projection and flat panel technologies (liquid crystal display, e.g. LCD, and plasma) allowed for widescreen sizes (16:9 aspect ratio much like a theater) of much larger dimensions between 40" and up to 103" ("Plasma TV, LCD TV, and DLP TVs from DTV City," 2007). The plasma panels historically were most prevalent in the larger dimensions of 50" and 60". Yet, the LCD technology greatly improved to also produce larger screens reaching up to 65" and were projected to control the television market and compete aggressively against plasma

in the largest sizes (Abowd, 2007, 2008; Plasma TV, LCD TV, and DLP TVs from DTV City," 2007).

In addition, the U.S. Federal Communication Commission mandated the last day of U.S. analog television broadcasts as February 17, 2009 ("Countdown to last day of analog broadcasts," 2007). As large numbers of consumers purchased newer and larger televisions, the overall price of the sets declined, creating a virtuous cycle of large-screen adoption and market diffusion.

With the impetus of technological, regulatory and market forces; world-wide total sales of large-screen televisions grew 108% between the years of 2005 to 2007. The 2007 worldwide total sales were close to 33 million units (Abowd, 2007). There is no indication that the tremendous growth of large-screen television adoption will decline. Projected worldwide unit sales for large-screens in 2010 will be close to 61 million units (Abowd, 2007). Of the two leading flat panel fixed pixel displays (LCD and plasma) in the large-screen television market, LCD sales were set to significantly outpace plasma display sales by 25 million units by the year 2010 (e.g. 41 million LCD units vs. 16 million plasma units) (Abowd, 2007). Televisions with screen sizes of 40-inches or greater accounted for 23% of U.S. television stocks in 2004 (Ostendorp et al., 2005). That percentage of large-screens increased as older analog televisions got replaced in conjunction with the FCC's February 17, 2009 deadline for ending analog television transmissions.

The rapid adoption rate of large-screen televisions indicates a prolonged and important change in television's home infrastructure through the coming decades. A conservative estimate of large-screen television product lifespan is 15-20 years ("LCD TVs versus Plasma TVs," 2007). Therefore, even though innovations of technology will continue to alter the media

landscape, the current forms of large-screen units will persist for the foreseeable immediate future.

Average costs for a large-screen television ranged from $1000 to $8000 depending on the format and size, although costs decline as greater numbers of people adopt the technology. The costs represent, therefore, an enhanced financial commitment from previous television buying ("LCD TVs versus Plasma TVs," 2007) in addition to the enhanced costs of cable and satellite content packages with multiple channels and premium digital formats. Hence, the variable of larger screens with greater pixel-enhanced visuals has gained an increasing presence in home entertainment which represents a potential growth of television's role in home life.

Television Definitions

Before one can understand the definition of a large-screen television, it is helpful to understand the basic definitions of the changing television environment. Figure 1 contains the most important definitions given from the Federal Communication Commission (*DTV Shopping Guide*, 2007). Televisions have two formats for shape: the traditional tube television with a 4x3 aspect ratio versus the wider screen (like a theater screen) with a 16x9 aspect ratio. Digital television includes standard definition (SDTV), enhanced definition (EDTV), and high-definition (HDTV). Televisions must have high-definition capability built into the infrastructure in order to carry high-definition or enhanced definition content. In addition, televisions have differing numbers of pixilated lines which is often referred to as "resolution." Most tube televisions have 480 lines. Newer flat panel and rear-projection models have 720 lines or 1080 lines providing ever sharper images. Televisions use either an interlace scan for projecting lines (e.g. 720i and

1080i) onto the screen or a progressive scan (e.g. 480p, 720p, 1080p). The progressive scan is the most advanced technology placing all lines onto the screen simultaneously.

Buyers of large-screen televisions in the era of digital programming and reception must also consider the brightness and contrast functions of the sets. Brightness or "luminance" of the screen can vary according to television formats. Brightness is expressed in terms of candelas per square meter (e.g. 1000 cd/m2) referring to the amount of light 1000 wax candles would produce. Contrast refers to how well a screen can produce blacks and whites. Contrast is expressed as a ratio that indicates the number of steps available between the displaying full black and full white (e.g. 1200:1). Larger contrast ratios are desirable (Ramsay, 2006). Digital capacity, brightness, contrast, and resolution need to be known before purchase in order to correctly accommodate all devices and functionalities in the television cluster ("Screen size: Determine how big a picture you want," 2007).

It is also necessary to review the basic question of what constitutes a television. Figure 2 outlines the five technologies that are used for mediating television and/or movie-related content from a consumer perspective. The cathode-ray tube (CRT) television was the mature technology that had traditionally been the standard television that received over-the-air analog signals (Sterling & Kittross, 2002). At the time of the study, CRT televisions were not widely available any longer for purchase. Rear projection television technology offered an inexpensive price for large-screen models even though it was not as thin as flat panels. The popularity for rear-projection sets were in decline due to costly repairs inherent in the technology ("Customer Representative," 2008). Liquid crystal display (LCD) and plasma televisions are flat panel technologies used to produce larger televisions. Historically, the plasma television has been the principal technology for large screens. LCD screens have been associated with the smaller

television sizes in the past but continue to expand in size reaching up to 60-inches. At the time of the study, plasma televisions were no longer dominant in the 40-49” screen sizes and were very quickly losing the stronghold on the 50-59” television sizes. The plasma television decline was due to improved quality in the 52” and 57” LCD glass that had 1080p resolution, compared to the comparably priced 50” plasma glass that was still mostly 720p resolution (Abowd, 2008).

There is no set definition of what constitutes a large-screen television. Figure 3 outlines definitions by various organizations, ranging from 25” and above by Pacific Media Associates ("Homepage welcome," 2007) to a category of 40” and above by Best Buy, Inc. and Consumer Reports ("Screen size: Determine how big a picture you want," 2007; Shop Televisions: Screen Size," 2007). By technical limitation, CRT televisions are limited to under 37” in diagonal length (Ostendorp et al., 2005; Screen size: Determine how big a picture you want," 2007). At the time of inspection, televisions from 37” and above were sold exclusively in digital (HDTV, EDTV, SD) and widescreen format ("Plasma TV, LCD TV, and DLP TVs from DTV City," 2007; Shop Televisions: Screen Size," 2007; Television," 2007). *Consumer Reports* classifies screen size into small screens (less then 27”), medium screens (between 27” and 37”), and large screens (40” and larger) ("Screen size: Determine how big a picture you want," 2007). For the purposes of the current study, large-screen televisions will follow the *Consumer Reports* category defined as units that are 40” or greater in diagonal length. By default, large-screen televisions include both widescreen and digital formats.

The current study of large-screen televisions will not include front projection units used in homes. Front projection units can be used in home theaters and have been considered a premium product at costs that were unreachable by most consumers. Front projectors can create very large viewing areas that surpass sizes currently available in plasma or LCD televisions. The

front projector market is divided into four use categories: home theater, portable, education, conference room ("Projector Central," 2008). The technology is best used where large groups of people are assembled which is often in a business, commercial, or civic function. In the home, these units are mostly used for viewing movies in an attempt to directly imitate the theater experience. The home setup for front projectors requires professional installation. Average costs for purchase and installation are between $10,000 to $20,000 (D. M. Lewis, 2007). As such, only about five percent of consumers own a front projection unit and that percentage is not likely to increase (D. M. Lewis, 2007). However, large-screen televisions in LCD, plasma, and rear-projection formats are projected to increase (Abowd, 2007). This is due to the rapidly declining costs and less extensive installation process. Consequently, the current study of large-screen television use in the home will include LCD, plasma, and rear-projection technologies while excluding front projector units.

The Need for Study

With a growing segment of the television audience viewing programming through digitally enhanced, widescreen, large-screen panels; there is a need to include the variable of screen/display size in the academic literature in order to further understand the role of media impact on viewers (Reeves, Lang, Kim, & Tatar, 1999). Screen size research has focused primarily on the physiological and emotional impact of the content on viewers. Previous research found that viewers enjoyed larger screens and found the viewing experience to be more intense (Lombard, 1995; Lombard, Ditton, Grabe, & Reich, 1997). Reeves, Lang, Kim, & Tatar (1999) studied attention and arousal using biometric measures of heart rate and skin conductance. Research detailed the use of other media technologies such as VCRs (Johnson, 1989) and DVRs (Smith, 2005). It is important to understand how large-screen televisions are

conceptualized and actually used within the home environment to assess what changes —if any—large-screens bring to home media consumption. The need for study is outlined in four major areas of examination.

Areas Examined

The study of the viewing and usage of large-screen televisions in the home will be focused into four general categories: 1) Conceptualization of large-screen television by users 2) Viewing and usage of large-screen television as an innovation 3) Screen size, Attention, and "Presence" 4) Household Centrality of Television.

Conceptualizing Large-screen Television

The television industry has moved toward a historic shift in the basic technology that will be a significant model of television reception in the future, even taking into account the parallel development of computers delivering some television content. Large-screen televisions represent a level of investment for home entertainment that exceeds previous costs for television. Other research has been done to assess how users conceptualize a television technology such as the digital video recorder (DVRs)(Smith, 2005), but a similar type of conceptualization of the technology by users has not been done regarding large-screens televisions. The current study addresses the gap in the media conceptualization literature.

The introduction of large-screen televisions also needs to be related to previous research on media clusters in the home (M. Morrison & Krugman, 2001; M. A. Morrison, 1996). Media clusters refer to pods of media technology within homes. A television, DVD player, DVR, and gaming devices would all pertain to the "television cluster" since many of these technologies could not operate independently of the television. The television cluster and computer cluster are the most prominent home media clusters. With multiple televisions in homes, smaller

television clusters could be found throughout homes. The largest television, or "main" television cluster, has been the unit examined in comparison to the computer cluster (M. Morrison & Krugman, 2001). The present study of large-screen televisions extends the media cluster construct to examine the large-screen television cluster in the home. Large-screen televisions naturally anchor the main television cluster in the home in a mega-media cluster.

Classifying Large-screen Television as an Innovation

The perceived innovative nature of the large-screen television as a technology needs to be understood in the context of the research literature. Rogers (1995), a pioneer in diffusion research since the 1960's, found that different perceptions by individuals about an innovation helps explain the different rate of adoption. He provided a five-part framework to assess these adopter perceptions (*relative advantage, compatibility*, *complexity*, *trialability, observability).* In addition, he outlined the literature of "re-invention," the process of users creating new applications for an innovation (Rogers, 1983). Robertson (1971) provided a classification system based on how an innovation impacts established consumption patterns. That system labels innovations as *continuous*, *dynamic continuous*, or *discontinuous* in terms of consumption.

Krugman (1985) conceptualized and analyzed Robertson's framework as it related to changes in television consumption introduced by new media services. Finally, Shih & Venkatesh (2004) have provided a use-diffusion model to assess innovation use after adoption. Two categories of use (*variety of use* and *rate of use)* are applied to four categories of users/adopters: *intense users*, *specialized users*, *nonspecialized users*, and *limited users*.

These frameworks of innovation assessment will be employed to understand with greater clarity the varied innovation characteristics of large-screen televisions.

Screen Size, Attention, and "Presence"

There exists an immediate need to better understand the relationship between screen size and attention due to the rapid adoption of large-screen televisions for home use. Researchers have documented the interaction of audiences regarding their actual attention to the screen (Reeves, Thorson, & Schleuder, 1985). Krugman and Johnson (Krugman & Johnson, 1991) documented changes in viewer attributes for new television services in the home and Krugman, Cameron, & White (1995) emphasized the role of attention to the screen as an important inquiry. Other research has focused on the specific variable of screen size and have shown that large-screen television viewing provides a more favorable and more intense experience as reported by viewers (Lombard et al., 1997). As a corollary, the variable of "presence" is discussed as a viable way to think about the enhanced nature of television viewing via large screens.

Large Screens and Television Centrality

Large-screen television adoption indicates—at least at some level—a changing relationship and/or commitment toward television. It may even call into question the very idea of the role of television in society and in individuals' lives as expressed through the construct of household centrality of television (Comstock & Paik, 1991). Prior research has focused on the prominence of television in the lives of inter-city children in a poor socio-economic situation (Medrich, Roizen, & Rubin, 1981). More recent research examined the role of television in the lives of 8-18 year olds (Roberts, Foehr, & Rideout, 2005). The current study examines television centrality using the home as the unit of analysis rather than children. The current analysis examines television centrality in homes where a large-screen television is present. More study is needed to determine television's impact in the more prosperous segments of the population to better complete the understanding of television's role in all of society.

Federal Communications Commission, *DTV Shopping Guide*
DEFINITIONS:
Analog TV: Today's TV system using radio frequency waves to transmit and display pictures and sound.
Digital TV (DTV): Television delivered and displayed using radio frequency waves that contain information that is digitally encoded for improved quality and efficiency.
Standard Definition TV (SDTV): Basic digital television transmission that may be displayed with fewer than 480 progressively scanned lines (480p) in 16 x 9 or 4 x 3 format. 480 interlaced (480i) is the quality of today's analog TV system.
Enhanced Definition TV (EDTV): A Better digital television transmission than SDTV with at least 480p, in a 16 x 9 or 4 x 3 display and Dolby digital surround sound. 480p is the quality used by most DVD players.
High-Definition Television (HDTV): The best quality digital picture, widescreen (16 x 9) display with at least 720 progressively scanned lines (**720p**) or 1080 interlaced lines (**1080i**) and Dolby digital surround sound.
HDTV Monitor (sometimes called HDTV Ready): A set that can display HDTV programming if you have a separate HDTV tuner, HD Cable Set-Top Box or HD Satellite Set-Top-Box Receiver.
HDTV Tuner (also decoder, receiver, set-top box):A device capable of receiving and outputting HDTV signals for display. May be stand-alone or integrated in the set.
Integrated HDTV: An HDTV that has the digital tuner built into the set. It does not need a separate set-top box to receive over-the-air DTV signals.
Plug-and-Play or Digital Cable Ready: A DTV or other device for digital cable customers that plugs directly into the cable jack and does not require a separate set-top box. Plug and Play TV owners must obtain a **CableCARD** from their cable company in order to view scrambled programming services.
Interlace Scan: A way to scan vertical lines onto a TV picture by scanning all the odd lines first, then filling in the even lines (this happens instantaneously).
Progressive Scan: A way to scan vertical lines onto a TV picture by scanning all the lines consecutively (progressively).
Aspect ratio: **4 X 3:** Traditional TV "aspect ratio," that is, the screen's width as compared to its height. For example, a "32 inch TV screen" would be 25 ½ inches wide and 19 inches tall. **16 X 9:** "Widescreen" TV "aspect ratio" that is more like a movie screen than a traditional TV. For example, a "32 inch TV screen" would be 28 inches wide and 16 inches tall.

Figure 1: Federal Communications Commission, DTV Shopping Guide

Media Technologies used for Television	Source: ConsumerReports.org 2007
Front Projector	For theater-like experience, need dark room. Not technically a television and not widely adopted for home use. Complex set-up and expensive.
Cathode-Ray Tube (CRT)	Mature technology, declining sales, little production
Rear Projection	Not as thin as flat panels, but good value for large-screen models.
Liquid Crystal Display (LCD)	Flat panel technology that can reach up to 60"+,
Plasma	Flat panel technology known for large-screen models (42"- 60")

Figure 2: Media Technologies Used for Television

"Large Screen" Definition	Source	URL
"Large Screen Televisions are generally the biggest conventional CRT TVs on the market. Screen sizes are usually at least 28 inches."	The Television Guide. 2007	http://www.newtv-guide.info/types/widescreen/
"Pacific Media Associates is a high-tech market research and publishing firm that specializes in providing information on large-screen display products, markets, and manufacturers. We cover all technologies that can produce a 25 inch (diagonal) or larger picture on a wall or screen from an electronic (video or computer) signal."	Pacific Media Associates September 2007	http://www.pacificmediaassociates.com/
"Due to the manufacturing constraints of producing direct view CRT TVs larger than about 37 inches large screens used to be only available in projection models; however, with the advent of so-called fixed pixel displays such as plasma and LCD, manufacturers have been able to produce direct view displays in excess of 40 diagonal inches."	Natural Resources Defense Council *Issue Paper March 2005*: Televisions Active Mode Energy Use and Opportunities for Energy Savings	http://nrdc.org/air/energy/energyeff/tv.pdf
"[T]here are fewer new tube TVs coming on the market…But the maximum screen size is limited to 36 inches, and these are getting harder to find."	ConsumerReports.org Sept. 11, 2007	http://www.consumerreports.org/cro/electronics-computers/resource-center/buying-a-tv-206/screen-size/index.htm
The largest CRT televisions on the market are 36", but few are available and not in demand. Televisions sold in larger screen size categories from 37"- 45", 46"-55", and over 56"	Circuit City 2007	http://www.circuitcity.com/ssm/Televisions/sem/rpsm/catOid/-12867/N/20012866+20012867+4589/link/ref/rpem/ccd/categorylist.do
Televisions sold in categories from 30"-39", 40"-49", 50"-59", 60" and above	Best Buy 2007	http://www.bestbuy.com/site/olspage.jsp?id=abcat0101000&type=category

Figure 3: "Large-screen" Definitions

CHAPTER 2

LITERATURE REVIEW

The present study examines the adoption and use of large-screen televisions from the perspective of the way people consume television. The literature review will begin by discussing the media conceptualization literature. The review will next discuss the innovations literature as applied to large-screen television. Media consumption, screen size and attention literature will then be discussed including the concept of "presence." Finally, literature regarding household centrality of television will be discussed in the context of family life and social use.

Conceptualizing Large-screen Television in the Home

Due to the technical and complex nature of the new digital television environment, consumers must deliberate more carefully before making a purchase. Purchasers are asked to make purchase decisions that can be extremely technical and challenging for a non-expert in electronics. The current study asked how users think about the large-screen television and the importance of television in their lives, their reasons for purchase, and their decisions of which options to purchase.

Media consumption research has focused on the arrival of over-the-wire cable services, VCRs, direct broadcast satellite (DBS), and digital video recorders (DVRs) that have altered some basic understandings of what television offered as a telecommunications service (Krugman, 1985, 1988; Krugman & Rust, 1993; Smith, 2005). The arrival of digital reception, widescreens (similar to the shape of theater screens) and large flat panels now further expands the definition of television consumption. In the current environment, any definition of television

ought to include both content and technical capabilities coupled with how the devices and content are related to viewing and consumption.

In another study, Pardun (1994) conducted the first research studying the connection of architecture with home television viewing. The research found that families living in more "traditional" style homes viewed television more as an individual activity. Families living in "transitional" homes (e.g. an open layout with public space) view television more as a family activity. The introduction of large-screen televisions in the home increases the need to account for the relationship between home architecture and television due to the viewing distances and wall space needed to properly accommodate the sets.

Large-screen Television Cluster

Rogers (1983) introduced the concept of "technology clusters" defined as "one or more distinguishable elements of technology that are perceived as being closely interrelated." Morrison (1996) applied the concept to home media in the form of "media clusters." Media clusters in the home—centered around anchor technologies of the television and the computer—represent different media contexts. The computer cluster was viewed largely as a workstation and an individually oriented technology. Television, on the other hand, was viewed as a social activity (Sparkes, 1983) that was used largely for entertainment and relaxation in "warm, cozy environments" (M. Morrison & Krugman, 2001; M. A. Morrison, 1996).

Morrison and Krugman (2001) detailed the internal social function and the external social function of the television cluster in the home. Television was the most social of the two media clusters. Within the television cluster, the VCR was found to be the most social of the technologies facilitating group viewing of movies and events. For external social functions of the home television cluster, television viewing with guests from outside the home occurred rarely

and occurred largely as a "special event." With the addition of large-screen televisions into the home, the internal and external social functions of the main television cluster may be altered from the previous findings by Morrison and Krugman (2001). Large-screen television offers a compelling media consumption experience in the home that could increase household viewing in groups as well as increase the frequency of sharing that consumption experience with others not living in the home.

Classifying Large-screen Television as an Innovation

As a rapidly diffusing television innovation, large-screen television needs to be assessed according to users' perceptions of innovativeness. Smith (2005) used three question areas from the innovations literature that included user-related questions. These include a framework on innovativeness by Rogers (1995), classification of innovations and consumption by Robertson (1971) and Krugman (1985), and use-diffusion considerations using a framework championed by Shih & Venkatesh (2003). The same three general categories are used to assess the innovativeness of large-screen televisions from a user perspective because—like DVRs as discussed by Smith (2005)—large-screen televisions provide a significant upgrade in the television consumption experience in the home.

Perceived Innovative Characteristics of Large-screen Televisions

An initial approach to understand these questions begins in addressing the nature of innovativeness that a large-screen television brings to the home. Rogers (1995) analyzed the characteristics of an innovation as perceived by individuals using five criteria: relative advantage, compatibility, complexity, trialability, observability.

Relative Advantage refers to the degree that users perceive the superiority of an innovation. What are most important in this scenario are not the actual "objective" advantages,

but rather the perceived advantages. Greater perception of innovation superiority leads to more rapid diffusion. For large screen televisions and its rapid adoption, this construct suggests users are likely to perceive a great relative advantage and differentiation over the prior television experience.

Compatibility relates to the user perception of consistency with prior experience and values. As television is a widely adopted home media form, users are likely to view large-screen televisions as naturally compatible with accepted social use of television.

C*omplexity* refers to the difficulty of understanding and using an innovation. Innovations or ideas that are easy to understand in concept are more quickly adopted. It is relatively easy to understand the basic advantage of a large screen television. However, the technical specifications and installation may present a level of complexity not previously encountered in the television configuration.

Trialability suggests potential users have an opportunity to experience the innovation on a limited basis prior to purchase. Rogers (1995) suggests that trialability should increase adoption rates due to reducing risk. With large-screen televisions, trialability in the home prior to purchase is rarely possible and is not likely to play a role in consumers perceptions of innovativeness.

Observability refers to the post-adoption variable of being openly visible to others who may also decide to adopt the innovation. Large-screen televisions are a social prestige purchase that suggests observability in how owners talk about and include others in the enjoyment of their purchase. Observability is likely to be of large influence for potential large-screen buyers who experience the television in friends' or neighbors' homes.

Large-screen Television Adoption

Robertson (1971) devised a classification system based on how an innovation impacts established consumption patterns. It should be noted that Robertson's framework differs from Rogers' prior categories due to its focus on actual consumption effects rather than user perceptions. The Robertson rubric of innovations has three categories of *continuous*, *dynamic continuous*, or *discontinuous* innovations.

A *continuous innovation* represents the least degree of disruption of established consumption patterns such as fluoride in toothpaste. A *dynamic continuous innovation* suggests a significant change or alteration to an existing product such an electric toothbrush. A *discontinuous innovation* creates new consumption for previously unknown products or services. (Robertson, 1971).

Krugman (1985) more directly applied Robertson's framework of innovation change as it applied to consumption via media technologies: *standard consumption*, *continuous consumption*, *dynamic continuous consumption*, *discontinuous consumption*. He classified basic cable subscriptions as "continuous consumption", pay cable and VCRs as "dynamically continuous consumption", and interactive services such as computers and home shopping as "discontinuous consumption."

In addition, Krugman focused the consumption differences using three questions: 1. Do the viewers change according to demographics or psychographics? 2. Does viewing process change because more programming is available? 3. Do other technologies influence the consumption via this technology (Krugman, 1985)? These are important questions to ask regarding the use of large-screen televisions because a larger segment of the population continues to adopt the enhanced large-screens that increasingly rely on high-definition

programming (as it becomes available). Advanced gaming devices and digital video recorders (DVR) also influence the consumption experience that large-screen sets bring to the television consumer.

Large-screen Television Use

Rogers (1983) outlined the diffusion process into five stages: a) knowledge, b) persuasion, c) decision, d) implementation, e) confirmation. Within the implementation phase of the model, the literature regarding "reinvention" is discussed. "Re-invention" is defined as "the degree to which an innovation is changed or modified by the user in the process of its adoption and implementation." Lewis & Seibold (1993) described a similar concept to re-invention using the terms "fidelity" and "uniformity." Fidelity was defined as the "match between design/intended use and actual use," while uniformity was defined as the "similarity across users." These inquiries, then, focus on the actual uses and changes made to an innovation by adopters.

Similarly, Shih & Venkatesh (2004) provided a use-diffusion model (UD) to assess use innovation after adoption (see Figure 4). The use-diffusion patterns typology has two categories of use (*variety of use* and *rate of use)* where variety of use is more central to the model because it reflects use innovativeness. The model addresses the gap in the innovations and adoption diffusions literature by focusing on the actual consumption patterns of the technology adopters rather than the adoption process itself.

Using the criteria of *variety of use* and *rate of use*, four categories of use patterns are derived for any given technology (*intense use*, *specialized use*, *nonspecialized use*, *limited use)*. Intense use and limited use represent the highest and lowest categories of the model. A high variety of use as well as high rate of use would be classified as "intense use." In contrast, low

variety of use and low rates of use are classified as "limited use." For a given technology, intense use is often desirable by manufacturers showing that the users have found the technology useful to customize for their desired purposes (variety of use) and use it frequently (rate of use). Limited users, on the other hand, are not likely to be engaged in the technology nor are they likely to become so. For the two remaining use patterns in the model, "specialized use" constitutes low variety of use but high rate of use. "Nonspecialized use" is high variety of use but low rates of use. Specialized and nonspecialized use patterns represent the potential for increased use by users in these two groups where additional marketing and support may yield increased overall functionality and use (Shih and Venkatesh, 2004).

In the predictive UD model, determinants precede the four use patterns detailed above which then lead to outcomes (e.g. Determinants → Patterns → Outcomes). Four determinants are listed that account for the variance in use: household social context, technological dimension, personal dimension, external dimension. Three outcomes complete the model detailing perceptions of technology impact, satisfaction, and interest in future technologies.

With large-screen televisions, there exists an obvious and specific use for the technology which does suggest degrees of uniformity and fidelity in its home use. Yet, increased functionalities built into the sets that provide new uses as well as connectivity to other devices creates multifunctional uses for which television may have not previously been identified (e.g. television as a digital display or computer screen). Some users will have a greater variety of technical uses for the large screens than others. As mentioned, this is an important question because multiple technologies connected to the large-screen televisions create multiple functionalities beyond the watching of television content or movies. Therefore, the overall

explanation of the consumption of television may need to be adapted to include such non-traditional uses.

Media Consumption, Attention, and "Presence"

Research has been done to assess the consumption changes in the television viewing process brought on through various television-related technologies such as VCRs (Johnson, 1989) and digital video recorders (DVRs) (Smith, 2005). Morrison (1996) also researched the media consumption environment in the home focused on television and computer media clusters. However, similar research has not focused on the changes in media consumption brought on by the increasing presence of large-screen sets in the home.

Research on screen size has found that viewers enjoyed larger screens and found the viewing experience to be more intense and more "real;" meaning a "non-mediated experience" (Lombard, 1995; Lombard et al., 1997). One experimental study manipulated the variables of screen size, resolution, and viewing distance. For television images displayed in high resolution, the subjects preferred larger displays (Neuman, 1990). Another study found that large screens (90" picture) created greater arousal and memory in viewers than a 22" screen (Detenber & Reeves, 1996). These studies follow the trend in other research to measure attention to television itself (Krugman et al., 1995).

Scholars have had differing views of the importance and the meaning of "attention." Early research in television focused exclusively on the content of the programming. "Attention" was implied and its definition assumed (Reeves et al., 1985). The specifications of the screens and the technical nature of the physical television sets were of less importance. Therefore, researchers did not focus on the screens themselves and the viewers' interactions with the

devices. The research primarily focused on content and the audiences that could be gathered—all within sociological, commercial, or narrative approaches (Reeves et al., 1985).

Researchers interested in the effects of television on children helped define "attention" as "visual selection" (Alwitt, Anderson, Lorch, & Levin, 1980). The research methodology relied on recording participants' attention to television and then quantifying how often the eyes were glanced toward the screen. This eyes-on-screen method (EOS) has been the dominant method of television attention research (Reeves et al., 1985).

The concept of attention as measured by eyes-on-screen, however, has been viewed as only an initial exploration into the greater psychological understanding of the individuals watching television. Information processing and cognitive models as well as neural processes are a natural extension of attention research (Posner, 1982). Others view visual measures as "blunt" instruments that are currently surpassed by physiological instruments such as skin conductance or heart deceleration (Reeves, 2007). Nonetheless, the eyes-on-screen (EOS) research provides an important and historically consistent method to measure attention to television. Other video recording and coding measures have also been used to measure attention (C. Allen, 1965; Anderson, Lorch, Field, Collins, & Nathan, 1986; Collet & Lamb, 1986). Both recording and eyes-on-screen measures are more accurately describing the specific notion of attention, labeled "visual attention."

Krugman and Johnson (1991) examined attention levels to VCR programming versus broadcast television programming. Krugman, Cameron, & White (1995) studied visual attention to programming and commercials using in-home observations and eyes-on-screen measures. Although some visual attention research has been done in experimental settings (Reeves et al., 1985; Thorson, Friestad, & Zhao, 1987), most research of visual attention has been conducted in

a naturalistic setting of in-home observations (C. Allen, 1965; Anderson et al., 1986; Bechtel, Achelpohl, & Akins, 1972; Collet & Lamb, 1986; Krugman & Shamp, 1992; Steiner, 1966).

Krugman, Cameron, & White (1995) found that viewers are visually connected to programming 62 percent of the time while only 33 percent of the time during commercials. In relation to previous studies, they found that attention to programming is relatively stable over time. However, attention to commercials had diminished in comparison to previous findings. In addition, they also found a correlation between stronger program viewing and commercial viewing presumably via a "lead-in" effect.

Screen Size & Attention

Reeves, Lang, Kim, & Tatar (1999) explored the effects of screen size and message content on attention as well as arousal. They provided four attention complications that need to be addressed with large screens rather than medium sized screens:

1. In large screens, objects can be portrayed in unnaturally large proportions (such as a 50" insect up close and personal) creating a distorted reality and greater attention.
2. Larger proportions of the peripheral vision are covered with wide and larger screens. Therefore, the viewing experience will involve greater input beyond the initial visual focus with greater peripheral cue inputs.
3. This also suggests that visual searching (changing the focus) within the screen will be greater in order to absorb all the information.
4. Mental images stored in memory will be much larger and therefore will positively affect recall.

The researchers compared viewers' attention and arousal (between a 56" screen, a 13" screen, and a 2" screen) using physiological stimuli (i.e. heart rate deceleration and skin

conductance) rather than the eyes-on-screen (EOS) measure. They found the highest levels of attention and arousal for the largest screen as compared to the smaller 13" and 2" screens (Reeves et al., 1999).

The prevailing view in the screen research is that larger screens produce greater spreads in the impact of content. Big screens produce greater memory recall, greater physiologic response (that have been used to show increased attention), and more intense direct response to images on the screen (Lombard et al., 1997).

Presence

Television has been long noted for its unique "absorbing" quality innate to the medium (Schramm, 1961). The large screens accentuate that absorbing quality becoming a new variable of "presence" in the home.

> "*Presence* means feeling and acting like you are having a nonmediated experience—the media user therefore responds (directly) to objects, events, and people in that environment rather than (indirectly) to what seem to be only symbolic representations or recreations of objects, events, and people that (if they exist at all) are in fact somewhere else" (Lombard et al., 1997).

Therefore, with large-screens (and the digital, widescreen format), the idea of attention alone is insufficient as a concept. Users have an increased transcendence to participate in events and society in more personally compelling detail via pixel-enriched sensory panels. In short, the large-screen television offers a more transparent medium for connection to televised experiences such that the idea of mediation is forgotten by the viewer. This transcendent effect—that moves beyond the notions of attention or absorption—could be described as the concept of "presence."

Household Centrality of Television

The last body of literature to be addressed in the study focuses on the impact of large-screen televisions on family and social life and also on the sociological function of television in the home (known as "household centrality of television"). The review will address the literature of family and social functions followed by the television centrality literature in the critical tradition of media scholarship.

Television and Family Life

The study of the television consumption experience of families is tied to an understanding of the historical relationship between televisions and family life. The rise of television's prominence within the home cannot be solely attributed to the commercial interests that so effectively built, promoted, and sold the sets. The quick diffusion of television suggests the technology filled a social role that could not have been created solely with persuasive marketing alone. The rapid arrival of such an engaging and time-consuming device within the reach of the average home brought hopes of family unity. "Television, it was said, would bring the family ever closer…In its capacity as a unifying agent, television fit well with the more general postwar hopes for a return to family values" (Spigel, 1992).

In the post-war era of the 1950's, suburbia and television flourished together in a social symbiosis fueled by economic growth and legions of young families. The television emerged as the center of family life, replacing other fixtures in the home that had previously represented family unity and happiness. Spigel (1992) noted the introduction of television as a family entertainment device coincided with the decline in the importance of the piano in the home.

> While in 1948 the baby grand piano typically held a dominant place in model living rooms, over the years it gradually receded…Meanwhile, the television set moved into the primary living spaces of model rooms where its stylish cabinets meshed with and enhanced the interior décor. (Spigel, 1992)

The implication is that television became the focus for family in-home leisure. In addition in the 1950's, television quickly became the leading entertainment focus of the home replacing—sometimes physically as well as symbolically—the role of the hearth (fireplace) (Spigel, 1992; Tichi, 1991).

> In 1951, when *American Home* first displayed a television set on its cover photograph, it employed the conventionalized iconography of a model living room organized around the fireplace, but this time a television set was built into the mantelpiece. Even more radically, the television was shown to replace the fireplace altogether, as the magazines showed readers how television could function as the center of family attention. (Spigel, 1992)

In effect, the role of television had been viewed as providing fundamental social needs beyond the more peripheral needs such as entertainment. In this view, the central role of television increased within the home and continued increasing in its impact and pervasiveness. The modern mediated world had produced a societal hearth of electrons and pixels that replaced at some fundamental level the ever-present and reassuring physical hearth of traditional society. In an information age, the mediated hearth provided constant connection and information to an ever-connected populace, increasingly isolated in individual homes. With large-screen televisions, that impact within the home could be augmented.

A 1956 study showed that many Americans saw television as a means to rejuvenate family life (Bogart, 1956). More recent research indicated that television was viewed as a medium that could produce positive experiences among family members and also encourage more time spent together (Kubey & Csikszentmihalyi, 1990). Coviewing (viewing together) as well as the interaction of television and family communication has garnered continued research emphasis particularly as it relates to children (Alexander, 2001). Coviewing, or the social nature of viewing, should be analyzed within the context of larger screens and the cinematic presence in

the home. One recent writing, however, suggests that large-screen televisions will not counter the trend toward individual television use due to wider targeting of television content to individuals, thus making family viewing or coviewing less likely to coincide (Alexander, 2007). In spite of the physical dominance in the social spaces of the home, large-screen televisions may not facilitate television's historic perceived role of family unity. Study is needed to examine what role large-screen televisions have in family viewing. The increasing diffusion of large-screen televisions highlights the need to research its impact on home audiences.

As noted previously in the chapter, Morrison and Krugman (2001) detailed the internal social function (e.g. family) and the external social function (e.g. guests) of the television cluster in the home. With the addition of large-screen televisions into the home, the internal and external social functions of the main television cluster may be altered from the previous findings. Large-screen televisions offer a compelling media consumption experience in the home that could increase household viewing in groups ("coviewing") as well as increase the frequency of sharing that consumption experience with others not living in the home.

Television Centrality

In a review of the television literature as it relates to children, Comstock & Paik (1991) focused one portion of their review on other research that addressed time allocation by children and the amount of television viewed. They focused on a study done with children in Berkeley, California. Medrich, Roizen, & Rubin (1981) detailed five major domains on how children's time was allocated, and television viewing was a prominent category. The researchers found that heavy television viewing by children was associated with high household and parental viewing as well as a lack of viewing rules within the home. Therefore, households could be categorized on a continuum of television's prominence in people's lives.

Comstock & Paik (1991) labeled this dimension "household centrality of television" and reviewed the broader literature that reflected a negative portrayal of the deleterious associations with high television viewing. For example, lesser educated parents watched more television than educated parents. Viewing was higher in single parent homes. Heavy users of television watched more entertainment (light) programming. On average, greater television centrality was found in homes of minorities. Therefore, the research highlighted a demographic skew that suggested television viewing had a more central place in homes lower on the socio-economic scale, thus suggesting the negative effects of television on children are part of social inequity.

Other researchers of television have used the term "household TV orientation" which means "the degree to which TV plays a central role in the home" (Roberts et al., 2005). Building on the research done by Medrich *et al* (1991), they found that homes that allow easy access to television also make it easy to access other forms of media.

The research findings coincide with other critical views of television's negative impact on society. With television's quick diffusion and acceptance throughout American society, cultural historians of television have sought to understand the role of television in modern life in both its enriching attributes and its cultural and personal debasements. Marketers ably persuaded the general public of television's benefits, but critics have also consistently portrayed a caricature of deleterious personal and social consequences.

> Critics have warned against a nation of robotized individuals and their families living hand to mouth out of cellophane bags in front of the television, itself an anesthesia chamber of corporate capitalism. The critics fear the addiction of men and women so narcotized by television that they become immobilized, apathetic, robotic (Tichi, 1991).

Therefore, in both the research literature of television with children and in critical television scholarship, television's central role in the home was viewed negatively. However, the concept of television centrality can expand to include the more neutral and/or positive

components of television's appeal. For instance, the adoption of large-screen televisions in homes could lead to increased television viewing but may not be associated with lower socio-economic classes or the previously reported ill-effects that greater television use in the home invites. The concept of television centrality needs to account for both negative and positive outcomes of increased television use in the home.

Literature Review Conclusion

The four bodies of literature discussed in this chapter provided an informed context and lens through which the present study was conducted. The focus of the study was to examine what impact—if any—the adoption of large-screen televisions had on the home consumption experience. The literature review led to the research questions which will be articulated in Chapter 3.

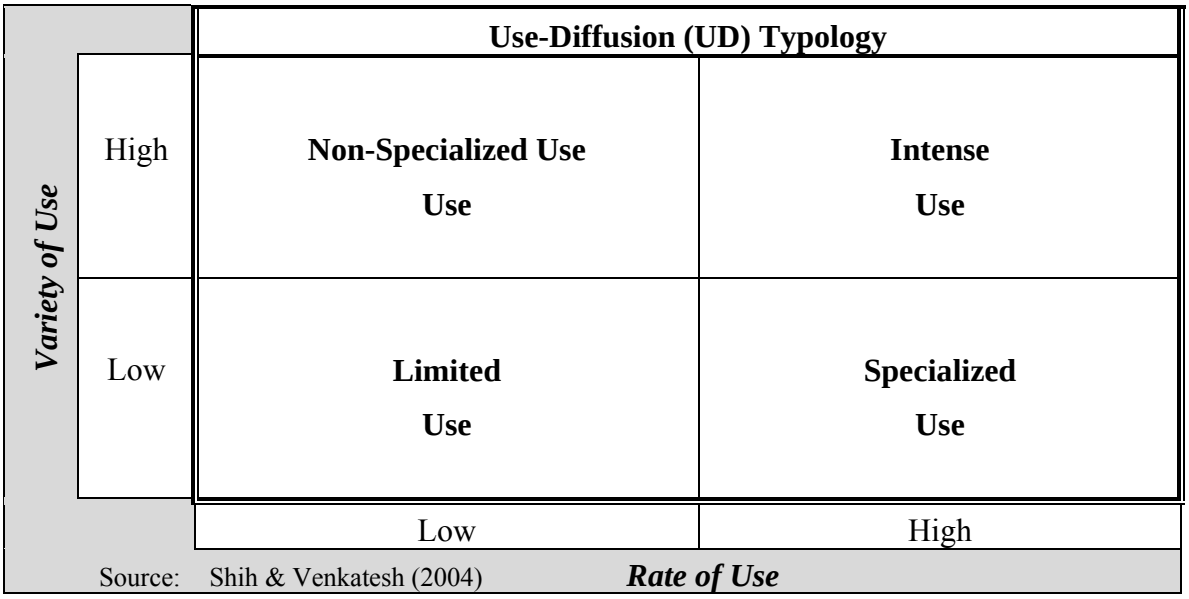

Figure 4 Use-Diffusion (UD) Model

CHAPTER 3

RESEARCH QUESTIONS

The study examined the viewing and usage of large-screen televisions in homes. Large-screen televisions represent a change from the past in how television fare is delivered to viewers and how television content is consumed. The research explored consumer perceptions and conceptualizations of the changing television environment and how it related to viewing and the role of television. Large-screen use and viewing in homes is the variable of interest to the current research. The study does not address the related issue of large-screen television use in public spaces.

Some of the preliminary questions were descriptive in nature, but exploratory research often requires such descriptive questions to find initial indications of what is occurring in a phenomenon (Wimmer & Dominick, 2006). Although an exploratory study, this research sought to transcend purely descriptive ends to relate to the more broadly theoretical constructs displayed in the literature regarding consumption, innovation, use, attention, and the household centrality of television.

The research questions of the study were focused into four general categories similar to the categories explicated in the literature review: 1) Large-screen demographics, conceptualization, and acquisition 2) Large-screen innovation and use 3) Large-screen consumption, viewing experience, and attention 4) Coviewing and household centrality of television.

Large-screen Demographics, Conceptualization, and Acquisition

As a beginning inquiry, the research addresses demographic and descriptive concerns for users/owners of large-screen televisions. Of principle interest is to construct a profile that adequately explains any differences that may exist between large-screen television owners and other television owners.

Research Question #1a: What is the demographic profile of people in homes with large-screen televisions?

Research Question #1b: Are demographic profiles of large-screen television viewers different from regular television screen viewers?

Although this study used a technical definition of large-screen televisions (40-inches or larger), there remains a need to understand how viewers conceptualize the idea of large-screen televisions. This is compounded with the confluence of three major changes in the television market as described in the literature review: larger screens, digital transmissions, and wide screens (similar to a movie screen). Media consumption research has focused on the arrival of over-the-wire cable services, VCRs, direct broadcast satellite (DBS), and digital video recorders (DVRs) that have altered some basic understandings of what television offered as a telecommunications service (Johnson, 1989; Krugman, 1985, 1988; Krugman & Rust, 1993; Smith, 2005). Conceptualization of large-screen televisions is a logical extension of that work.

Research Question #2a: How do viewers conceptualize "big-screen" or "large-screen" televisions?

Research Question #2b: Do viewers differentiate between digital resolution, dimension difference in screen shape, and large-screen innovations?

As noted in the introduction, technological, regulatory, and market forces have combined to create a transition in the television marketplace. Much of that transition can be found in the diffusion of large-screen televisions into the consumer market. Sales of large-screens grew

108% between the years of 2005 to 2007 (Abowd, 2007). The 2007 worldwide total sales were close to 33 million units with projected worldwide unit sales for large-screens in 2010 to be close to 61 million units (Abowd, 2007). A conservative estimate of large-screen television product lifespan is 15-20 years ("LCD TVs versus Plasma TVs," 2007). Therefore, in spite of the rapidly changing technology cycle producing better products in shorter time, the rapid adoption rate of large-screen televisions indicates an important change in television's home infrastructure through the coming decades.

Due to the transition occurring in the television market, it is important to know the consumer reasoning and expectations associated with the large-screen purchase. This includes the discussion of replacing prior televisions (or not) with a larger unit.

Research Question #3: What are the reasons, justifications and context for purchasing large-screen televisions?

The process of buying a large-screen television could be more complex than previous television buying (*DTV Shopping Guide*, 2007; Ramsay, 2006). Issues such as functionality, desired use, home placement, installation, and costs should be considered prior to the purchase in order to account for the many variables which contribute to the optimal consumption situation (Ramsay, 2006). In particular, the level of expense would suggest that greater care ought to be taken prior to the purchase to assure satisfaction with the units after purchase.

Research Question #4: What are the considerations taken, barriers to entry, and difficulties when purchasing a large-screen television?

Morrison (1996) and Morrison and Krugman (2001) identified the role of media clusters in the home with both a television cluster and a computer cluster. Dependent technologies were identified as those technologies in each cluster that could not function separately, such as a DVD player or a gaming system. For a large-screen television cluster with enhanced connectivity to

multiple devices, research needs to address what other dependant technologies are seen as essential by viewers for the optimal consumption experience. In addition, the use of other technologies in the home such as computers and phones ought to be assessed in relation to large-screen televisions.

Research Question #5a: What other technologies are used in conjunction with large-screen televisions?

Research Question #5b: How does the ownership of large-screen television relate to other technology (computers, phone, etc.) use in the home?

Large-screen televisions have also introduced a greater need to account for television architecturally; where the television is actually placed within the home. Larger spaces are needed for both placing the units as well as distances needed for proper viewing (Ramsay, 2006). Pardun (1994) conducted the first study connecting home television viewing with architecture. The introduction of large-screen televisions in the home increases the need to account for the relationship between home architecture and television due to the viewing distances and wall space needed to properly accommodate the sets.

Research Question #6a: How are large-screens situated in the home?

Research Question #6b: What interior adjustments—if any—were required to accommodate the large-screen television?

Large-screen Innovation and Use

Rogers (1995) analyzed the characteristics of an innovation as perceived by individuals using five criteria: relative advantage, compatibility, complexity, trialability, observability. The present study will also consider viewer perceptions using these criteria.

Research Question #7: How do owners perceive large-screen television using the ideas of a) relative advantage, b) compatibility, c) complexity, d) trialability, e) observability?

With large-screen televisions, there exists an obvious and specific use for the technology, which is viewing television content and movies. Yet, with increased functionalities built into the sets and connections to other dependent technologies such as DVRs and gaming systems, large-screen televisions have multifunctionalities not previously associated with television (e.g. television as a digital display or computer screen). With many available uses, the study examines how consumers *actually* use the large-screen televisions in the home.

Research Question #8a: How are large-screen televisions used in the home?

With the varied uses of large-screens established (see previous research question), a corollary question arises when recognizing that some users will have a greater variety of technical uses for the large screens than others. Similarly, some users will use the sets in greater amounts than others. Shih & Venkatesh (2004) provided a use-diffusion model (UD) to assess differences in use after adoption. The use-diffusion patterns typology has two categories of use (*variety of use* and *rate of use)* where variety of use is more central to the model because it reflects use innovativeness. Four categories of use patterns are then derived for any given technology (*intense use*, *specialized use*, *nonspecialized use*, *limited use)*. This matrix and typology of use will be applied to users of large-screen televisions.

Research Question #8b: Can use of large-screen television be classified as intense, specialized, nonspecialized, or limited?

Large-screen Consumption, Viewing Experience & Attention

Robertson (1971) devised a classification system based on how an innovation impacts established consumption patterns. The Robertson rubric of innovations has three categories of *continuous*, *dynamic continuous*, or *discontinuous* innovations. A *continuous innovation* represents the least degree of disruption of established consumption patterns such as fluoride in

toothpaste. A *dynamic continuous innovation* suggests a significant change or alteration to an existing product such as an electric toothbrush. A *discontinuous innovation* creates new consumption for previously unknown products or services. (Robertson, 1971).

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The current study asks to what degree the introduction of large-screen televisions changes the consumption paradigm in the home including uses and experiential considerations.

Research Question #9a: How should large-screen televisions be classified according to the Robertson/Krugman framework?

Research Question #9b: Is large-screen television viewing a different viewing experience than regular screen viewing?

Researchers have studied attention to television in various contexts. Krugman and Johnson (1991) examined attention levels to VCR programming versus broadcast television programming. Krugman, Cameron, & White (1995) studied visual attention to programming and commercials using in-home observations and eyes-on-screen measures. Although some visual attention research has been done in experimental settings (Reeves et al., 1985; Thorson et al., 1987), most research of visual attention has been conducted in a naturalistic setting of in-home observations (C. Allen, 1965; Anderson et al., 1986; Bechtel et al., 1972; Collet & Lamb, 1986; Krugman & Shamp, 1992; Steiner, 1966).

Krugman, Cameron, & White (1995) found that viewers are visually connected to programming 62 percent of the time while only 33 percent of the time during commercials. In relation to previous studies, they found that attention to programming is relatively stable over time. The present study assesses the general reported attention given to television when it is delivered via a large screen.

Research Question #10a: Do large-screen viewers pay more attention to television during the programming and commercials?

As noted in the literature review, television has a unique "absorbing" quality innate to the medium (Schramm, 1961). The idea has been described as the concept of "presence" in other research (Lombard et al., 1997). For the concept of "presence", viewers become absorbed in the content such that the mediated experience is forgotten and a greater sense of reality occurs. With large-screens encompassing the greater visual field of the viewer in a more compelling mediated environment, increased "presence" is likely to occur. If confirmed, users of large-screens would report an increased transcendence to participate in events and society in a more personally compelling experience, thereby enhancing the connection to the content being displayed.

Research Question #10b: Do viewers feel more connected to the television content having a large-screen television?

Coviewing and Household Centrality of Television

Coviewing (e.g. viewing together with two or more people) has garnered research emphasis particularly as it relates to children (Alexander, 2001). Scholars have also considered the impact of television on culture as well as shared experiences in the home (Lull, 1982; Morely, 1988; Spigel, 1992; Tichi, 1991). Television has drifted steadily toward individualized experience and programming.

The introduction of large-screen television has the potential to reverse that trend in limited ways. A 2007 review of television and the family suggests that large-screen televisions will not counter the trend toward individual television viewing due to wider targeting of television content to individuals. Thus, coviewing or family viewing is less likely to coincide as individuals within the home develop differing tastes in programming (Alexander, 2007). That conclusion, however, needs to be verified. Coviewing, or the social nature of viewing, should be analyzed within the context of larger screens and the cinematic presence in the home.

The coviewing research is complemented by the media consumption literature. Morrison and Krugman (2001) assessed the internal social function (e.g. family) and the external social function (e.g. guests) of the television cluster in the home. With the addition of the variable of large-screen televisions into the home, the internal and external social functions of the main television cluster need to be examined again. The current study assesses the family and social aspects of viewing via large-screen televisions in the home.

Research Question #11a: Has the presence of large-screen televisions influenced family viewing and family/group togetherness?

Research Question #11b: Has the presence of large-screen televisions influenced social viewing (with family, friends or neighbors)?

The final research questions address the concept of household centrality of television (Comstock & Paik, 1991) as it relates to large-screen televisions in the home. Household centrality of television is a measure of the prominence of television in homes based on a study done by Medrich, Roizen, & Rubin (1981). The researchers found that heavy television viewing by children was associated with high household and parental viewing as well as a lack of viewing rules within the home. Therefore, households could be categorized on a continuum of television's prominence in people's lives.

Other researchers of television have used the term "household TV orientation" which means "the degree to which TV plays a central role in the home" (Roberts et al., 2005). Building on the research done by Medrich *et al* (1991), they found that homes that allow easy access to television also make it easy to access other forms of media. The current study examines the central role of television in homes where large-screen televisions are present.

Research Question #12a: Do large-screen television owners have a greater commitment to viewing as a media form?

Research Question #12b: Does having a large-screen television compete for attention to and use of other media?

CHAPTER 4

METHOD

This study employed a multimethod research design to answer the research questions presented in the previous chapter. In a multimethod design, both qualitative and quantitative techniques may be used to study specific research questions (Wimmer & Dominick, 2006). Each research technique contributes to the depth and understanding of the study's results and as such, each technique employed—either qualitative or quantitative—is central to the methodology of the research. Qualitative techniques provide general impressions, context, and depth that principally address the questions of "why" and "how." Conversely, quantitative techniques provide statistical data that can help describe larger populations and help answer the questions of "how many" or "how much" (Wimmer & Dominick, 2006).

Qualitative methods may be used as an exploratory instrument before a quantitative measure. In addition, qualitative methods may also be used after quantitative methods as a way of providing context and depth to statistical results (Baker, 1999). In a supplementary or a multimethod design, however, qualitative methods are often used prior to quantitative measures because they help identify "the nature or structure of attitudes and motivations rather than their frequency" (Goldman & McDonald, 1987). These attitudinal or motivational findings can then be tested using a quantitative measure. Multimethod research designs are an established methodology in communications research (Wimmer & Dominick, 2006) and have been employed successfully in a prior media consumption study (Johnson, 1989).

Method Overview

The two-phase multi-method approach for this study first involved focus groups and then employed an online survey. The nature of the inquiry about the use of large-screen televisions in the home begins at an exploratory level. Therefore, a qualitative approach using focus groups can help gain context and insight into the uses, attitudes and motivations of large-screen television owners. Using the information gained via the focus groups, a survey instrument was formulated and then administered to both large-screen and smaller screen owners using an online national panel service. For the national online survey, a split sample of smaller screen as well as large-screen households was chosen to provide a valid comparison mechanism when assessing what changes—if any—large-screen televisions bring to the home media environment.

Johnson (1989) used a similar method in an exploratory study of the impact of VCRs on home television and movie entertainment. His study followed the basic methodological order of finding *comprehension* and *clarification* via focus groups and then culminating in a mailed research survey to gain *confirmation*. The current study follows that basic methodological order for finding *comprehension and clarification* via focus groups. The second phase of the research, however, uses a *confirmatory* online survey rather than a mail survey.

A detailed methodological description of both Phase I (Focus Groups) and Phase II (National Online Survey) will now be discussed.

Phase I: Comprehension & Clarification

The first phase of the study employed five focus group interviews to explore the topic and understand the salient issues of large-screen television viewing and use. Focus group interviews have become a popular research design developed largely from the disciplines of

marketing and political polling. As is used in this study, focus group interviews have been widely used in the early design phase of large-scale surveys (Baker, 1999). The current study used the focus group interview for obtaining background information about large-screen television users, for generating working hypotheses about these households in regards to the research questions of the study, and learning the language and context of the respondents which aided in survey question development. These three uses for focus groups are consistent with prominent historical uses of focus groups in other research contexts (Stewart & Shamdasani, 1990).

Focus Group Advantages & Limitations

The focused group interview—as with any research design or technique—has advantages as well as limitations that should be properly acknowledged as it relates to the current study (Baker, 1999; Morgan, 1988; Stewart & Shamdasani, 1990; Wimmer & Dominick, 2006). The focus groups were cost-effective as compared to other research techniques and were completed relatively quickly (e.g. five 90-minute sessions over a 1.5 month period). In addition, the open format with respondents allowed for direct probing and clarification about specific questions. Synergism between respondents often occurred as topics were openly discussed bringing additional depth to the information. Finally, the flexible nature of the discussion and the power of the spoken word provided immediate and understandable response. These benefits gained through the focus group portion of the study were consistent with established focus group advantages listed by Stewart & Shamdasani (1990).

For the current research, the principal author of the study performed the role of moderator for all five focus groups. The moderator used professional moderating skills to promote an environment of positive openness while probing for information on key issues (Wimmer &

Dominick, 2006). A prominent limitation to focus group research involves the professional capability of the moderator. The validity and the degree to which focus group results can be reflective of the respondents' true feelings and impressions depends on the ability of the moderator to create an open, positive environment. Moderators must avoid bias and leading questions in a positive environment that elicits personal expression without retribution. The professionalism and ability of the moderator is listed as a potential limitation to focus group research (Stewart & Shamdasani, 1990). For the current study, great care was taken to not elicit specific types of responses. Even though a general interview schedule was constructed for each focus group, the moderator allowed (as much as feasible) important topics to surface during the course of the discussion without overtly priming the issues. Follow-up questions were then discussed if the situation merited further depth.

Other important limitations to focus group research found in the literature should be considered in reference to the current study. Conclusions reached via focus group are not generalizable (Stewart & Shamdasani, 1990). Great caution should be exercised in stating that conclusions represent the collective opinions of the focus group members and not the general population. Additionally, the refreshing, "live" element of human interaction and dialogue in a focus group can also lead to over-exuberance regarding the conclusions. Focus group results, then, need to be properly contextualized in the summary and analysis report including the difficult work of analyzing information gathered in an open-ended format (Stewart & Shamdasani, 1990).

Interview Schedule

An interview schedule based on the research questions of the study was constructed for the first focus group (see Appendix A) and then adjusted thereafter for subsequent focus groups

as information from the discussions led to specific topics of interest (see Appendix B and C). The interview schedule gave a general outline to the discussions assuring that all the needed question areas were covered. As an iterative process, each focus group discussion schedule was used to further clarify and to comprehend questions until redundancy was reached. "Saturation" has also been used to describe the process: "Saturation occurs when the focus groups no longer provide any fresh information…It is nearly impossible to predict when the saturation point will occur" (Wimmer & Dominick, 2006). Redundancy using the original topic schedule was reached after the third group. The remaining two focus groups were used to gain greater depth on a narrower group of topics involving attention, the large-screen television experience, and household centrality of television (see Appendix C). A booklet was used during all focus groups as a method of capturing immediate responses and stimulating thinking about the specific questions. The group discussion then followed (see Appendix E). The booklet was adjusted for the final two focus groups in order to focus the discussion on several main issues and to begin testing potential questions used in the survey (see Appendix F). A demographic questionnaire was given at the end of each group (see Appendix G).

Location and Dates

Focus groups for this research were conducted in the greater Athens, Georgia and Roswell, Georgia communities (see Table 4.1 for a focus group summary). Five focus groups were conducted between Feb. 19, 2008 and April 2, 2008 (see Table 4.2 for dates, locations, and attendance).

Due to the nature of the topic of interest (television research) and the sometimes conflicting public sentiment about the social value of television, locations were sought that would be "neutral" public environments where respondents would feel comfortable to express

themselves without institutional interference. Church or non-profit facilities were not considered. For ease of parking and accessibility concerns, the local university was eliminated from consideration as a location. A suitable and publicly accessible location was secured at the Athens-Clarke County Public Library. During and after the administration of the first focus group, it became apparent that the location was not ideal for attracting larger numbers of qualified participants in the evening hours of a weekday. The scheduling of the facility for future focus groups was problematic. In addition, one respondent mentioned a safety concern for women coming to that location alone in the evening hours. Therefore, a new location was secured at the Athens YMCA that provided future scheduling of focus groups and where many of its members own large-screen televisions. This aided in recruiting and in actual attendance. Focus groups two, three, and five were held at the Athens YMCA. In order to diversify the respondent base, the fourth group was held in Roswell, Georgia, a more suburban city north of Atlanta, Georgia. A participant of the second focus group generously hosted the Roswell event and assisted in recruiting qualified respondents from the community. The fourth group was held in the Chimney Lakes Clubhouse in Roswell, Georgia.

All the focus groups were held in the evenings to accommodate work schedules since the principal respondents for the groups were adults 18 years old and older. A doctoral colleague assisted with the administration of the second and fourth focus groups.

Participants

Morrison (2001) identified a specific person within homes who is the technology expert, the person most capable of sorting through the purchase and operation of in-home technologies. Although it is possible that the technology expert in the home is also the most ardent viewer, it may not necessarily be so. Therefore, regarding questions of consumption, the research focused

on a principal viewer in the home who also happens to understand some of the technical complications involved in purchase and set-up.

Participant Origin, Recruitment and Selection

As is common to focus group research, the participants in the focus groups for this research were a convenience sample found in the greater Athens, Georgia and the Roswell, Georgia communities. Respondents were sought through colleagues, friends, neighbors, acquaintances, churches, community organizations, and retail stores (e.g. personal contacting and advertisement flier placed in Circuit City & Best Buy retail electronics stores. See flier, Appendix D. For a list of recruitment sources of respondents, see Table 4.3). Respondents were screened in person, via phone, and through email. To be eligible to participate, persons had to own a large-screen television as well as be a principal viewer in the home. Reminder phone calls and emails were sent the day prior to the discussion.

Focus Group Size

Researchers and focus group practitioners have disagreed over the optimal size of focus groups. As a rule, focus groups are optimal when containing between six and twelve (6-12) participants (Baker, 1999; Stewart & Shamdasani, 1990). Others suggest the range is optimal between six and ten (6-10) respondents, with others in the field of marketing suggesting a smaller range of six to eight (6-8) respondents (Morgan, 1990). Larger groups have the potential of greater collective experience available for the discussion as well as the potential limitation of less interaction and involvement due to the limited time for each participant to speak. There may be less contribution per person and therefore the depth of the discussion may suffer.

Smaller groups of four to six (4-6) participants (e.g. mini-groups) have the potential for greater rapport and interaction generating greater depth (Templeton, 1999). Smaller groups also

have the potential to be a "rather dull discussion" (Stewart & Shamdasani, 1990). The key, then, in conducting focus groups is to try to maximize the advantages of each group size while diminishing the negative possibilities of each.

The current research had five focus groups that ranged from four participants (first group) to twelve participants (fifth group). The average group size was 7.2 across all five focus groups (see Table 4.2).

The first focus group of four respondents was largely successful as an exploratory adventure into the subject matter. As part of a mini-group, each participant was able to contribute to each question of the interview schedule. This created a lively discussion in which each person was anxious to contrast and compare their experiences and views with the other participants. For the first focus group, a smaller number of participants proved to be optimal.

The final focus group consisted of twelve participants and was successful for the purpose of finding redundancy in the study. Although a significant and useful discussion occurred from a large number of respondents, no new information of any significance was gained. The size of the group limited rapport as compared to prior groups. A few participants had nominal contributions in spite of the moderator's attempts to involve all participants. Overall, however, the size of the last group proved useful for the needs of the study in its final stages.

Focus groups 2-4 contained six or seven participants each and were largely successful and manageable. Regarding overall focus group size and using this study as a reference, groups of between six and eight participants may be optimal as a balance between rapport, depth, participation, and manageability.

Incentives for Participation

A varied incentive approach was used for the five focus groups. Original cost estimates for the study suggested that another incentive rather than cash must be used. For the first and second focus groups, $15 donations were offered to charities of the participants' choice. Seven local charities ranging from the Boy Scouts to the local food bank received donations as a result of the study. This method of introducing community altruism as an incentive for obtaining participants in the research proved effective in prior research (McNiven, 2002). It was less effective in this study. Although the participants were of high quality due to interest in the subject rather than financial gain, actual attendance numbers were lower than expected. For the third focus group, $30 cash incentive was offered. No incentive was offered for the fourth focus group held in Roswell, Georgia. In order to assure a large attendance, a $50 incentive was offered for the fifth and final group. The $50 cash incentive for each participant was the most effective incentive for obtaining actual attendance by those who were committed to attend.

Institutional Review for Human Subjects Research

Approval to conduct the focus groups by the university's institutional review board for human subjects was granted November 13, 2007 (see Appendix H for approved consent form).

Recording

The focus groups were recorded using an Olympus Digital Voice Recorder WS-300M. The recorder contained a USB-enabled functionality to transfer audio files to a computer hard drive for transcription via Windows Media Player.

Analysis

Analysis of the focus group transcriptions employed the cut-and-paste method using a computer processor (Stewart & Shamdasani, 1990). Relevant material from each transcript was

placed in categories based on the interview schedule of the focus groups. Analysis was then conducted on the groupings of relevant responses for each question or topic area.

The cut-and-past method has the limitation that the results rely heavily on the analysis of one researcher. To account for this limitation, qualitative analysis software (NVIVO 8) was used to check and verify conclusions made using the cut-and-paste method.

Results of the Phase I focus groups will be discussed in Chapter 5.

Phase II: Confirmation

As mentioned previously, the two-phase multimethod approach for this study first involved focus groups and then employed an online survey. The nature of the inquiry about the use of large-screen televisions in the home began at an exploratory level. Using the information gained via the focus groups and other published sources, a survey instrument was constructed and administered for Phase II of the study. The survey was a comparative instrument to test the findings of the focus groups of large-screen television owners with owners of traditional televisions. The research goal was to test what changes—if any—large-screen televisions bring to the home viewing experience.

A detailed description now follows for the survey construction, testing, selection of the online panel, and administration of the survey by the national online panel company.

Survey construction

A 34-question online survey was formulated using information gained through the focus groups and measures found in the television literature (see Appendix I for a paper copy of the online survey). The survey construction and testing process began after the conclusion of the last focus group and lasted two months (April 2, 2008 – June 10, 2008). Multiple drafts of the

questions and the survey format were screened by established media scholars within the University of Georgia's Grady College of Journalism and Mass Communication. The effort was designed to provide methodological rigor to validate the research instrument using established scales from the literature as well as to receive input from the completed focus groups. (For a listing of the input sources for each question on the survey, see Appendix J.) For ease of use for survey respondents and for analysis, all survey questions were closed-ended questions.

The focus groups and rigor of the survey construction process assured adequate response categories for each question. Twenty-three of the thirty-four survey questions were single response, close-ended questions with text input response format (e.g. use a computer mouse to click the appropriate box). Five of the thirty-four survey questions were multiple response, close-ended questions with text input response format. Both types of questions formats have been used in prior online surveys (Best & Krueger, 2004). The remaining six questions employed Likert scale responses using an umbrella format adapted from Dillman (2007).

Throughout the survey construction phase, care was taken to write questions in complete and clear sentences, to provide appropriate and complete options for close-ended questions, and to limit the survey to a manageable length that would not over-burden respondents (Dillman, 2007). Additional emphasis was given to assure that the survey questions appropriately operationalized the basic research questions of the study (see Appendix K for survey questions related to the study's research questions).

Survey Testing

Survey testing occurred after the questionnaire took shape and the many drafts were successfully edited and adjusted. Hard-copy testing was conducted June 4-5, 2008 using twenty (20) adults from the University of Georgia staff, graduate students and community members who

would reflect the type of person taking the online survey. Many useful comments and feedback were incorporated to enhance the flow of the questions and to complete option choices. On average, the 34-question survey took nine minutes and three seconds (9'03") to complete, well-within the ten minute threshold for optimal survey length. This assured that the length of the survey was manageable for an average respondent.

The survey was programmed into the *Zoomerang* online platform June 6, 2008 (see next section for panel selection) and checked for errors in translation between a paper-based instrument and an online instrument. The online survey was then sent on June 7, 2008 to personal contacts via an email invitation asking them to complete the survey. Forty-two (42) respondents completed the online survey by 8 a.m. on June 9, 2008. Feedback gained from the online test led to important clarifications and refinements which were subsequently incorporated into the online instrument. The average time to complete the online survey was not reported by *Zoomerang*, but online surveys, on average, via respondent panels take less time than equivalent hardcopy surveys (Wilner, 2008).

Selection of the National Online Panel

Zoomerang, a subsidiary of MarketTools, Inc. based in San Francisco, was selected as the panel provider for this research. The selection of *Zoomerang* occurred in two stages. The researcher began by analyzing the top research companies in the US using the *2007 Honomichl Top 50* issue of *Marketing News*, a publication of the American Marketing Association ("2007 Honomichl Top 50," 2007). National online research panels advertise aggressively in the annual report. Calls were made to several providers to clarify their offerings and capabilities. From that initial inquiry, three providers were selected for further consideration. Each of the three companies then submitted a bid for the proposed project using similar data retrieval assumptions.

Based on these estimates and the information gained from the process, one of the three providers was dropped from consideration due to questions about the quality of the panel.

The final two providers were then compared based on cost, quality of sample, size of sample, ability to segment sample by plasma or LCD ownership, and customer service. Based on the criteria given, *Zoomerang*, a subsidiary of MarketTools, Inc. based in San Francisco, was selected as the host for the study.

Zoomerang Methodology

Zoomerang, a subsidiary of MarketTools, Inc., maintained an actively managed panel of three (3) million respondents in the U.S. The *Zoomerang* panel was not only the largest consumer U.S. panel available, but the double opt-in process also employed a rigorous verification procedure. *TrueSample* from MarketTools, Inc. employed the same rigorous process of online verification that was used in the financial services industry to prevent online fraud (*Introducing TrueSample: The market research industry's first quality-assured sample*, 2008). As such, *TrueSample* methodology of panelist verification was recognized by Forrester Research as the leader in panel verification (Bortner, 2008).

By contractual agreement, no panel members were recruited on "surveys for cash" websites (*MarketTools Answers ESOMAR's 25 Questions*, 2007). A small rewards program was offered as an incentive for survey completion, but the rewards gained were nominal and were meant to discourage professional panelists from gaining entry into the *Zoomerang* panel. Panelists were limited to one survey invitation per week. Panelists who did not complete any surveys in a three month time period were put into a process for removal (*MarketTools Answers ESOMAR's 25 Questions*, 2007).

Upon entry to the panel, new panelists completed an extensive attributes questionnaire that included up to 500 profile attributes. The up-front approach toward attribute designation allowed for targeted sampling. Updates in the profile attributes were conducted quarterly to assure accuracy (*MarketTools Answers ESOMAR's 25 Questions*, 2007). The depth of attribute designations for the panel proved to be a selling point and ultimately useful for targeted sampling in the current study.

Sample Representativeness

The issue of sample quality must also include sample representativeness. As noted, the *Zoomerang* panel contained three million U.S. panelists which exceeded in size other consumer panels. However, the key question was to determine how closely the overall *Zoomerang* panel mirrored the US population. This was necessary for external validity of the study to generate conclusions that can be properly designated to reflect a population beyond the sampling frame.

A study comparing the representativeness of four competing consumer panel companies found that the *Zoomerang* panel came closest to mirroring the US overall population (*How representative is your sample?*, 2006). Compared against the U.S. Census, the *Zoomerang* panel matched the U.S. gender ratio but was underrepresented in the 18-24 age category, in the lowest income group of under $15,000 per annum, and with African Americans. The panel was overrepresented in the middle class income bracket ($50,000 - $75,000), with Whites/Caucasians, and in senior ages. Overall, compared to the other panels, *Zoomerang* was the closest to mirror the U.S. Census. The study did not report geographic distribution of its members as compared against the U.S. Census.

The survey sample results of the current study were then compared against the *Zoomerang* panel and the U.S. Census. Overall, the study's sample aligned closely with the

overall *Zoomerang* panel which was the closest panel to mirror the U.S. Census (*How representative is your sample?*, 2006). There were, however, slight variations that should be noted. The survey's age percentages were also comparable to the *Zoomerang* panel but with slightly fewer respondents in the 65 or older category, which was more in line with the U.S. Census. For income, the survey sample continued to underrepresent the least affluent segment (under $24,999) and overrepresented the *Zoomerang* panel and the U.S. Census in the middle to upper middle class categories ($50,000 - $99,999). This is an expected finding due to the prestige nature and price of large-screen televisions drawing a more affluent consumer base.

The survey sample accentuated further the *Zoomerang* panel's overrepresentation of White/Caucasian respondents and underrepresented Black/African American respondents as compared to the U.S. Census. The survey sample also notably underrepresented Hispanics (3%) as compared to both the *Zoomerang* panel (11%) and the U.S. Census (12.5%). With the variations in mind, however, the survey sample largely reflected the *Zoomerang* panel which was found to most closely mirror the U.S. Census as compared to three of its competitor panels.

Sample size

The final sample size achieved in the online survey was N=1328 due to a higher than expected response rate among traditional television owners. The total sample N for the online survey of 1328 responses included 475 owners of televisions 40-inches or larger, 475 owners of televisions 30-36 inches, and 378 owners of televisions 29-inches or smaller.

Larger sample sizes (such as N=1000) are almost always desirable to smaller sample sizes (such as N=200) in order to gain statistical precision for national studies. However, large samples are not always practical. Therefore,

> "[T]he number of observations to be included in the sample will be a compromise between the desired accuracy of the sample statistic as an estimate of the population

parameter and the required time and cost to achieve this degree of accuracy (Ott & Longnecker, 2001)."

When using a national online survey panel such as *Zoomerang*, the limiting factor in order to determine sample size is often cost. For some research questions (such as issues regarding large-screen televisions), most national panels don't ask specifically for large-screen television ownership. Therefore, the effort to screen out large-screen television owners from the greater pool of regular television owners can increase the costs dramatically. However, the *Zoomerang* panel did generate a targeted list of large-screen television owners which reduced the need for screening questions and decreased overall costs.

Johnson (1989) reported an N of 415 which was deemed sufficient enough to not seek greater response through follow-up contact. For this research according to the funding obtained, a minimum of at least 800 respondents (400 large-screen households, 400 smaller screen households) was sought to enhance statistical precision in a comparative survey. Due to a higher response from traditional television owners on the first tranche of the survey, the total N for the study was 1328.

Sample Generation

The sample for the survey was generated using the panel attribute designations mentioned previously in the methodology of the *Zoomerang* panel. One of the 500 original profile attributes allowed panelists to designate whether they owned a traditional television in addition to many other items. A follow-up survey sent to update attributes inquired whether the panelists owned a large-screen LCD or a large-screen plasma television. From this inquiry into the overall panel, a list of approximately 4000 owners of LCD large-screens and approximately 1500 owners of plasma large-screens was generated. The combined group of 5500 panelists were then randomly listed in a large-screen television sampling pool. Thus, a comparative sampling frame

was generated with large-screen and traditional television owners represented. The sampling frame was further divided to control for gender. The study employed, therefore, four sampling pools: females owning large-screen televisions, males owning large-screen televisions, females owning traditional televisions, males owning traditional televisions.

Administration of the Survey

A sequential sampling method known as disproportionate stratified sampling was employed in the study (Tinkham, 2008). The online survey was implemented in three phases over a three day, weekday period on June 10-12, 2008 (see Table 4.4 for survey invitations and response within four sampling pools). Due to the questions that referred to "watching television yesterday", the sample was implemented in split releases over Tuesday, Wednesday, and Thursday. This assured that the respondents would be referencing their television viewing on Monday through Wednesday. Research by Nielsen Media has shown that the most primetime viewing occurs on Sunday night followed by Tuesday night, Monday night, and then Wednesday night (*Average U.S. Home Now Receives a Record 118.6 TV Channels*, 2008). The survey implementation occurred during the early part of the week where primetime viewing was consistent across all categories of viewers. There were no news events or other abnormal occurrences that would affect normal viewing patterns during the three days.

Each of the three sequences of survey invitations were sent via email to panelists in the early morning. The invitation to complete the survey arrived in the morning when the panelist would readily recall the situation of their prior evening's activities. A 24-hour survey close was placed on each of the three survey tranches to provide even response across the three-day period. The decision to close each survey after 24 hours likely suppressed overall response rates. Due to the 24 hours closing of each survey tranche, no follow-up emails or reminder invitations (e.g.

multiple contacts) were sent to increase response rates as recommended for increasing survey response rates (Dillman, 2007). The overall response rate for the survey was 12.8% which is within the middle range (5%-20%) of the estimated overall *Zoomerang* panel response rates (Wilner, 2008). This response range is similar to a 2006 Harris Interactive reported range of 7% - 40% (""An interview with our panel expert: The top questions about Harris Interactive's Internet Research Panel," 2006). Although some online panel response rates were reportedly high in the early days of online panels, online panel response rates have declined significantly trending lower than response rates in traditional survey forms, prompting research on how to maximize online response rates (Neslin, Novak, Baker, & Hoffman, 2006).

The first survey yielded a higher than expected response by both male and female traditional televisions owners (see Table 4.4). Based on those response rates, the number of invitations sent to each sampling pool were adjusted for the last two surveys to more accurately reach the completion parameters of the study. Therefore, parity in number of large-screen owners versus smaller screen owners was not reached. Gender parity of the sample was achieved. The higher survey completions (N =1328) provided sufficient response for comparative data analysis.

Institutional Review for Human Subjects Research

Approval to administer the online national survey by the university's institutional review board for human subjects was granted June 9, 2008 (see Appendix K for the online consent form that appeared as the welcome page of the online survey).

Funding

In order to account for the costs of the research that included both the focus group expenses and the fees associated with conducting a national online survey using an established national

opinion panel, grants were secured for both phases of the study. The Grady College's Broun Dissertation Fund provided important funding that supported the focus group discussions. In addition, the James M. Cox Jr. Institute for Newspaper Management Studies generously contributed funds that helped make the national online survey a reality.

The results for the Phase II survey are discussed and detailed in Chapter 6.

Table 4.1: Phase I Summary

Phase I: Focus Group Summary
■ Five (5) Focus Groups
■ Thirty-six (36) Participants (8 women, 28 men)
■ Conducted between Feb. 19, 2008 – April 2, 2008
■ Three (3) locations in two (2) Georgia cities

Table 4.2: Date, Location, Incentive Offered

Date, Location, Incentive Offered Phase I: Focus Groups 1 – 5 (# of participants)
#1: Athens-Clarke County Public Library (4) Feb. 19, 2008 -$15 Charity
#2: YMCA (Athens, GA) (7) March 4, 2008 -$15 Charity
#3: YMCA (Athens, GA) (6) March 18, 2008 -$30 Cash/Charity
#4: Chimney Lakes Clubhouse (Roswell, GA) (7) March 26, 2008 -NO INCENTIVE
#5: YMCA (Athens, GA) (12) April 2, 2008 -$50 Cash

Table 4.3: Phase I Participant Recruitment Sources

Phase I: Participant Recruitment Sources (36 Total Participants)	
■ Advertisements in public venues	(1)
■ Charities	(1)
■ Street contacting/Shopping venues	(3)
■ Personal friendships and networks	(14)
■ Professional friendships and networks	(17)

Table 4.4: Online Survey Invitations and Response

		Online Survey Invitations and Response				
		Female/ Large-screen	Female/ Standard TV	Male/ Large-screen	Male/ Standard TV	**Totals**
Tues. 6/10/2008	Invitations	921	2127	429	2241	**5718**
	Completes	105	252	51	274	**682**
Wed. 6/11/2008	Invitations	625	624	660	421	**2330**
	Completes	68	85	83	77	**313**
Thurs. 6/12/2008	Invitations	625	624	661	421	**2331**
	Completes	68	105	86	76	**335**
Totals	**Invitations**	**2171**	**3375**	**1750**	**3083**	**10,379**
	Completes	**241**	**442**	**220**	**427**	**1330**
	Response Rate	**11.1%**	**13.1%**	**12.6%**	**13.9%**	**12.8%**

CHAPTER 5

PHASE I: FOCUS GROUP RESULTS

This chapter will discuss results derived from the five focus groups conducted in Phase I of the two-phased study. Focus groups for this research were conducted in the greater Athens, Georgia and Roswell, Georgia communities (see Table 4.1 for a focus group summary). Five focus groups were conducted between Feb. 19, 2008 and April 2, 2008 (see Table 4.2 for dates, locations, and attendance) that ranged from four participants (first group) to twelve participants (fifth group). The average group size was 7.2 people across all five focus groups (see Table 4.2).

As is common to focus group research, the participants in the focus groups consisted of a convenience sample found in the greater Athens, Georgia and the Roswell, Georgia communities. Respondents were sought through colleagues, friends, neighbors, acquaintances, churches, community organizations, and retail stores (e.g. personal contacting and advertisement flier placed in Circuit City & Best Buy retail electronics stores. See flier, Appendix C. For a list of recruitment sources of respondents, see Table 4.3.). Respondents were screened in person and via phone and email. To be eligible to participate, persons had to own a large-screen television as well as be a principal viewer in the home. Reminder phone calls and emails were sent the day prior to the discussion.

For a detailed methodology of the focus groups phase of the study, see Chapter 4.

Findings

The findings of the focus groups will be organized in the general order of the research questions of the study. For some research questions, the focus groups will be the principal mechanism for answering the questions. For others, the second phase of the study (national online survey) will answer the questions more precisely.

The findings from the focus groups now follow.

Participant Demographics

The first research question of the study asked about the general demographic make-up of large-screen owners. For analysis of the focus groups, a brief description of the general demographic background of the respondents helps contextualize the findings presented hereafter. In total, thirty-six people participated in the five focus groups. Each focus group participant completed a demographic questionnaire at the end of each session. Data analysis software (SPSS) was used to analyze the demographic questionnaire.

A complete listing of the demographic information compiled through the questionnaire can be found in the following tables at the end of Chapter 5:

Table 5.1: Focus Groups Participants: AGE
Table 5.2: Focus Group Participants: MARITAL STATUS
Table 5.3: Focus Group Participants: RACE
Table 5.4: Focus Group Participants: EDUCATION
Table 5.5: Focus Group Participants: GROSS HOUSEHOLD INCOME
Table 5.6: Focus Group Participants: CHILDREN IN HOME

Participants in the focus groups represented diverse ages of the adult population in the Athens and Roswell Georgia communities. The average age of the participants across all five focus groups was 43 years old. However, the median age of 46 years old and the mode of 56 years suggest a slight skew toward the older population in the sample. The ages ranged fairly evenly between 18 years old up to 76 years old, giving the sample a robust cross-generational

representation. Twenty-five of the thirty-six participants were male with the other eleven being female.

The overall make-up of the respondents contained great homogeneity in the areas of marital status, race, education, and wealth. Twenty-nine of the thirty-six participants were married, 2 of 36 were divorced, and 5 of 36 were single (never married). Twenty-four of thirty-six participants had children living in their home. Thirty-four of the thirty-six participants were white (Caucasian) with only one African-American and one multi-racial participant represented. The participants were largely from the educated segments of society. Sixteen of thirty-two respondents reported attending or completing graduate school. Twenty-seven of thirty-two respondents reported at least attending or graduating from undergraduate college. Five of thirty-two respondents did not have an undergraduate or graduate degree. Lastly, the participants were largely from the more prosperous segments of society. Sixteen of thirty respondents reported household income of $100,000 or more each year. Nine of thirty respondents reported household income of between $50,000 and $99,999. Five of thirty people responding to the question earned less than $50,000 per year.

In summary, the respondents for the five focus groups appear to represent a demographic of television viewer that consumes cutting-edge programming and technology who is distinct from traditional television viewers in the current market. Krugman (1985) categorized television viewers across traditional TV homes, basic cable, and pay cable homes finding demographic differences. The demographics of the focus group participants suggest a more current distinction of television viewer that is more affluent, more educated, and middle aged who enjoys the best of the newest television technologies as indicated by the large-screen television ownership. Although there is a good age representation and a reasonable gender split among the participants,

the homogeneous sample according to race and income largely reflects the perceived makeup of the middle-to-upper socio-economic class in the communities of Athens and Roswell Georgia.

Television Data from Participants

A complete listing of the television-related information compiled through the questionnaire can be found in the following tables at the end of Chapter 5:

Table 5.8: Size of Television in Inches
Table 5.9: Years of Large-screen Ownership
Table 5.10: Television Cost
Table 5.11: Number of Televisions in Home
Table 5.12: Monthly Bill for Television Services
Table 5.13: Ownership of Other Television Cluster Technologies in Home

On average, the participants of the focus groups owned televisions that were 49.5", suggesting a group who collectively owned and experienced television on screen sizes that were significantly larger than televisions in the general population. The smallest television size reported was 37" inches. The largest television size reported was 65". Nine of thirty-three participants owned a 42" television. Six of the thirty-three participants owned a 60". One participant owned two 60" televisions. The mean score for length of large-screen ownership was 2.3 years. The average price paid for the large-screens was just under $2,200. The price range, however, spanned from receiving the television as a gift (e.g. "free") up to $8,000. The higher prices reported above $3,000 appear to reflect purchases prior to the dramatic reduction in prices due to increased competition in the recent period (2006-2007). Therefore, the median price paid was $1,700 which reflects a skew toward the less expensive purchases as the prices for large-screen televisions continued to decline.

The participants, on average, owned 3.25 televisions per household. This is more than the US average of television ownership per household of 2.8 (*Average U.S. Home Now Receives a Record 118.6 TV Channels*, 2008). Some participants owned just the large-screen as their only

television. In contrast, one participant owned eight televisions with two other participants owning seven televisions. All but one participant were customers of either a cable or satellite television system. The average bill for monthly television services reached just over $80 per household. The range of bills, however, went from no services ($0) to another participant paying $176 per month.

Finally, the participants reported other technologies or services that they own or to which they have access. Twenty-seven of thirty-six participants subscribed to high-definition television channels (HDTV). Nineteen of thirty-six participants owned a digital video recorder (DVR). Eighteen of thirty-six respondents owned one or more gaming systems such as XBOX, PS2, or Nintendo's Wii. Thirty-four of thirty-six participants owned a DVD player whereas only seventeen of thirty-six stilled owned a VHS player.

The breakdown of the television-related information for the sample helps inform the legitimacy of the overall panel of respondents by establishing their ownership of large-screen televisions (average 49.5" screen) with access to high-end programming and dependent technologies such as gaming devices and DVRs.

Conceptual Issues

The second research question of the study asked how viewers conceptualized large-screen televisions. Screen sizes continue to grow, and consumer perceptions of what is large and small continue to adjust. Although there is an industry consensus of what constitutes a large-screen television (see Figure 2.3), screen sizes continue to grow creating an upwardly adjusting perception of what constitutes "big" or "large" in the consumers' view. In a not too distant past, 25-inch and up to 37-inch televisions were the large screens in the market. During the focus

groups, televisions in those sizes were disparaged as no longer desirable nor adequate (emphasis added by underlining)

> "[My television] is not that big in the first place, it's only a 37-inch, because the room is not that big, and a big-screen TV would just throw us out of there, visually."

> "Some of these folks have a 50-inch, you know…and they're not giving that up to come watch the game on my 27-inch puny."

> "It's just a night-mare 27-inch television. Yeah, it's just a 27-inch or whatever. But realize, the other is a 42-inch, though."

Some of the participants used the technical limitations of the cathode-ray tube (traditional tube technology) to set the standard breakpoint between regular screen and large-screen televisions at 36-inches. Therefore, the definition of a large-screen television involved the technology used rather than just the screen size. This is a significant finding for the construct of screen size. Screen size, as a variable, is being routinely connected to technological considerations.

> "Thirty-six is the biggest tube TV you can get. Once you get above a tube TV, when it is a projection or an LCD or something of that nature, it's a big screen."

Thirty-six inches was broadly recognized across the first three focus groups as the upper limit of the "normal" televisions. Although televisions between 30-inch and 36-inch may have been referred to at various points in the past as large televisions, the concept of a large-screen television in the current conception was birthed amid the development of new television technologies such as plasma, liquid crystal display (LCD), and rear-projection. Therefore, the distinction of screen size as a stand-alone variable may be diminishing in consumer perceptions. The implications of this finding will be further explored in this study when discussing the relationship between screen size and digital resolution.

The consensus of the focus groups put the large-screen entry-point at or around 40-inches. Screens of 37-inch to 39 inches operated in a "between-zone" and would likely also be considered large-screen. However, not many televisions are produced in that size and most use new technology indicative of "large-screens".

> "Forty (inches) is where the large-screens start, as far as technically."
>
> "[Forty inches is] what I thought was the entry into a large screen TV…That's where I put the threshold."
>
> "I was looking for the 42-inches, because that's where I thought…a big screen would start, is about 42, maybe 37, but I think it's probably up to 42 now."

Although the entry point of around 40-inches was recognized by the focus groups as a starting point and the technical definition by the industry, many respondents also suggested that 40-inch televisions were insufficient as a common idea of large-screen televisions. Televisions in the range of 50-inch to 60-inches were declared to be the more acceptable definition of large-screens. The following are a sampling of the many responses in agreement:

> "Everything is relative, like how big the room is and where you're sitting in the room. But, I think the definition of a large screen is [55" or bigger]."
>
> "Fifty-five inches, I guess maybe because the company I keep. Most people I know have televisions those sizes. In fact, most people, a lot of people I know have one even bigger than that."
>
> "If you have a house with a big room, a television the size of number four (40-inch) is just going to be swallowed up."
>
> "I picked [55-inch] because a lot of people I know have televisions that big, and anything smaller than that, now to me, looks small."
>
> "I visit a lot of families in my work, and I've seen TV's as high as the ceiling, and I just kind of decided when I started looking that [55-inch] is the minimum size."

Using these focus groups as the measure, the current conceptualization of "big-screen" or "large-screen" televisions—when referring only to the actual size of the screens in inches—

begins at 40-inches, but is rapidly expanding to a consensus much larger than that. Future conceptualizations of large-screen televisions may even exclude 40-inch to 48-inch televisions as larger televisions are produced and diffused into the broader consumer market.

A Consumer Hierarchy of Television Innovations

The second research question of the study also sought to differentiate digital signals, wide screens, and large-screens. As was detailed in Chapter 2, the traditional tube television (CRT) has had three very distinct characteristics: 1) It operated using an analog signal of radio frequency waves for transmission 2) Its traditional box shape had a 4 x 3 aspect ratio 3) Its overall size by technical limit was less than 37". The current television landscape has produced major innovations on all three of these traditional tube (CRT) television characteristics, and most of these innovations have occurred in synchronized form. Digital signals with optional High-Definition signals replaced analog signals by government mandate. Television screens have been made like movies screens with a 16x9 aspect ratio. New technologies have allowed for mass production of screens larger than 37-inches. In addition, the arrival of the digital video recorder (DVR) contributed to the ongoing changes in television consumption in the home. In many cases, the adjustment for the consumer to these four major changes occurred approximately at the same time when older tube televisions were replaced with newer technologies.

> "[Getting TiVo] was correlated with [high-definition] and a big-screen TV all at one, so our viewing changed dramatically all at one time."

An early finding in the first focus group revealed that these four major variables—digital and high-definition reception, movie screen shape rather than the old "box" TV format, large sized screens, and DVRs—needed to be assessed and prioritized using the collective experience

of the participants. Participants were most willing to extol the benefits of the high-definition programming and the control given them by the digital video recorder. Similar discussions in subsequent focus group continued to emerge with participants wanting to discuss the DVR and high-definition clarity rather than screen size as the topic of interest.

> "I think, again I hate bringing up HD, because I know that's not what you're talking about here…That's what I got with this new system that I put in just last December and I've got the TiVo feature to it. And because of that, my television [viewing] has decreased…"
>
> "It has to do with the large-screen, but more so high-definition."
>
> "Maybe you should be studying the DVR (rather than large-screens)."
>
> "I don't know it is the size of the TV that's really important…I don't think the size matters. It's the quality again (resolution). That seems to be the focal point."

A hierarchy of new television technologies emerged from the discussions comparing and contrasting the four new television innovations. When comparing the usefulness, importance and general excitement for the four technologies, the digital video recorder (DVR) was the most important technology for the focus group respondents. High-definition digital resolution was the second most desired technology. Large-screens were the third technology in the hierarchy and were valued for the supporting role in delivering high-definition content that could be displayed at the specific time and choosing of the viewers. The enhanced wide-screen format in the shape of theater screens was appreciated but largely taken for granted in the context of the other innovations. Each of the four television innovations will now be discussed in the context of the focus group findings.

Digital Video Recorders

As mentioned previously, the digital video recorder (DVR) was found to be the most prized and valued television innovation by the focus group participants: more than clarity, screen

size or screen format. The collective responses to questions about DVRs generally included superlatives in satisfaction. A sampling of the many responses now follow:

> "The HD is absolutely fantastic. The big screen is wonderful. But the DVR has given me so much more control over my life. The DVR is absolutely the best."
>
> "Once you have it, you can't live without it."
>
> "It's amazing!"
>
> "[When you are] watching something, the phone rings, the baby cries, PAUSE. Pause! Or you miss something? 'What did they say?' REWIND…ahh, I can't live without it."
>
> "[T]he Tivo is just fantastic. You've got what you want, when you want it, stop it, pause it, turn it off if you don't like it. Just, you know, you can just shop and have what you want, rather than just waiting on the program, and relying on the hour or the time that it's coming on. Did I [just] sell a TiVo or what?"
>
> "But the one thing I love about television is I am a treadmill fanatic, and I got to have something to watch when I'm on the treadmill, and that DVR has revolutionized my life."

Other research has already detailed the conceptualization and use of the DVR for giving control to the consumer in home media consumption. Smith (2005) found that the DVR changed the television viewing equation by granting editorial control to consumers. The DVR enabled consumers to override the decisions by media organizations and to take greater control over the types of programming and commercials by pre-selection, recording, scheduling, and manipulating content to suit their tastes, preferences, and time availabilities. The DVR functionality, thereby, changed the thinking about television viewing by creating a decision-maker in the home rather than a viewer (Smith, 2005). The respondents in the focus groups for the current study helped further clarify this preference as it relates to large-screen televisions and high-definition digital.

> "I think the DVR has actually made a bigger difference than the big-screen TV."
>
> "That would be an interesting thing to have to sit and think about: the DVR, the HD, and big screen; if you had to give up one. But I think it would be the TV, the screen. I've

only had the HD for four months. I'm sure I could give it up if I had to, but I sure don't want to. But I like the DVR probably better."

DVR services (such as TiVo) may be initially an add-on product to the television cluster in the home. However, once implemented into the viewing situation, the DVR gained great popularity in creating a large change in the way that television is consumed in the home.

Digital Programming

The second most valued—and probably the initial reason to upgrade televisions—is the innovation in digital broadcasting. The upgrade in signal technology from analog to digital signals occurs at several levels including multiple definitions and specifications (see Figure 2.1 for digital television definitions). Most of the television market has automatically received an upgrade in signal quality and resolution. Standard definition digital signals have been connected to cable and satellite systems with no effort or cost to the consumers. A few of the focus group participants noted with approval this standard digital upgrade.

"We don't get any high-def. channels out in the middle of nowhere, but the quality of the picture on standard definition broadcasts is double what it was even on our 32-inch. So even without the high-def signal, the quality difference is huge, especially when watching DVD's. Even on our 32-inch the DVD's were comparatively fuzzy and blurry. You scale that up twice to 60 inches and it's sharp and clear, and much more enjoyable to watch."

The standard digital signal—which represents a significant upgrade in signal quality over analog—has already been surpassed with high-definition signals. With over three-quarters of the focus group participants subscribing to high-definition digital channels, the analog-to-digital leap has been magnified in the minds of these premium television consumers. The quality differential between High-Definition TV and Standard Definition TV elicited a general consensus of the superiority of HDTV programming.

> "I'd say clarity, definition. You can really see some of the Hollywood stars. You see them in a magazine, you see them on HD, it's different. You know, there's no hiding. You can see the pores."
>
> "I mean, with those HD's, you can see the hair on the arms of the football players. I mean it's that detailed, you can see the sweat dripping off of them. It's crazy how crystal clear it is."
>
> "And with HD the clarity and definition of the picture is just so superior to analog and my experience is with the satellite cable HD packages…And the packages, they seem to want to show those things off. I mean they're just tremendous programming in terms of nature series, travel logs. Last week I went to Cambodia in my living room. The week before that I went to Singapore; we just keep on traveling, and it's just terrific, from an educational standpoint, just my experience, and I'm thoroughly enjoying it.

Many of the respondents concurred that with HDTV programming, Standard Definition TV digital broadcasts are not acceptable as a matter of principle.

> "Well, if it's not on HD, there's no point in watching it."
>
> "Some channels are high-definition, some are not. And if the game is not on high-definition, I'm probably not even going to watch it.
>
> "I won't watch anything unless it's in high-def."

The compelling quality of the digital resolution and high-definition programming is a beloved feature of the modern television.

> "I was just enchanted by the quality of the resolution of the screen, the quality of the picture. That was just so nice. I'm a visual oriented type person. Things that are crisp, clear, and you know, that's part of the display in the stores that show you some of the best movies and pictures. So I just kind of fell in love with that aspect."

With the variable of resolution introduced, the more complicated relationship between resolution and screen size will now be discussed.

Screen Size and Resolution are Inseparable

For the focus group participants who could be classified as a very knowledgeable segment of the viewing public, the variables of resolution and screen size were distinct and recognizable. Resolution represented the "quality" whereas larger screens represented

"quantity." The issue of quality via resolution took precedence over quantity via screen sizes. The participants largely favored quality of signal over screen size as a variable. Here's a sampling of the many responses of this nature:

> "[Y]ou don't want quantity without quality. I mean, if there's a great picture and I'm watching something like a Star War's type movie on a 32-inch screen and the picture's phenomenal, or I could watch it on a 60-inch screen, and the picture's just horrible, I'll take the 32-inch every time. But if I'm going to have the same quality with a bigger screen, of course I'd rather go that route.
>
> "Yeah, it's just not about how big it is, it also has to keep the quality."
>
> "Mine actually came not because of the size of the TV, but because of the HD, and you know, once I decided I was going to go with HD, then I decided to move to a bigger screen television."
>
> "[I]t has to do with the large-screen as well, but more so High-Definition, that's what's grabbing people's attention, just how clear it is, that's what they're talking about."
>
> "You have to have a good picture, even if it's small."
>
> "If it wasn't for HD, I probably wouldn't have gotten [the large-screen]."
>
> "I think High-Definition might be more important than TV size. For example, let's say a game is on TV, and it's not an HD, you can tune down the size of the screen, where it compresses those pixels, where it looks clearer, and I much prefer to watch that, than to watch the same thing on a bigger screen.

The preference for clarity and resolution over screen size, however, was not unanimous. For some respondents, the size of the screen was more important than High-Definition resolution.

> "To me, I'd rather have the big screen than digital…if I had to lose something. I love high-def., but I wouldn't give up the big screen. I wouldn't have high-def. on a little itty-bitty-screen."
>
> "I think screen size is more important than the HD. I mean, I just watch a game when it's on, I don't care about whether it's HD or not. That's just my opinion."

Ultimately, the focus group respondents concluded that quality picture and large-screen televisions go together and are inseparable. Having high-definition programming and capability is the *sine qua non* for owning the large-screen.

> "I think that High-Definition and large-screen televisions go hand in hand, and I find it difficult to separate the two."
>
> "You've got to have big screen and HD."
>
> "I'd say they go hand in hand. You don't get a large-screen and not get HD…You don't do one without the other. It's like buying a Porsche and keeping it in the garage. You don't do that. Yeah, you know, I mean people are going to do it, but you're not getting the true benefit."
>
> "Large-screen televisions without High-Definition are horrible. You can see the lines, and there's no point in buying a large screen before High-Definition."

The distinction of screen size as a stand-alone variable is likely diminishing in consumer perceptions. The respondents of our focus groups were able to correctly distinguish between digital, High-Definition TV, and large-screen television. As noted in the demographics of the focus groups, the participants also represented the more educated and affluent segment of the television marketplace. Yet, many of them see a melding of the two variables as it applies to the high-end television technology. As these technologies become standard in the television marketplace, it is unclear whether the average person will correctly distinguish between these variables. The colloquial use of the term "big-screen" or "large-screen" televisions already imply the inclusion of picture quality (and even wider screens) as one luxury media product. Speaking metaphorically, the large-screen is the luxury car; the high-definition clarity is the stunning guest. They both arrive together leaving one very favorable impression.

Wide-screen Format

The least exciting and noticeable of the four technologies was the wide-screen format in the 16x9 aspect ratio (similar to a theater/cinema screen in shape). The wide screen format enhanced the visual transfer of the theater experience to the home movie viewing experience. The feature is particularly noted for those viewers of movies in the home who try to replicate the theater experience. In the five focus groups, most participants cited watching movies as a

principal use for the large-screen television and noted the enhanced movie experience facilitated by the wide format.

> "I found too, that movies, because movies are formatted differently for television than they are for theaters, that now you can…actually get it where it's formatted for the letterbox edition, and you literally can see the entire view of what you can see in the theater, where before you're only getting about 2/3 of what you're actually seeing on the screen in the theater."

> "Especially now with the plasmas and LCD, they're wide screen, so you can see more of the movies, more of the HD programming, then you can on a tube [television[."

The groups, however, mentioned the wide-screen innovation with much less frequency and enthusiasm than the other television innovations. In the euphoria with the many changes to television architecture and functionality, the wider screens are valued but not obsessed over. As a majority of the newer televisions of all sizes adopt the wide screen format, the variable of the wide-screen will likely continue to be taken for granted in the consumer conscience and be largely included as a component of large-screen televisions rather than a separate innovation.

Large-screen Television Acquisition

The third and fourth research questions of the study examined the length of the acquisition process and costs for purchasing large-screen televisions.

Length of Purchase Decision

The large-screen television has become a major purchase rather than a discretionary or incidental purchase. As such, the purchase of a large-screen often requires much more time to appropriately understand the technical complexities, to plan, to purchase, to install, and to trial. For a large majority of the respondents, the purchase cycle took, on average, between a month and six months. Many, however, took much longer than that. Some of the typical responses citing variable purchase lengths now follow:

> "Honestly, with the intent and the motivation to do it, about a year. But I'd say, going back, wanting to do it, about 2 years."
>
> " I'll say, we had a little tiny TV in our giant room, and it was probably 3-4 months, maybe 6 months, till we bought our big one."
>
> "About 7-8 months."
>
> "It was a matter of weeks, probably, maybe two months tops in terms of the time from when we thought, when I thought, 'You know, that would be what I'd like to do with it' to the time we bought it."

As a major purchase, greater planning and saving generally occurred creating a greater delay from the point when people wanted to buy the large-screen to the date of actual purchase. Respondents reported purchase processes spanning from impulse, on-the-spot buys all the way to ten years of planning and waiting.

The respondents with a short purchase cycle did not seem to have a great appreciation for the complexity of the large-screen technologies, nor did they seem to consider in any methodical way the costs involved.

> "I'm a spur-of-the-moment type of guy. I had a really big job. I had three grand ($3000) in my pocket, and I was like, 'Holy #%&*! I'm buying that!' So, it was like that (snaps his fingers). Then somebody tried to talk me out of it, and I was like, 'No, because if I leave this store, I know I won't ever do it. So, take it."
>
> "My television went out and I was having company that weekend, and we have a big, huge room and I have a big kitchen, and I wanted a television I could see from the kitchen. So I walked into Best Buy (retail electronics store) the next day and bought one."

In contrast, others with a purchase process of several weeks to several months were much more thorough in the evaluation of the technologies available and the prices.

> "Once I decided I was going to go with HD, then I decided to move to a bigger screen television…and I over-research stuff, I know. And so I really researched the daylights out of it, and it probably took me 4 weeks to decide what I was going to buy and then I looked for the best price on what I decided I was going to buy."

Even though the technical complexities and implementation are more significant with large-screen televisions than prior televisions, the principal reason reported for the longer purchase cycle was price and cost concerns. For many respondents, the research phase of the purchase led to a waiting period that was cost-related. They waited over periods of years in order to obtain the desired television at an agreeable price.

> "I waited about three years before I made the purchase, waiting on the right price that I was satisfied with; more than just buying what was on the shelf when I first became attracted to the televisions. So, a little patience paid off."

> "I kept waiting for the price-point to come down…So for two-plus years I have just bided my time…[W]e wound up with a 42-inch."

The purchase decision is often correlated with the purchase of a new home or a major home improvement. Such transitions where large financial transactions occur and major projects are completed create a window where large-screen purchases are more easily justified.

> "I'd say, once we found a house (*upgraded, new home*), and put the contract on the house, we bought [a large-screen television], because we wanted it to fit in, and to be a certain way."

> "[W]e were moving into a much larger living room, and that was a condition of our move. 'We're getting a big-screen TV', you know, 'You're getting hard-wood floors, I'm getting a big-screen TV.'"

Lastly, as large-screen televisions become major purchases with prices in the thousands of dollars, some of the respondents received their large-screens as significant gifts from family members.

> "Ours was sort of an inheritance from my dad. And my dad called and asked me if we wanted it, and I said no, but I would ask my husband. And within seconds we were planning on how to get it to our house."

> "The big-screen TV was a gift for finishing my Ph.D. I wasn't quite done with my Ph.D., but the old TV died, so I begged the gift off my mom beforehand."

Cost

The cost of the large-screen televisions is a significant consideration to the overall purchase equation. Large-screen televisions represent a significantly greater investment of resources than prior televisions. As such, the costs have to be budgeted as a major purchase rather than a discretionary purchase.

> "[Y]ou have expenses, and there are priorities in those expenses. And how can I justify spending 8,000 dollars on a TV system if I have this over here to do, or this over here. It's very difficult to do…So, I mean, cost is an issue, but if I had to do it over again, I'd still do it. You can only pull that kind of trigger every 10 years…You can't go out and do this every couple years…It's too expensive."

For the focus group respondents, the average price paid for the large-screens was just under $2,200. The price range, however, spanned from receiving the television as a gift (e.g. "free") up to $8,000, as mentioned by the respondent above. The higher prices reported above $3,000 appear to reflect purchases prior to the dramatic reduction in prices due to increased competition in the recent period (2006-2007). Therefore, the median price paid was $1,700 which reflects many of the purchases occurring within the prior twelve months when the costs have declined (see Table 5.9).

For the respondents on the fringe of large-screen affordability, stealth purchasing was required in order to find a large-screen television at a lower, affordable price.

> "I waited until the new models came out, and I bought the old year's model that was on sale."

> "Oh, you would not believe! We got a 60-inch screen HDTV for $499!!...The Day-After-Thanksgiving Sale, I'll tell our secret: We jumped the line. We jumped 300 people, and snuck in the front door, and ran to the back, and got one of the four that were there."

The purchase price, however, was only the significant first step in costs. As premium technologies, premium cable or satellite services and other content are likely to follow. These monthly costs are often significant. For the focus group participants, the average bill for

monthly television services reached just over $80 per household (see Table 5.11). The range of bills, however, went from no services ($0) to another participant paying $176 per month. Participants cited the higher monthly costs as necessary expenses for entertainment associated with buying the large-screen.

> "It's entertainment. [It's] just one of those things you just suck it up and do it. If you're gonna pay the money to buy the TV, there's no reason to get the TV if you're not gonna use it for the purpose."

> "We pay $112 bucks, something like that, for cable…You budget for it…[I]f we augment the plan down a little bit…you're not gonna save that much in the long run."

The unnoticed cost that nobody in the focus groups ever mentioned involved the increased electrical power requirements of large-screen televisions. None of the respondents noticed or mentioned that the addition of a large-screen television alone would raise one's monthly household power bill, particularly for those people who are either heavy television viewers or who otherwise just leave the television on when they are at home. The Natural Resources Defense Fund reported that large-screen televisions require significantly more power to operate than previous televisions, much like having another refrigerator drawing power in the home (Ostendorp et al., 2005).

Television Cluster

The fifth research question of the study asked what other technologies would be included in the large-screen television cluster in the home. The DVR (digital video recorder) and high-definition (HDTV) services have already been discussed earlier in the chapter as it relates to the conceptualization of large-screen televisions. In addition to these already discussed technologies, other systems such as gaming devices, Blu-Ray Video players (high-end visual clarity and audio for home movies), standard DVD players, and traditional VHS players were

often mentioned. Computers and Internet connectivity were also mentioned, but these functionalities of mixing the computer capabilities and Internet with the television technology cluster were not deemed useful in any of the focus groups.

Using the questionnaire administered at the end of each focus group, twenty-seven of thirty-six participants subscribed to high-definition television channels (HDTV). Nineteen of thirty-six participants owned a digital video recorder (DVR). Eighteen of thirty-six participants owned one or more gaming systems such as XBOX, PS2, or Nintendo's Wii. Thirty-four of thirty-six participants owned a DVD player. Seventeen of thirty-six participants owned a VHS player which reflects the general decline in VHS use.

The second part of the research question asked about the general technology environment of the home. It was clear that a majority of the respondents were engaged technology consumers across the range of personal consumer technologies. References to cutting-edge cellular phones, Blackberries, laptop computers, home wireless Internet connectivity, BlueTooth (wireless radio frequency) transmission, and other technologies often seasoned the discussions. Eighteen of the thirty-six participants reported ownership of at least one gaming device (which can range in price up to several hundreds of dollars), but five of those participants also reported owning multiple systems up to as many as four (PlayStation 3 system, XBOX, Nintendo's Wii, GameCube, etc.).

High use of the Internet in the home and during television viewing was also often mentioned in conjunction with large-screen viewing. As a natural conclusion, many owners of large-screen televisions are heavy consumers of home technologies across the spectrum of the television, computer, and personal technology clusters. The multi-technology nature of the participants further supports the distinction of large-screen viewers being different from other segments of the market mentioned previously in the chapter (see Krugman, 1985). In addition,

large-screen viewers likely pertained to the early adopter and/or early majority distinctions as amply described in the diffusions of innovations literature (Rogers, 1983, 1995, 2003).

Home Placement

The sixth research question of the study asked where large-screen televisions are situated in the home. The question asked about the adjustments or interior arrangements that occurred in order to accommodate the set.

When large-screen televisions are purchased, the owners must make interior layout decisions that they did not likely have to make with prior televisions. The visual distance needed for optimal viewing increases (Ramsay, 2006). Viewing large-screens at distances less than the recommended distances can create visual blurring and sometimes vertigo for the viewer. For some of the respondents in the focus groups, however, the large-screen needed to be placed exactly where the previous television was placed. Apartment living or small home structures, by default, require the television be placed in the living room in a specific place, whether large or small.

> "I've been in apartments for like ten years, so there's really only one place in any given apartment to put one, which is wherever the cable jack is."

> "[I] just put it where the old one was."

In many cases, that location in the living room is the optimal placement.

> "It's in the living room, just directly in front of the sofa, nice and big. Absolutely. I mean, just right in the center, optimal viewing, no angle, just straight ahead."

A few respondents placed their large-screens in the bedroom. Others placed the large-screen in the basement or a recreation room. On the whole, however, most of the large-screen televisions

were placed in a large, public room where a home theater experience could be approximated and shared with family and friends.

Many of the respondents who owned flat-screen panels placed them up on the wall. Part of the allure of the flat screen plasma or LCD televisions is the ability to save space as a result. In effect, the large-screen flat panel takes the place of a large picture on a wall, freeing up the space where large CRT televisions and their accompanying stands or furniture previously sat.

> "I wanted one that went on the wall. Yeah, I was tired of the big bulky television… Just had to slap one of those things so we could hang it on the wall, you know, just the stand. We didn't have to do anything architecturally to it."

> "That's one of the biggest reasons we also got that (flat screen) is because it saves space."

> "I was able to do away with an entertainment center, and put like a bookcase or something there. It made so much room being able to put it up on the wall."

There is also a social desirability component to owning flat screens. Flat screens can be placed in a very public, conspicuous area such as a living room or even an entire media room. A large-screen, flat-panel television mounted on a wall in a beautiful interior setting is a token of socio-economic stature. This contributes to the aesthetic qualities of the setting.

> "[My television] is pretty. I love it. Just the glossy black, it's elegant…it looks classy, I think. Like some of [other large-screens look] just like a TV. But, I don't know, just the glossy black trim around it. Even when it's turned off with the black screen with it, I think it looks nice. That's why I went with the Samsung because that's the way it looked."

> "I show it off a lot, when people come in…I do. Everybody likes it…So when people come in, I make them sit on the couch and watch it."

Conversely, there were some respondents who thought the large-screen television ought to be less conspicuous. Often this was accomplished by making or purchasing large cabinets or other furniture in order to hide the television when desired.

> "Our [television] is in a place where you can cover it up if I don't want to see it. It's not a fixture of the room…I know, maybe I thought I didn't want to look at it, but I never

close my cabinet. I have the ability to hide it. I planned that, I built…a cabinet to close it."

"So the only place for us was in our living room where most people put their TV. The deal my wife made with me was if we were going to have such a big monstrosity, was that we had to have a nice cabinet to go around it…The built-in [cabinet] is twelve foot tall and nine feet long. It's huge, but it's nice."

In summary, the focus group respondents ranged across the spectrum in the amount of preparation, thought, and interior adjustment they exerted when introducing the large-screens into homes. Although some of the respondents made significant interior rearrangements to certain rooms, none of the respondents made any architectural adjustments to their homes in order to accommodate the large-screens.

The following respondent demonstrates how these factors mentioned previously can impact a single situation. The situation included the decisions made about proper distance from the screen, an entire change in the interior layout of the living room area, the complexity of the wiring, and the sheer magnitude of the task. The quote is left in almost complete form to demonstrate how all of these considerations can come to bear at the same time when a large-screen television is placed in a home.

"Initially we put [the large-screen 60-inch] where our old television was because we were too lazy. But as soon as we got the motivation, yeah, we flipped the entire room like 180 degrees…Twice. We had to run wires and we went to a lot of effort. Because it's such a focal point for our living room, it changed the whole design of our layout. Where our old TV was was close enough to the couch that you know, we had a 32-inch originally, and it was close enough to the couch that it was a real decent distance. When we got a 60-inch, and sitting six-and-half feet away from a 60-inch, you know, you've got to turn your head to see all the action. And so we had to make a pretty severe rearrangement…We have a surround sound system running, you know, eight sets of wires. Plus when we built the house, we built it with the intention of having the television on one wall. But, you know, when we got the big [television], we had to run cable all the way around the room, and it ended up being…a heck of a project. And, the first time we didn't get it right. We had to do it again."

Other than the somewhat obvious finding that large-screens are largely placed in living rooms, no clear pattern emerged in how a majority of people would accommodate and adjust the large-screen in their specific circumstances.

Innovation

The seventh research question of the study sought to place the large-screen television within the framework of innovation as discussed by Rogers. Rogers (1995) analyzed the characteristics of an innovation as perceived by individuals using five criteria: relative advantage, compatibility, complexity, trialability, observability. The analysis of these innovative characteristics as they applied to large-screen television followed the pattern established by Smith (2005) when assessing the DVR. For large-screen televisions in this study, relative advantage and compatibility were high. Observability/trialability and complexity were found to be moderate for large-screen televisions.

Relative Advantage

Relative advantage of large-screen televisions over previous televisions was high. The findings of the focus groups revealed that there is a clear and obvious relative advantage to large-screen televisions over their predecessors. The large-screen itself portrays its immediate advantage.

> "I've always wanted a big-screen television, you know, just the Wow! Factor."
>
> "My parents own a big screen TV and I watch it all the time. I like it a lot…It's pretty 'sick' (e.g. slang for really cool)."

As noted earlier, part of the perception of superiority for "large-screen televisions" actually involved digital signals and high-definition. The large screens with enhanced clarity brought a compelling proposition to the potential buyer such that consumers were willing to pay significant

sums to obtain them. The very clear public perception of large-screen superiority over older televisions was driving the continued diffusion in the market and helping to drive down prices.

Compatibility

Compatibility of large-screen televisions with previous television was also high. Compatibility refers to the user perception of consistency with prior experience and values. For large-screen televisions, users viewed large-screen televisions as naturally compatible with their accepted social use of television. Viewing habits and attitudes were likely established with prior television experience. The large-screen offered a compatible but enhanced television experience.

> "I used to apologize for watching all the television that I watched…I do watch a lot of television…and I've learned not to apologize for [it]."
>
> "We're Americans. We watch TV…That's what we do."
>
> "See with my wife, she feels guilty if she watches too much TV. Where with me, I feel no guilt. None."

Large-screen televisions were also given to respondents as important gifts or inheritances. Two of the participants received their large-screen televisions as part of a living inheritance and a gift to commemorate finishing doctoral studies. The gifting of large-screen televisions in formal, filial settings signifies a social compatibility understood and accepted by both the givers and the receivers.

Observability/Trialability

Observability and trialability when referring to large-screen televisions were moderate. Observability and trialability are roughly identical constructs for large-screen televisions because to observe the television is also a form of trial. Observability and trialability are essential for potential large-screen purchasers to properly experience the technology and to desire that experience for one's own home.

> "I had a close friend who watched football games. He had a wide-screen, high-definition television [and invited me to watch with him]. After that…'We're getting a big-screen TV'…Seeing it was believing."
>
> "I just like shopping at Best Buy (electronics store) and different places and was just enchanted by the quality of the (televisions)…That's part of the display in the stores that show you some of the best movies, pictures, so I kind of fell in love with that aspect."

However, observability and trialability is limited to those who shop at electronics retail establishments or to those who have social networks where a large-screen television will be owned and shared in the home with family, friends, or colleagues.

Complexity

Complexity for large-screen televisions was also moderate for this study. Complexity refers to the difficulty of understanding and using an innovation. For large-screen televisions, there is very low complexity in understanding the basic advantages of large screen televisions. As mentioned with relative advantage, a more complete, realistic and impressive technology created a "WOW" factor driving potential buyers to seek the improved television experience for their homes. This public perception of large-screen televisions is low complexity and easy to understand. Yet, the large-screen television also brought high technological, price, and installation complexity. Differing technologies and functionalities coupled with price considerations and installation required time, research, and planning heretofore not associated with television. Therefore, the overall complexity for large-screens was assessed to be moderate.

Large-screen Television Usage

The ninth research question of the study examined uses of the large-screen television in the home. General uses of the large-screen were verbally solicited from the respondents as well as written down in the booklet provided to each participant. The written responses were tallied

to provide an initial framework of usage variety for the population of the thirty-six members of the five focus groups (see Table 5.13 at the end of the chapter). Major uses of the large-screens were simply watching television, watching movies, playing video games, watching sports, and hosting social events. Minor uses of the large-screens included listening to music, as a computer screen or Internet portal, as furniture and for aesthetic purposes, as a digital photo or home video display, a baby-sitter, and a status symbol/conversation piece.

As discussed in the literature review, Shih & Venkatesh (2004) provided a use-diffusion model (UD) to assess use innovation after adoption (see Figure 2.4). The use-diffusion patterns typology has two categories of use (*variety of use* and *rate of use)* where variety of use is more central to the model because it reflects use innovativeness. The model addresses the gap in the innovations and adoption diffusions literature by focusing on the actual consumption patterns of the technology adopters rather than the adoption process itself.

Using the criteria of *variety of use* and *rate of use*, four categories of use patterns are derived for any given technology (*intense use*, *specialized use*, *nonspecialized use*, *limited use)*. Intense use and limited use represent the highest and lowest categories of the model. A high variety of use as well as high rate of use would be classified as "intense use." In contrast, low variety of use and low rates of use are classified as "limited use." For a given technology, intense use is often desirable by manufacturers showing that the users have found the technology useful to customize for their desired purposes (variety of use) and use it frequently (rate of use). Limited users, on the other hand, are not likely to be engaged in the technology nor are they likely to become so. For the two remaining use patterns in the model, "specialized use" constitutes low variety of use but high rate of use. "Nonspecialized use" is high variety of use but low rates of use. Specialized and nonspecialized use patterns represent the potential for

increased use by users in these two groups where additional marketing and support may yield increased overall functionality and use (Shih and Venkatesh, 2004). Variety of use and rate of use for large-screen televisions will now be discussed within the context of the focus groups.

Variety of Use

With large-screen televisions, there exists an obvious and specific use for the technology which does suggest degrees of uniformity and fidelity in its home use. However, the multiplication of technologies suggests that some users will have a greater variety of technical uses for the large screens than others. The focus group setting was an ideal location to develop categories of use. Based on the input from these groups, variety of use for large-screen televisions has been operationalized on these four dimensions: television viewing, watching movies, interactivity (e.g. DVR viewing of pre-recorded programming, gaming, and shopping), social.

Television Viewing: This is a traditional and obvious category of use that does not need extensive explanation. It includes broadcast, cable and satellite programming of multiple genre types.

Watching Movies: This category includes cable and satellite movies, DVD, BluRay, and VHS delivered movies. It should be noted that movies and "television" content delivered via rental services such as traditional, brick-and-mortar movie rental services (e.g. Blockbuster Video) as well as online services (e.g. NetFlix) fall into this category.

Interactivity: In the analysis of the focus group responses, the concept of interactivity as a separate category of large-screen television use emerged. The most obvious interactive function involved gaming (e.g. video games). Over half of the respondents owned gaming

devices. Shopping on television and using the television as a computer screen were the other less prominent interactive uses that were mentioned in the discussions.

For the purposes of applying the Use-Diffusion matrix to large-screen television use, DVR use has also been classified as interactivity rather than "television viewing". Although certainly DVR viewing is a different type of interactivity than gaming or shopping, the editorial control and constant interaction places DVR viewing in between television viewing and interactivity becoming an experience increasingly closer to gaming rather than normal television viewing.

Yet, the grouping of DVR viewing of television content with gaming, computer use within the television cluster, and shopping could prove to be complicated. Smith (2005) found that DVR users had a difficult time differentiating between the concept of "television viewing" and DVR use. The DVR was a dependent technology in the television cluster. DVR use was "subsumed within overall television viewing." However, Smith's conclusion that DVR use had a significant effect on how television viewing occurs has been confirmed in the current study. As previously noted, of all the impressive new technologies associated with television, the focus group respondents reported that the DVR was the most valued for the great change in the consumptive experience that it allowed. With this finding, DVR use should be included in the category of interactivity.

Social: A major finding from the focus groups included the social function of large-screen television use. A more detailed description of those findings will be found later in the chapter (Research Question 12b).

Rate of Use

With these four categories of use established, the completion of the use-diffusion model for large-screen televisions needs to include measures of rate of use. In spite of the limitations of quantifiable information that could be derived from the focus groups, general directional indicators of rate of use could be determined for watching movies, gaming and for social use. In these categories, large-screen use has increased.

> "There are sports programming now that I watch now, that I never watched before, I never cared watching this ultimate fighting or boxing and that sort of stuff, but when you watch that now, you actually see what's going on, and know what's happening."

The Phase II portion of the study contains more quantitative measures for all of the four categories established for variety of use (e.g. television viewing, watching movies, interactivity, social). The quantitative findings were used to complete the application of the UD model for large-screen television rate of use that is discussed in Chapter 6 under Research Question #8b.

Attention

Another area of focus for the study asked how large-screen televisions relate to attention during programming and commercials. Attention is also associated with competitive and complementary activities. As a general finding, respondents did report that a large-screen television is better able to hold people's attention than previous (smaller) televisions. The following two quotes were indicative of that sentiment.

> "If it's a small TV, I'm more likely to leave the room, to go do something."

> "We have another television for, kind of for the kids; and it's a 27-inch or something like that. I mean, it just doesn't hold the attention."

This section will now address attention to programming and commercials as well as complimentary and competitive activities.

Attention to Programming and Commercials

Attention to programming was measured in the focus groups using a scale in the booklet provided to each respondent for each focus group. The scale asked the respondents to indicate the degree to which they paid attention to programming (see Table 5.14). The self-report measure of attention was taken and adapted from scales used in the VHS study by Johnson (1989). The respondents indicated the degree to which they paid attention to the screen. From these results and the discussion that followed the measure, respondents reported consistently that attention levels for programming in general were high for large-screen television viewing. The findings, however, need to be cross-checked using other methods for gauging attention.

Attention to commercials was also measured in the focus groups in the same manner as attention to programming. The scale asked the respondents to indicate the degree to which they paid attention to commercials. The respondents consistently reported less attention to commercials than programming. This finding is consistent with previous research by Krugman, Cameron, & White (1995). With large-screen television use, however, the confounding variable of the DVR must be considered when discussing attention to commercials. Over half of the respondents owned a DVR and many of them reported a particularly aggressive stance toward avoiding commercial viewing.

> "For us…it has nothing to do with the large-screen television. It's the DVR. We just don't watch commercials. We just don't watch live television. I mean, if it hasn't been recorded, there's no need to watch it."

> "We'll pause it, and we'll wait, and we'll have nothing on just so the commercials will get backed up so we can switch ahead."

> "No joke. We'll pause it and look at the pause screen rather than watch the commercials."

A quantitative comparison of attention to programming and commercials between large-screen television owners and smaller screen owners is found in Chapter 6.

Competitive/Complimentary Activities

Competitive and complementary activities were only measured in the booklet for the last two focus groups (see Appendix G). The exercise helped refine what questions regarding preparatory and competitive/complementary activities could be asked in the online survey. No responses from the booklet measures, therefore, will be reported in this section. A comparison of large-screen and smaller screen owners as it relates to complementary and competitive activities is found in Chapter 6.

Discussions during the focus groups that arose spontaneously, however, revealed some directional findings regarding complementary and competitive activities which indicated a change in the consumptive process of television viewing. With large-screen television, respondents reported fewer competitive activities that might deflect attention from the screen. The following quotes reflect that finding.

> "I used to be able to read the paper and have the TV on in the background. But now, I can't read the paper. It's too much of a distraction. That has changed."

> "You're habit in your old TV might have been your same habit, but you might have been doing something else (reading a book) instead of watching the full program. I tend to watch the full program now."

Exclusivity of attention, therefore, increased for large-screen television viewing and consumption.

One issue, however, that complicates the overall finding that did not arise in previous studies was that many viewers tend to use computers (e.g. laptops connected to wireless home systems) during television viewing. On the surface, the use of computers at the same time of television viewing would appear to be a competitive activity taking focus from the television

viewing. Yet, some respondents reported that the computer use was directly related to the television viewing creating dual-usage multi-media attention for the topics at hand.

> "I never watch television anymore without my laptop (computer) sitting on my lap. I'm constantly looking things up that I'm seeing on television…actors, various shows, you know…reading bios on Wikipedia, what have you."

> "Sports is one as well that I think is one where you see a lot of that dual usage (computer and television together) where you're following a game and you're getting the stats or the information on the players, checking the scores…"

These participants looked up websites listed on the television, searched for definitions and biographies of actors, or checked other related television/program related information. Dual usage of viewing television and using the computer at the same time to gather similar information introduces multi-media interactivity to the television consumption experience.

Large-screen Television Consumption Experience

A major area of focus in the studied concentrated on the changes in the consumption experience that large-screen televisions facilitated in the home. From earlier findings in the study, the conceptualization of large-screen televisions was closely tied to other variables such as high-definition resolution and wide screens. This was particularly evident in the questions involving the "experience" of viewing the televisions. When referring to the "large-screen television experience," the respondents spoke of the total package of technologies and physical setting as one experience.

> "Yeah, I mean, as I said earlier, the sound, you add the sound system to that, it's just the overall experience. If it was just the standard sound coming out of the TV, I almost always turn on the sound system when I'm watching the high-definition big-screen TV, so I have a total experience. It's not just the high-definition experience or the big screen. It's the overall package."

From the focus group responses, four main categories emerged. Large-screen televisions enabled a greater absorbing sense of "presence" as well as the "theater" experience in the home. Large-screen television viewing became "event" viewing rather than a passive entertainment utility. Finally, the large-screen television experience enhanced general enjoyment and was easy to watch. These categories of changes in the consumption experience will be explicated further followed by placing the large-screen television within the Robertson/Krugman rubric of innovations' impact on consumptive patterns.

"Absorbing"and "Presence"

Part of the research questions about attention extended beyond the traditional concept of attention to include large-screen televisions' absorbing qualities and the concept of "presence." The concept of "presence" is that viewers become absorbed and engaged in the mediated content such that they feel like they are at the event or that the programming is compellingly realistic. The research question asked if large-screen televisions have a greater absorbing ability to draw viewers into the content. "Absorbing" and "engaging" qualities of large-screens were measured in the focus groups in the same manner as attention to programming and commercials (see Table 5.14).

The scale asked the respondents to indicate the degree to which they got absorbed in the programming and was used as a device to stimulate discussion thereafter. The majority of the respondents marked high levels of being absorbed and engaged in programming on large-screen televisions which denotes connection and a more intense television consumption experience. The results from the focus groups found that, indeed, large-screen televisions absorbed viewers better than prior televisions and created a sense of "presence."

> "[Y]ou're like all absorbed, because you don't have any distractions. And that's what it'll do when you have a big screen."

The respondents also used the terms "life-like", "realistic" and "riveted" to explain the large-screen viewing experience. In all these very similar concepts, the main finding is that large-screen televisions do connect people to electronic content in a compelling and focused consumptive environment.

> "Yeah, I mean, you're riveted, you're there."
>
> "It's the whole realistic view of it. It's just more realistic."
>
> "I think the draw of a bigger screen to me, and my family, is that it's almost like they're there with you, that they're life size."
>
> "Well, I think a lot of it too, is, it's more realistic, the people are a little bit larger, so it's easier to allow yourself to be drawn into the program, because it's almost more relatable because the size of the characters."

This type of connection with the viewer allowed for greater complexity in receiving the plots and sub-plots or details of the program or content.

> "[Y]ou see things that you didn't see before. One of the nature shows that was on the other night, it's like you're watching an aquarium. So this fish is walking by, swimming by, and all of a sudden this thing jumps up and grabs the fish, and I wouldn't have seen that on my smaller television. I mean, there's just no way I would have seen that, and on the big screen, you see those sorts of things, so you do see things that you didn't see before…[I]t's much more theater-like, it's much more captivating, it is more entertaining when you're watching things on the big screen television."
>
> "I really do like it better for the sports more than anything…there are things that I see in sports now that I never saw before."

For viewers of sports events, the large-screen experience delivered a compelling and impressive "ring-side" seat to the action creating "presence" for the viewers.

> "[W]ith sporting events, you feel like you're there, you feel like you are in the stands watching it."
>
> "My son and I love to watch Duke basketball. We watched the Duke game the other night. The people in the stands are jumping up and down, [my son is] jumping up and down. You can see what they're wearing, you can see pendants on their neck…Literally

> for basketball, you have a better seat than the people do at the game, and you're not being bothered."
>
> "I mean it's lifelike. Particularly you throw in surround sound, like with the 500 (car racing). I watched this weekend with surround sound, the cars come from behind you, they literally go past your ear to the front of the screen. It's kind of cool."
>
> "The viewing experience is much better than what it was with the regular TV. I mean, the picture is just so much clearer, I've got the surround sound, the experience is so much better, and you know, you want to sit there and watch the whole movie, you know, compared to the 32-inch TV…it's kind of like being there."

The focus group discussions revealed a very clear sense of "presence" associated with viewing of content on large-screen televisions, marking a distinct change in the television viewing experience for viewers.

Home Theater Experience

Large-screen televisions have an obvious similarity to movie screens found in theaters. Both screens can be configured to cover a majority of the field of vision of the viewers. The large-screen televisions in the home, however, allow the viewer greater control over the experience. Johnson (1989) described the impact of the VHS player giving viewers control over movie content to be used in the home. Smith (2005) described the impact of the DVR giving viewers control over television programming. The large-screen television with the accompanying technology and sound complete the transition.

The evolution of bringing the theater experience into the home accelerated dramatically with the introduction of a large-screen television that is situated optimally in a comfortable home setting. "Home theater" was mentioned repeatedly across all five focus groups as a description of large-screen television use.

> "It gives you that movie theater feeling once you have it. You know, like you could set up to a home theater…when you have the surround sound and all that. You can really get into it, like you're really at the movies."

"I agree, I was thinking too, theater-like, like being at the movies, 3-dimensional, it pulls you in."

"We have a home theater. That applies to everything we watch."

"And I think that similarly movies approximate a theater experience…especially when you've got surround sound. [The content is] so much more riveting, the larger the screen and the sound and everything else… I think therein is what big-screen TV, and certainly digital TV and HDTV is offering."

Respondents in the focus group often mentioned the ability of the large-screen television cluster to deliver "the experience" most associated with movie theaters viewing. This is closely associated with the next finding about large-screen viewing as "event" viewing.

Event Viewing

Another prominent consumption change regarding large-screen television use in the home involved "event" viewing rather than normal television viewing. The increased use of large-screens for movie viewing as well as sports events has already been discussed in the study. Movies and sports events often have a specific "event" nature inherent to the content.

"[M]ovie and sports viewing in particular take on kind of an event atmosphere. Even if you don't have friends over, it just feels more like an event if you watch it on a large-screen."

"Since we have gotten the large screen television, [viewing] is much more of an activity, rather than a diversion. I mean, we will plan on watching television and it will be a thing to do, rather than just what you do when there's nothing to do."

"As far as the high, the large-screen television, it's still an event. At least that's how we use it."

The finding that large-screens facilitated event viewing in the current study extended to regular television programming in the initial stages after purchase.

"I noticed that when we first got ours—for the first several months after we got it—television became an event. We would, you know, sit down, turn off the lights, get the popcorn. And it wouldn't matter what it was, it was just, you know, there was this huge thing in our living room. It became like a real event we would plan on doing. But after

> the newness wore off, and we've had it for a couple years now, I wouldn't say it's gotten any more attention than our old one did."
>
> "The day that the television arrived, my husband and three kids, if you ran into them that day, you would have thought that we had never, ever had a television before. Ever, [as if] they'd never seen a television or had a television in their home. It was that big of a thing to them."

It was unclear if or how long it might take for "normal" television viewing to resume such that regular programming (e.g. not sports or movies) no longer took on the event atmosphere. The event nature of regular programming on large-screens for children and teenagers potentially did not subside.

> "With my children, there is no question that watching the big screen is like they are paralyzed, deaf, and dumb. You have to physically go in there and hit the pause button in order to interact with them at all. It is like the lights are on but nobody's home, and they are zoned in on that 60" television."

Another way to gauge the perception of event viewing in the home was found to be the lighting in the room. Many of the respondents reported viewing their large-screen televisions in rooms that were dark or only dimly lit. Most of these respondents also reported that their prior television viewing on normal tube television occurred with the lights on.

> "It just seems like a better experience (with the lights off)… I think we mostly watched it with the lights on before."
>
> "For me, if it's a movie on a big screen, or even a sporting event, you're going to get set up ahead of time, and again, I'm turning the lights down, so I can see it better, I'm turning the sound up so I can hear it better, and have the whole experience."
>
> "More often with the lights on before, now it's usually a very dim lamp on in the corner."

The pattern of turning down the lights not only displays the more focused interest associated with events, it also contributes to the transformation of home viewing into a theater-like media consumption experience.

Easy to Watch, Greater Enjoyment

Many of the respondents reported that a principal part of the large-screen television experience was simply the ease of watching the larger screen. With the proper distance from the screen, visual searching and extreme concentration in order to understand the plot of the content were not necessary, allowing for a more relaxed visual experience. For those who had experienced eye-strain or otherwise had vision issues, the large-screen eased those concerns.

> "It's easier to see across the room with a larger picture, for those of us who have more than two eyes."

> "I can enjoy foreign films for the first time, with the subtitles. I couldn't read 'em (prior). It wasn't worth the effort, and now it's just right there. It's really a pleasure to watch."

In addition to ease of watching, many of the respondents reported that their basic enjoyment had increased due to the presence of their large-screen television in their homes.

> "I was going to say more enjoyable. Sports, particularly, I mean sports are ridiculous, just ridiculous."

> "We are all sports fanatics. And so having the big-screen…there's nothing like watching a ball game on a big-screen."

> "I'm a big gamer, as you can probably tell by the shirt. And high-def gaming is a completely different experience on a big-screen, it's, I don't know if anyone else games, but to try to aim, or do something competitive, when you're playing online against other people, it's a completely different world when you can actually see somebody that's, you know, a hundred yards away, as opposed to thirty yards away, so, that's made a big difference."

> "I put in a surround sound system in with a big TV, so when you watch, I mean, you go there to watch a movie, 'cause you got the surround sound going, or you got the whole sporting event going on. I mean, the high-definition for golf is, and basketball, football, I mean baseball, anything. It's, it's just fantastic. It's like being there. And so from that standpoint, if I really want to enjoy a game I'll always watch it on that set rather than on the other ones. It's pretty cool for video games, too."

The focus group discussions revealed that owners of large-screen television report only salutary benefits to the television, viewing, or gaming experience in the home. There were no reports of dissatisfaction or decreased consumption or quality due to the technology.

Movie Theater Attendance

As a result of the enhanced home media consumption experience enabled by large-screen televisions, many respondents reported a decrease in movie theater attendance. The following quotes are illustrative of the general attitudes expressed by the participants.

> "[The large-screen] kind of takes, I mean it doesn't take the place of the movie theater, but I mean it's huge, it's in your face, it's enjoyable…[I]nstead of going to the movies and spending 8, 10 dollars a person, we'll get a Pay-per-View or something and watch it at home. Our sound system is just as good. So, you know, it's fun."

> "We have actually sat in movies thinking, 'We should have waited for this to come out on DVD because it would be better on our screen.' I mean, we have done that, literally."

> "I'm almost never [at the movies]. I used to go to movies all the time. It's been, the last one was Beowolf, and that was like the first time in six months."

> "Whereas in the past we would maybe go see five or six movies a year,…we probably go to none now. Maybe we'll go see one, something may come out and maybe we'll go to a movie just to go to a movie. But now we'll just wait. [My wife will] say, 'This is an Academy Award here, let's go see it,' and I'll say, 'We can have it at home in three days and have it on our huge screen.'"

One respondent took the idea to another level. As compared to their home screen, the movie theater experience was no longer a good enough experience to elicit their attendance.

> "If we even think about going to a movie, it's an IMAX because it has to be so much better, and so much bigger to think about going to the movie now. The regular movie is not that much different, but the IMAX is."

Although there is general agreement by the focus group respondents that movie theater attendance had been impacted significantly, empirical evidence should be used to verify the finding.

Large-screen Television as Continuous Consumption

The changes in television consumption need to be classified according to the rubric of innovations established by Robertson (19971) and elaborated further for media technologies by Krugman (1985). Robertson (1971) provided a classification system based on how an innovation impacts established consumption patterns. It should be noted that Robertson's framework differed from Rogers' prior categories due to its focus on actual consumption effects rather than user perceptions. The Robertson rubric of innovations contains three categories of *continuous*, *dynamic continuous*, or *discontinuous* innovations.

A *continuous innovation* represents the least degree of disruption of established consumption patterns such as fluoride in toothpaste. A *dynamic continuous innovation* suggests more disruptive effects on the consumptive pattern even though it does not alter established patterns. A product innovation such an electric toothbrush would be an example of a dynamic continuous innovation. A *discontinuous innovation* creates new consumption for previously unknown products or services (Robertson, 1971). Krugman (1985) added the implied category of *standard consumption* to Robertson's rubric and then applied the framework to television services available at the time. Standard consumption included traditional broadcast fare. Basic cable subscription was labeled as continuous consumption. Pay cable programming (pay-per-view, movies, premium movie channels) and VCR's were considered dynamically continuous consumption because the viewing experience was no longer employing tradition television content. Interactive services via the computer were listed at discontinuous consumption.

For the current study, the variable of interest was the size of the televisions concentrating on how large-screen television viewing compared to standard television viewing. In applying the Robertson/Krugman rubric to the present study, standard consumption referred to television

viewing on standard sized televisions (36" or smaller). It should be noted that Krugman's (1985) categories were based on types of access/ownership of television services (e.g. broadcast, cable, pay cable, etc.) and not screen size. Four categories of change for the large-screen television viewing experience were found in the focus group discussions. The large-screen viewing experience:

1. Increased absorbing qualities of the television and increased "presence".
2. Created a home theater experience with fewer distractions.
3. Created an event atmosphere.
4. Made television easier to watch and provided greater enjoyment.

Using these findings as applied to the consumptions framework, large-screen televisions should be categorized as a continuous innovation providing continuous consumption patterns (e.g. enhanced experience) to viewers (see Table 5.15).

Coviewing and Household Centrality of Television

Research Questions 11 and 12 asked about the concepts of coviewing and the household centrality of television as it relates to large-screen television households. Coviewing refers to television viewing with more than one person present (Alexander, 2001) and is complemented by the media consumption literature regarding internal social functions (e.g. family) and external social functions (e.g. guests) of the television in the home (M. Morrison & Krugman, 2001). Household centrality of television refers to the role that television plays in people's lives and their commitment to television as a media form (Comstock & Paik, 1991). The basic research question of the study sought to know what changes—if any—having a large-screen television would bring to the role of television in homes.

Coviewing/Internal Social Function

Research Question 11a asked whether the large-screen television in the home influenced coviewing (e.g. viewing together rather than as individuals) as an internal social function. With most indicators in the television market indicating television as an individual experience (Alexander, 2007), the research question was placed to locate any viewing patterns or habits of large-screen television households to either confirm or refute that trend in these homes.

The general findings from these focus groups were mixed and unclear regarding whether large-screens were enough of an attraction to encourage coviewing in and of themselves. A few respondents related that coviewing in general had increased as reflected in this statement:

> "When anybody's around, if the television's on, the big screen, they'll come into the living room and watch it, pretty much even if it's not a show that they really care about, they seem to be drawn to it, and I think it's the size of it, and they feel…like they're kind of there with you."

These types of findings may occur for the obvious fact that large-screens make viewing more available and comfortable for more than one person. The technology to allow greater peripheral viewing allows greater flexibility for group viewing.

> "Every seat in the room is a good seat, so we get ready, we're able to spread out and not sit on top of each other."

However, many of respondents seemed to have clear viewing patterns—whether coviewing or individual—that had been formed prior to the introduction of the large-screen that remain post-adoption of the large-screen televisions.

> "It depends on I guess, your choices. See, I have a big screen in the bedroom and a big screen in the living room. So, you know, I'm a single parent. When my son stays over, he gets to one first, and I'll go to another one. You know, that's what we do."

It is unclear how much the introduction of large-screens encourages overall family/coviewing.

Large-screen televisions were, however, found to increase family/coviewing for event viewing in the home. Event viewing (e.g. mainly sports and movies but also some reality television) occurs in the home on the large-screen. It is evident that large-screens were used primarily for event viewing and that event viewing was often at least a small group experience (two people or more). There was no indication that family/coviewing patterns within the home changed for broadcast programming due to the presence of large-screens. One exception, however, may be very popular reality television or competition shows that are often "live" and interactive with the audiences.

> "[T]here are certain shows that everyone gathers to watch. And, don't ask me why, but they're mostly the reality shows, whether it's the dancing show, or a singing show, and then, you know because it's interactive. Thumbs up, thumbs down, they're bad, they're different, you can vote on people as things are happening, so. From that aspect, the reality TV, I think that's one reason people are watching it more, because it does have the ability to bring people together. They can comment on it, and pick favorites, as opposed to a sitcom.

Another finding that emerged from the focus groups involved family participation using the large-screen that did not include "viewing" as used in the classic sense. The large-screen television facilitated multi-player video gaming as a family activity where participants competed against each other as well as gathered to watch others compete.

> "We have family adventures…We have tennis matches and it's fun cause the kids will actually watch while other people are interacting with the television because it's so large. It's actually fun to watch somebody play a video game that way."

> "I think, we as a family, we'll play video games together. I mean, all of us will sit and play video games. So that kind of has, you know, you're sitting there punching and doing whatever…But I think, for that reason, it has increased."

The competitive and lucrative home video gaming market has produced impressive and realistic video games. These games particularly are suited to be used with large-screen

televisions. The televisual experience alone can be enough to draw people to watch beyond just the person or persons playing the game.

The one thing that is clear from the focus groups is that any vestige of having a coviewing/family viewing or internal social function in the home occurs with the principal television, which is enhanced by having a large screen.

Coviewing/External Social Function

Research Questions 11b asked whether the ownership of large-screen television led to increased social viewing with guests, extended family members, and friends. Morrison and Krugman (2001) referred to this type of viewing as the external social function. One of the clearest findings of the focus groups involved the social viewing aspect of large-screen television use. Much like the early television era of the 1950s and 1960's, large-screen televisions at the current date of the study yet contained the novelty and social prestige factor. Therefore, it is natural that large-screen televisions would be the vehicle for increased social viewing experiences with families, friends, colleagues, and neighbors. The most prominent social uses included watching movies with friends, watching live sporting events, and engaging in multi-player video games. Other less prominent uses included using the large-screens as a digital video/photo display or a karaoke machine. The social nature of the viewing is part of the allure of having large-screens.

> "I go back and remember that movie 'Back to the Future,' where they were having dinner and they were getting their first TV, you know, fifty years ago. And now you have a TV in every room, but typically you have one big piece that's entertainment. [W]hen you have folks over, you're going to sit in the room that has the big TV. And the football game, or ballgame, or whatever event that's taking place. That's the one that you use when you have guests. It's like bringing out the good silver or the china or something. That's the one you use when you have guests over."

> "You know before, when I just had a 27 or 30-inch TV, I wouldn't host those types of events."

In many cases, just owning the large-screen television led to more external social viewing patterns that began in rather innocuous ways.

> "Our best friends this year said, 'Well, are you going to have us over for the [football] game?'…[We] looked at each other and said, 'Sure,' and we did. And then the next week, [the friend] said to me, 'What about the Super Bowl?' and I said, "Okay," so we had them over for the Super Bowl, and it was great. It was wonderful. Not a problem."

> "[W]e have developed this little tradition thing with our neighbors…but every Sunday night we have a movie night, where they come over and we watch a movie together, the two of them, and my wife and I."

> "We have friends with a small TV that come over to watch 'Survivor' because we got the big TV."

In some circles, having updated, large televisions is the pre-requisite to hosting a social event. The increased peripheral viewing allowed by the large-screen televisions facilitate events with many visitors.

> "With the big screen…you get better clarity and peripheral vision. You're able to see from almost all the way around [the room]."

For social purposes, it is important to have the capability of many people being able to experience the technology. In these cases, the more impressive technology, the better for entertaining.

> "We went over to our friends' house for a football party, and they had two. In the same big room they had two big-screen TV's…But the kids got down to playing…video games, "Rock Star" or whatever it is, playing with guitars. So they were all down there playing that, and then the older…guys were down at the other end watching the football game."

> "We actually have karaoke parties, and we hook it into the big screen. You know, there are people like myself that can't see . . .and you can see from the back of the room. We have a huge den that we can put probably 40 or 50 people in, to watch that and sing along, and everybody has a good time at the party."

The lack of a large-screen television may detract visitors from coming to one's home if the possibility for television viewing is involved.

> "Yeah, I've had invites to go to other people's homes, and my first question is, 'Do you have a big-screen TV,' and if it's 'No', I'm staying home, no question. I mean, why go and do that?"

> "Well, it's like with my big-screen, before I got the big-screen, very few people would come over to watch [sports] and things of that nature. But when you get the big screen, the whole neighborhood, I mean, all our friends at church and everything, they're all coming."

Some parents in the focus groups cited the large-screen television as a mechanism for entertaining and keeping track of children and/or teenagers. Often, gaming is part of the media equation with children and teens.

> "It's a way of entertaining fifty kids from your youth group, to keep them from destroying your house. We definitely have more youth functions than we did before, because it's hard to entertain a whole room full of teenagers or college kids with a small television. And we have a big one in a big room, so it definitely has increased in that regard. Which I don't know if that's a good thing or bad thing, but at least I know where they are."

> "[We] have a lot of the friends come over and they go and play Wii (games) and all that stuff."

A small minority of respondents did not engage in more social viewing due to the large-screen television purchase, citing no disposition to do so prior to or after the purchase. However, the consistent and unaided responses across all focus groups indicated that large-screen televisions in the home have increased television, event, and movie viewing with people from outside the home. This finding is counter-trend to the overall societal pattern of television usage as individual experience. Yet, as with television in its early days, the novelty factor may decline as large-screen diffusion continues. One respondent in the fourth focus group mentioned that the social nature of viewing had already started to decline for him. What remains clear, however, is that the large-screen television in the current timeframe has great social utility.

Household Centrality of Television

The final research questions addressed the concept of household centrality of television as it related to large-screen televisions in the home (Comstock & Paik, 1991; Medrich et al., 1981). Household centrality of television is a measure of the prominence of television in homes and has also been referred to as "household TV orientation" which means "the degree to which TV plays a central role in the home" (Roberts et al., 2005).

Using the focus groups as the basis of analysis, there was no evidence to suggest any change in television centrality within homes or families due to large-screen televisions. One of the basic measures of television centrality involves the presence or lack of television rules when children live in the home. None of the respondents reported any lessening of the television rules after the arrival of the large-screen. Three respondents reported greater scrutiny and care devoted to television exposure of children after the large-screen purchase.

Excluding those respondents who did not own a television prior to their large-screen purchase, there is no evidence from the focus groups to suggest that the overall amount of television viewing has increased or decreased due to the large-screens. It is clear that certain programming genres may be viewed more as a result (e.g. movies, sports, gaming), but that does not indicate any change in overall viewing patterns or intensity. The viewing patterns and attitudes were likely set prior to the large-screen purchase. The survey portion of the study will more directly measure the construct of television centrality using responses from owners of all sizes of televisions (see Chapter 6 Online Survey Results).

Focus Group Results Summary

The Phase I portion of the study provided meaningful and contextual findings for most of the research questions of the study. As discussed in Chapter 4, qualitative methods such as focus group interviews are often used as exploratory instruments before quantitative measures are used. The focus group process began at an exploratory level and brought forth specific findings that can be further established through other research. The focus group findings in this chapter provided context and insight into the uses, attitudes and motivations of large-screen television owners. In addition, using this context and insight, the Phase II survey instrument was constructed. Chapter 6 next details the findings of the online panel survey.

Table 5.1: Focus Group Participants AGE

Focus Group Participants: AGE Mean: 43, Median: 46; Mode: 56; Range: 56 (from 18 to 76)	
18-24:	5 of 36
25-34:	10 of 36
35-44:	2 of 36
45-54:	9 of 36
55-64:	8 of 36
65+:	2 of 36

Table 5.2: Focus Group Participants MARITAL STATUS

Focus Group Participants: MARITAL STATUS	
Married:	29 of 36
Divorced:	2 of 36
Single:	5 of 36

Table 5.3: Focus Group Participants RACE

Focus Group Participants: RACE	
White:	34 of 36
Black:	1 of 36
Multi-racial:	1 of 36

Table 5.4: Focus Group Participants EDUCATION

Focus Group Participants: EDUCATION	
Attended High School:	1 of 32
Graduated High School:	2 of 32
Attended Vocational School:	1 of 32
Graduate Vocational School:	1 of 32
Attended Undergraduate College:	5 of 32
Graduated Undergraduate College:	6 of 32
Attended Graduate School:	6 of 32
Graduated Graduate School:	10 of 32
(Four responses not recorded)	

Table 5.5: Focus Group Participants GROSS HOUSEHOLD INCOME

Focus Group Participants: GROSS HOUSEHOLD INCOME	
$25,001 to $50,000:	5 of 30
$50,001 to $75,000:	6 of 30
$75,001 to $100,000:	3 of 30
$100,001 to $125,000:	11 of 30
$125,001 to $150,000:	2 of 30
$150,001 and over:	3 of 30
(Six responses not recorded)	

Table 5.6: Focus Group Participants CHILDREN IN HOME

Focus Group Participants: CHILDREN IN HOME	
No Children:	12 of 36
Children age 5 or under:	9 of 36
Children between 6 -10:	7 of 36
Children from 11 – 17:	6 of 36
Children 18 and over:	9 of 36
(categories not mutually exclusive)	

Table 5.7: Size of Television in Inches

Size of Television in Inches Mean: 49.5”; Median: 50”; Mode: 42”; Range: 28” (from 37” to 65”)	
37”:	3 of 33
40”-49”:	13 of 33
50”-59”:	10 of 33
60” and up:	7 of 33
(Three responses not recorded)	

Table 5.8: Years of Large-screen Ownership

Years of Large-screen Ownership Mean: 2.3; Median: 2; Mode: 2; Range: from 3 weeks to 10 years	
Less than a year:	7 of 32
1 year to less than 2 years:	8 of 32
2 years to less than 3 years:	8 of 32
3 years or more:	9 of 32
(Four responses not recorded)	

Table 5.9: Television Cost

Television Cost Mean: $2,179; Median: $1,700	
Free:	1 of 29
Less than $500:	1 of 29
Between $501 and $1000:	3 of 29
Between $1001 and $1500:	7 of 29
Between $1501 and $2000:	9 of 29
Between $2001 and $3000:	3 of 29
$3001 or more:	5 of 29
(Seven responses not recorded)	

Table 5.10: Number of Televisions in the Home

Number of Televisions in the Home Mean: 3.25; Median: 3; Mode: 2; Range: from 1 to 8 televisions	
One:	3 of 32
Two:	10 of 32
Three:	8 of 32
Four:	6 of 32
Five:	1 of 32
Six:	1 of 32
Seven:	2 of 32
Eight:	1 of 32
(Four responses not recorded)	

Table 5.11: Monthly Bill of Television Services

Monthly Bill for Television Services Mean: $80.75; Median: $80; Mode: $80; Range $176	
$0:	1 of 28
$1 to $19.99:	0 of 28
$20 to $39.99:	1 of 28
$40 to $59.99:	4 of 28
$60 to $79.99:	7 of 28
$80 to $99.99:	7 of 28
$100 and above:	8 of 28
(Eight responses not recorded)	

Table 5.12: Ownership of Other Television Cluster Technologies in Home

Ownership of Other Television Cluster Technologies in Home	
High-Definition TV (HDTV):	27 of 36
DVD Player:	34 of 36
Digital Video Recorder (DVR):	19 of 36
Gaming System:	18 of 36
VHS Player:	17 of 36

Table 5.13: Large-screen Television Uses

Large-screen Television Uses

Major Uses

- ☐ Watching TV/DVR (35)
- ☐ Watching DVD or Satellite movies (27)
- ☐ Video games (19)
- ☐ Sports (15)
- ☐ Parties/entertaining (12)

Minor Uses

- ☐ Listening to music (6)
- ☐ Computer screen/Internet (5)
- ☐ Education/College courses (4)
- ☐ Furniture/Aesthetic (3)
- ☐ Picture frame/Display/Slide Shows/Home movies (2)
- ☐ Baby-sitter (2)
- ☐ Status symbol/conversation piece (2)
- ☐ Alleviate eye strain

Table 5.14: Attention Measures in Focus Group to Generate Discussion

Attention Measures in Focus Groups to Generate Discussion (Note: the numbers indicate how many total participants marked that response. ‖ = mid-point.)		
How much attention do you give to the large-screen television during programming?		
NOT REALLY PAYING MUCH ATTENTION	* * * * * * 1 * 1 1 ‖ 4 5 1 3 2 4 * 6 5 3	EYES ON THE SCREEN MOST OF THE TIME
How much attention do you give to the large-screen television during commercials?		
NOT REALLY PAYING MUCH ATTENTION	3 1 * 1 2 * 3 1 2 * ‖ 2 1 1 * * * * * * *	EYES ON THE SCREEN MOST OF THE TIME
Do you find programming more or less absorbing and engaging on a large-screen?		
NOT ABSORBED WITH THE PROGRAMMING	* * * * * 1 * 1 * * ‖ 3 2 2 2 3 3 5 6 1 7	ABSORBED WITH THE PROGRAMMING

Table 5.15: Large-screen Television as Continuous Consumption

Large-screen Television as Continuous Consumption			
Standard Consumption →	Continuous Consumption → *(Least Disruptive Influence)*	Dynamically Continuous → *(More Disruptive Influence)*	Discontinuous Consumption *(New Patter of Consumption)*
Standard Televisions ‖ Televisions 36" or smaller.			
Large-screen Televisions ‖ Televisions 40" or larger. Offering enhanced viewing experience by: 1) Increasing absorbing qualities of the television and increasing "presence." 2) Creating a home theater experience with fewer distractions. 3) Creating an event atmosphere. 4) Making television easier to watch and providing greater enjoyment.			

CHAPTER 6

PHASE II: ONLINE SURVEY RESULTS

This chapter will discuss the results from the online survey conducted in Phase II of the two-phased study. The research goal was to test what changes—if any—large-screen televisions brought to the home viewing experience. As such, the survey mainly focused on large-screen television owners versus traditional television owners on a broad range of issues as dictated by the literature and the focus groups. The online survey was implemented in three tranches over a weekday period on June 10-12, 2008 (see Table 4.4 for survey invitations and response within four sampling pools). *Zoomerang,* a subsidiary of MarketTools, Inc. based in San Francisco, hosted and administered the online survey. The *Zoomerang* panel generated a targeted list of large-screen television owners which reduced the need for screening questions and decreased overall costs.

For the current research, a minimum of at least N=800 respondents (400 large-screen households, 400 smaller screen households) was sought to enhance statistical precision in a comparative survey. The final sample size achieved in the online survey was N=1330 due to a higher than expected response rate among traditional television owners. The total sample N for the online survey of 1330 responses included 476 owners of televisions 40-inches or larger, 475 owners of televisions 30-36 inches, and 378 owners of televisions 29-inches or smaller. The higher survey completions provided sufficient response for comparative data analysis across groups of television owners based on the size of the largest television they owned. Two

respondents were deleted from the study due to insufficient completion of important questions for the study (e.g. screen size) bringing the total N for analysis to N=1328.

For a detailed description of the methodology of the Phase II online panel survey and its administration via an online panel provider, see Chapter 4.

Findings

The findings from the online survey will be organized in the general order of the research questions of the study. Some of the research questions were addressed in Chapter 5 as part of the focus group findings and are not subsequently addressed in the results for the online survey (e.g. RQ2a and RQ2b regarding conceptualization of large-screen televisions and the consumer hierarchy of television innovations; RQ7 regarding the framework of innovation by Rogers (1995) as it relates to large-screens; RQ9a regarding the changes in consumption framework by Robertson/Krugman).

The findings and results from the online survey now follow.

> RESEARCH QUESTION #1a: What is the demographic profile of people in homes with large-screen televisions? Are demographic profiles of large-screen television viewers different from regular television screen viewers?

The survey respondents answered nine demographic questions contained at the end of the survey. The nine questions addressed age, gender, race, marital status, number of people living in the home, the presence of children in the home, education, and gross income. The demographic information gained from the survey was used to compare the demographic variables based on the respondents' screen size. The variables of age, number of people in the home, education level, and gross income were compared parametrically using one-way ANOVA.

The variables of race, marital status, and presence of children in the home were analyzed using Pearson's Chi Square and cross tabulations.

There was no significant age difference between owners of large-screen televisions and other television owners (F=.864, df=1, p=.353, eta=.001; see Table 6.1). There was also no evidence in the data that there was any difference in race between large-screen and smaller screen owners (see Table 6.2). As mentioned previously, the overall sample contained 89% white respondents which was significantly more than the white population according to the U.S. Census.

Regarding marriage, however, large-screen television owners were more likely to be married than were traditional screen owners (chi square=21.273, df=1, p=.000, phi=-.127; see Table 6.3). Sixty-seven percent of large-screen owners were married whereas only fifty-four percent of standard sized television respondents (36" or less) were married. The effect size of the relationship indicates a significant but small relationship.

Large-screen owners were also more likely to have children in the home than were traditional screen owners (chi square= 8.300, df=1, p=.004, phi=.079; see Table 6.4). Thirty-seven percent of large-screen television owners had children between the ages of zero and seventeen years of age. Only twenty-nine percent of standard television owners had children between the ages of zero and seventeen years old in the home. Further analysis that broke up the age of children in the homes revealed that there was no significant difference in the percentage of small children (0 – 10 years old) in large-screen versus traditional television owners (for 0-5 years old: chi square=1.297, df=1, p=.255, phi=-.031; for 6-10 years old: chi square=3.238, df=1, p=.072, phi=-.049). The small statistical separation between the groups occurred with teenagers and older children still living in the home. Large-screen owners had more teenagers (11 – 17

years old) in the home (chi square=7.912, df=1, p=.005, phi=-.077) as well as children over eighteen years old (chi square=5.510, df=1, p=.019, phi=-.064). Consistent with those findings, large-screen owners were more likely to live with more people than were traditional screen owners (F=12.733, df=1, p=.000, eta=.010; see Table 6.5).

Large-screen television households also earned significantly more money per year than the traditional television households (F=111.184, df=1, p=.000, eta=.077; see Table 6.6). The results indicate a moderate effect size for the statistical relationship. The differences in gross income were found on the lower and upper extremes of the responses. In the lower incomes, forty-nine percent of traditional screen owners reported a gross income of less than $50,000, whereas only twenty-four percent of large-screen owners reported an income less than $50,000. In the higher incomes, twenty-nine percent of large-screen owners reported incomes above $100,000 whereas only thirteen percent of traditional television households reported incomes in that range.

Finally, the survey results showed a statistically significant but negligible difference in education levels between large-screen versus traditional screen owner (F=5.037, df=1, p=.025, eta=.004; see Table 6.7). The small mean difference and the low effect score indicates that there are only marginal differences in educational levels between the two groups.

Compared to other television owners, large-screen owners do not vary according to age and there is no conclusive information to suggest any difference in education levels or race, other than the normal racial makeup of the U.S. population. Large-screen television households were more likely to be married, have teenagers and older children in the home, live with more people, and make more money each year than traditional television households.

Television Profile

Respondents were also asked to report television size, the number of televisions in the home, average monthly charge for television services, length of ownership, and cost. Thirty-six percent of the total sample owned a large-screen television (defined as 40" or greater, see Table 6.8). Of those, seventeen percent owned televisions between 40" and 49"; thirteen percent owned televisions between 50" and 59"; and six percent owned televisions larger than 60".

Large-screen television owners were significantly more likely to own multiple televisions than their traditional television counterparts (F= 123.613, df = 1, p = .000, eta=.85). Large-screen television households on average owned 3.53 televisions per household. Traditional television households owned on average 2.69 televisions (see Table 6.9). Eleven percent of large-screen owners reported six or more televisions in the home.

Large-screen television owners also reported that they paid significantly more per month for television services than their traditional television counterparts (F= 98.164, df = 1, p=.000, eta=.069). The results showed large-screen television owners outspending at the $80 and higher level of monthly charges (see Table 6.10).

Large-screen television owners also reported owning their largest television for a shorter time than traditional television owners (chi square = 74.857, df = 3, p = .000, *C*=.231; see Table 6.11). The finding is not surprising as large-screen technology became available and relatively affordable in the recent period. Therefore, large-screen owners were more likely to have purchased their largest television in the most recent few years.

The respondents were also asked to report the cost of their largest television. Intuitively, large-screen televisions would be more expensive than traditional screen televisions. The cost differential was confirmed in the survey results showing significantly greater costs for large-

screens versus traditional televisions beginning at the $1,000 and more levels (F=949.451, df = 1, p=.000, eta=.417; see Table 6.12).

The collective results from the television related questions show large-screen television owners to be heavier consumers of television technology and services than other television owners. The large-screen owners also owned newer televisions that cost significantly more than previous televisions.

RESEARCH QUESTION #3: What are the reasons, justifications and context for purchasing large-screen televisions?

Respondents were asked to identify the reasons for purchasing their largest television and were given nine potential responses that were derived from the focus group discussions with large-screen television owners (see Table 6.13). All of the nine response categories were significant at the .01 level when comparing large-screen owners with standard television owners. Large-screen owners cited six of the nine categories more often than standard television owners (e.g. to get HDTV programming, for family entertainment, for entertaining friends, moved to a new home and bought updated technology, buying the television for a specific televised event, and to decorate the room). Standard television owners cited three categories more often than large-screen owners (e.g. old TV needed replacement, TV was a gift, did not own TV prior).

Large-screen television owners reported that gaining high-definition programming was the most common motivation for the purchase (38% vs. 8%). This was also significantly different from traditional television owners indicating a moderate relationship (chi square =170.269, df = 1, p =.000, phi=.358). Large-screen television owners also cited family entertainment as an important reason for purchasing the largest television. As a motivation for purchase, this was significantly more (40% vs. 17%) than standard television owners (chi square= 81.778, df=1, p=.000, phi=.248). Although thirty-eight percent of large-screen owners

also reported replacing an old television which is roughly consistent in response with the first two motivations, sixty-four percent of standard television owners cited replacing an old television as a prime motivation. When compared, this is a significant difference suggesting that large-screen owners were more inclined to be purchasing the largest television for reasons other than for replacing dysfunctional sets (chi square = 85.071, df =1, p=.000, phi=-.253; see Table 6.13 for all comparisons).

The results paint a picture of people buying large-screen televisions as a premium product to get high-definition programming and for family entertainment. The increased television experience in the home and family was then also suitable to extend to friends and visitors as a social utility.

RESEARCH QUESTION #4: What are the considerations taken, barriers to entry, and difficulties when purchasing a large-screen television?

Using information gleaned from the focus groups, the research question was focused into understanding the length of the purchase cycle and the costs involved. Both factors were found to be related to large-screen television purchases during the focus group interviews. The survey respondents were asked to report how long it took to buy their largest television from the first time they wanted one to the date of actual purchase. As compared to standard television owners, large-screen television owners took more time to purchase their largest television (F= 78.406, df = 1, p=.000, eta= .063; see Table 6.14).

The cost differential was confirmed in the survey results showing significantly greater costs for large-screens versus traditional televisions beginning at the $1,000 and more levels (F= 949.451, df = 1, p=.000, eta=.417; see Table 6.15). The two results in tandem suggest potential owners have to plan for and budget for the sets in ways that traditional owners do not.

RESEARCH QUESTION #5a: What other technologies are used in conjunction with large-screen televisions?

The respondents were asked a series of questions to determine the technologies that they owned. Eleven technologies were listed for the respondents to identify ownership (e.g. DVD player, VCR player, tube TV, cable services, HDTV, DVR, gaming system, LCD television, satellite services, plasma television, and DLP television). The answers to the questions were then condensed to form a seven point technology ownership index for each respondent based on the number of technologies owned (index ranges from 0=Low to 6=High; see Table 6.15). Plasma, LCD, and DLP ownership were condensed into one score. Cable television and satellite services were also condensed in to a single score. VCR ownership and tube televisions were omitted from the index. Using the comparative design, owners of large-screen televisions were then able to be compared against traditional television owners to determine any significant differences between them in the overall technology profile.

Large-screen television owners received significantly higher scores on the television technologies index than traditional television owners ($F = 371.493$, df=1, sig. (two-tailed) p=.000, eta=.219; see Table 6.15). The mean technology index score for large-screen television owners was 3.96. Standard television owners registered a mean technology index score of 2.49.

Further analysis breaking up the respondents into three categories of large-screen (40"+), medium (30" – 36"), or small (29" or smaller) showed significance at all levels ($F = 216.779$, df = 2, p = .000, eta=.247). Smaller television respondents received a mean index score of 2.14. Medium television respondents had an average index score of 2.77. As previously noted, large-screen television respondents had a mean index score of 3.96. Each group was found to be significantly different from the other groups. In short, the propensity to own multiple television technologies increased in proportion to television screen size.

Other analysis into each television technology or service allowed for a more specific comparison of individual technologies. As is intuitive to the research question of the study, traditional television owners owned more tube televisions whereas large-screen television owners owned more plasma, LCD, and DLP televisions (see Table 6.16). Yet, 21% of traditional sized television owners did not own a tube television. These viewers, then, own the newer LCD or plasma televisions in a size that is 36" or smaller and likely own other technologies or services consistent with those people buying new technologies and cutting-edge services.

Cable services and VCR players were roughly equivalent for both groups signifying both as standard technologies that most viewers use. Large-screen television owners were shown to own DVD players at a slightly higher rate (90% vs. 85%, chi square = 5.834, df = 1, p = .016, phi=.066; see Table 6.16), but the high levels of penetration suggest that DVD players are standard technologies as well.

The greater distinction of television technology ownership was found in the variables of high-definition television (HDTV) and digital video recorders (DVR). As was found in the focus group, a strong relationship was found between the variables of screen size and high-definition television (chi square= 271.848, df=1, p=.000, phi=.452). The two technologies are closely related. Large-screen owners were more likely to own high-definition television, or vice versa. A moderate relationship was also found between DVR ownership and large-screen ownership (chi square= 110.351, df= 1, p=.000, phi=.288).

Another finding related gaming systems and satellite television services to large-screen television ownership. Large-screen households were more apt to own at least one gaming system (such as Playstation, GameCube, Nintendo's Wii, etc.) than were other television households (44% vs. 29%; chi square = 27.529, df = 1, p = .000, phi= .144). Large-screen

television owners also subscribed to satellite television services in greater numbers than traditional television owners (30% vs. 21%; chi square = 14.828, df = 1, p = .000, phi= .106). Therefore, large-screen television owners were more apt to have satellite television services than traditional television owners. The technologies questions of the survey showed that large-screen television owners are larger consumers of technologies and likely aficionados looking for cutting edge products.

Additional analysis sought to identify those variables that showed the most predictive power when predicting television screen size. Standard multiple regression was conducted with dependent variable of screen size (Survey Question #3). The question asked respondents to indicate the size of their largest television. Six response categories were given as response options (e.g. "1"-19", 20"-29", 30"-36", 40"-49", 50"-59", 60" and up). Twenty-six independent variables were compiled from the survey data to be assessed in the regression. Using the Mahalanobis distance values to test for multivariate outliers, nine cases were detected and deleted from the sample. Multicollinearity was assessed by running intercorrelations, tolerance & VIF scores, and the condition index. None of the four measures detected multicollinearity among the variables.

The stepwise multiple regression analysis was used to identify the variables in the study that predicted screen size. Of the twenty-six variables, eight were found to have unique predictive contributions in the model. On further judgment of those eight variables, variables contributing less than 1% of the explanatory power of the model were not included. Therefore, four variables were found to significantly predict television screen size. Multiple R for the regression was significant, F (6, 1312) = 251.275, p<.000, R^2 = .535. The model, therefore, explained 53.5% of the variation associated with screen size. The bulk of that explanation was

attributed to the cost of the television (46.6%, Beta= .446). The intuitive finding showed that the size of the television screen increased in proportion to the rising costs. The other five variables showing explanatory power in the model were the number of televisions in the home (3.5%, Beta=.153) and length of ownership of the largest television (1.7%, Beta= -.115). Ownership of gaming systems, access to satellite services, and access to high-definition television each accounted for less than one percent of the total variance. Of the six predictors, only the length of ownership held an inverse relationship to screen size. The older the largest television was in the home, the smaller the television screen.

RESEARCH QUESTION #6a: How are large-screens situated in the home?

Survey respondents were asked to identify the room of the home where they placed their largest television. Eight options were listed that were found during the focus group interviews. Of those options, five questions garnered most of the response in the survey (see Table 6.17). A majority of both large-screen and traditional television owners placed their largest television in a living room. Traditional television owners placed the largest television in the living room more often than large-screen owners (70% vs. 60%; chi square = 15.857, df = 1, p = .000, phi= .109). Large-screen television owners were more likely to place the largest television in a great room (chi square = 14.230, df = 1, p = .000, phi=-.104). The results were further analyzed to control for income and for amount of money spent to purchase the television. Neither were found to moderate the finding. Overall, there were significant but small differences in the home placement of the largest televisions. Large-screens televisions were more likely than traditional televisions to be placed in a great room. However, the majority of both large and traditional televisions are still placed in the living room.

RESEARCH QUESTION #6b: What interior adjustments—if any—were required to accommodate the large-screen television?

Survey respondents were also asked to identify the interior adjustments that were made to accommodate their largest television. Seven categories were listed that were obtained from the focus group interviews and through the testing of the survey. The categories included making no adjustments, putting the television in the same place or a new place, some re-arranging of furniture, a major re-arrangement or change in room layout, the purchasing of cabinetry, or an entire media room built to accommodate the set. Large-screen television owners made more adjustments or furniture re-arrangements than traditional television owners (20% vs. 10%; chi square = 27.723, df = 1, p = .000, phi= .144). Major adjustments or complete room layout changes were also found to be significant between the two groups even though the overall percentage of respondents reporting large changes were smaller (7% vs. 3%; chi square = 14.784, df = 1, p = .000, phi= .106). Large-screen televisions were also situated in a new place (than the prior television) more often than traditional televisions (chi square = 31.348, df = 1, p = .000, phi=.154).

RESEARCH QUESTION #8a: How are large-screen televisions used in the home?

Respondents were asked to rank the level of use using a five point scale (from "Never" to "All the Time") for the largest television in their home. Six categories of use were derived from the focus group interviews. The four major categories included watching broadcast or cable/satellite television, watching television using a DVR, watching DVD/VHS/satellite movies, and playing video games. The average response for both large-screen owners and traditional television owners are found in Table 6.19. The percentage of respondents marking each answer are reported in the columns. The mean scores (reported in the sixth column of the tables) were calculated for both groups and then compared using one-way ANOVA.

There were no significant differences in use for viewing broadcast, cable, or satellite television based on size of television (F= 2.585, df = 1, p =.108, eta=.002). There was, however, a significant difference in watching television while using a DVR (F= 105.017, df = 1, p=.000, eta=.073). The analysis included DVR owners with large-screen televisions compared to DVR owners with smaller televisions. The result can be largely explained in the earlier finding that large-screen television owners are more likely to own a DVR as part of their television cluster than traditional television owners.

A smaller relationship was also found for watching movies (F= 21.013, df = 1, p = .000, eta=.016) and playing video games (F= 21.483, df = 1, p = .000, eta=.016).

Programming

Use of the largest television was also assessed according to genres of television programming viewed. The survey listed ten categories of television fare derived from the focus group interviews and judgment (Newcombe, 2008; see Appendix J for a listing of input sources for each survey question). The respondents rated each television genre on a five point scale to reflect amount of use (1 = "Never" through 5 = "All the Time"). Response averages for both large-screen and traditional television respondents are found in Table 6.20a and Table 6.20b. The mean scores for each genre were calculated and then compared using one-way ANOVA.

The mean scores were larger in every category of viewing for large-screen television owners versus traditional television viewers. The mean differences of seven of the ten programming categories were statistically significant at the p =.000 level and one other category (cooking) was significant at the p = .005 level. The findings reflect a statistically significant but small relationship when accounting for effect sizes. Large-screen viewers watched more entertainment programming, sports, and movies than their traditional television counterparts

(entertainment: F= 13.286, df = 1, p = 000, eta=.010; sports: F= 47.828, df = 1, p= .000, phi=.035; movies: F= 22.317, df = 1, p = .000, eta=.017). These findings are consistent with the reported findings of the focus group interviews. Significant differences in large-screen viewer consumption were also found for music, cooking, reality shows, shopping, and children's programming. News and educational programming were the two programming categories for which no differences were found. In general, owners of large-screen televisions reported watching most of the genres of programming at a slightly greater rate than traditional television owners.

RESEARCH QUESTION #8b: Can use of large-screen television be classified as intense, specialized, nonspecialized, or limited?

The use-diffusion model relies on both rate of use measures and variety of use measures.

Variety of Use

A four-category framework for variety of use was constructed based on the focus group interview responses. Variety of use for large-screen televisions was operationalized on the following four dimensions: 1. Television viewing; 2. Watching DVD, VHS, or satellite movies; 3. Interactivity (e.g. DVR viewing of pre-recorded programming; gaming, and shopping); 4. Social.

The survey contained quantitative measures for all of the four categories established for variety of use (e.g. television viewing, watching movies, interactivity, social). Based on the total sample response, watching television (e.g. basic television watching of broadcast, cable, or satellite) was determined to be the sole use category that would represent low variety of use for television in the UD model (see Figure 5 immediately following Table 6.27 at the end of the chapter).

For high variety of use in the Use-Diffusion model, the remaining three categories found in the focus groups were used (e.g. watching movies, interactivity, social). The many categories were indexed and a similar "low variety of use" versus "high variety of use" was determined by splitting the sample in half based on a natural break in the index scores (3.6% "Never", 45% "Low variety of use", 51.4% High variety of use). Respondents were then able to be placed into the Use-Diffusion matrix based on the scores.

Rate of Use

With variety of use determined, the UD model requires a rate of use measure for each category of use. Each of the four areas of response were measured using a five point Likert scale that was then adjusted to create low rate of use vs. high rate of use. The adjustment was accomplished by coding any response of 1, 2 or 3 as "low rate of use" and any response of 4 or 5 as "high rate of use" (scale 1 = "Never" up to 5 = "All the time").

UD Model for Television Consumption

Respondents receiving both high variety of use as well as high rate of use scores were placed in the "Intense Use" quadrant. Conversely, respondents receiving both low variety of use as well as low rates of use were placed in the "Limited Use" quadrant. Respondents with high rates of use but low variety of use were placed in the "Specialized Use" quadrant. Finally, respondents with low rates of use but high variety of use were placed in the "Non-specialized Use" quadrant (see Figure 5).

A tally of the total sample as well as the categories of large-screen viewers and traditional television viewers was taken (see Figure 5 for percentages of each group in each quadrant). Almost forty-three percent of the total respondents were categorized as "intense use". Almost

thirty-nine percent of the total respondents were categorized as "specialized use". Another nine percent of the total sample respondents were "non-specialized use". Finally, ten percent of the total sample were categorized as "limited use".

The categorized groups based on screen size were then compared using crosstabulations and were found to be significantly different at a moderate level (chi-square = 84.356, df = 4, p = .000, *C*=.244). Traditional television respondents engaged in more specialized use and limited use (e.g. watching broadcast television at high and low levels). Large-screen owners were significantly more likely to engage in intense usage of television than the traditional television viewers. The finding is consistent with the overall research questions of the study showing that large-screen viewers use the increased functionalities that are available with the newer technology. Television consumption in the home is associated with the new technology. A more thorough discussion of the implications of these findings as it relates to the other research questions will be addressed in the next chapter (Chapter 7, Discussion).

RESEARCH QUESTION #9: Is large-screen television viewing a different viewing experience than regular screen viewing? How?

Respondents were asked to describe the experience of watching the largest television in their home. The respondents marked the response on a five point Likert scale for seven categories that were derived from the focus group interviews. The categories included enjoyment, ease of watching, a theater-type experience, a feeling of being at the events on screen, compelling sound, life-like picture, and watching the television more as an event rather than just a way to pass time.

A one-way ANOVA was used to compare the means and to produce effects size estimates. The mean differences for all of the categories were found to be statistically significant at the p =.000 level and to reflect a moderate to strong relationship across the range of questions

(see Table 6.21a). Versus traditional television respondents, large-screen viewers reported much greater enjoyment (F=102.686, df =1, p= .000, eta=.072; mean 4.59 vs. 4.16), greater ease in viewing (F= 81.437, df = 1, p= .000, eta=.058; mean 4.60 vs. 4.21), and an experience similar to being at a movie theater (F= 345.300, df = 1, p = .000, eta=.207; mean 3.76 vs. 2.55). Large-screen viewers also reported greater satisfaction with the sound (F= 126.502, df = 1, p = .000, eta=.087; mean 4.25 vs. 3.64) and life-like picture detail (F= 190.236, df = 1, p = .000, eta=.125; mean 4.2 vs. 3.40). The large-screen television produced an experience that felt like being present at the events on screen (F= 281.548, df = 1, p= .000, eta=.175; mean 3.52 vs. 2.40). Watching television itself as an activity was also more of an event rather than a passive activity (F= 104.387, df = 1, p= .000, eta=.073; mean 3.52 vs. 2.85; see Table 6.21b and 6.21c for category response and means).

RESEARCH QUESTION #10a: Do viewers feel more connected to the television content having a large-screen television?

Part of the research inquiry of the study sought to understand if large-screen televisions influenced the notion of television at some level. Respondents were also asked about the absorbing quality of their largest television and its ability to draw them into the programming. Specifically, the question asked the respondents to report the degree to which they get "absorbed" in the programming. A five point Likert scale ranging from "Strongly Disagree" to "Strongly Agree" provided the response categories. Consistent with the previous questions of the large-screen television cluster producing a different and more compelling experience, large-screen viewers also reported significantly greater levels of being absorbed into the programming (F= 86.192, df= 1, p =.000, eta=.061, mean 3.88 vs. 3.31; see Table 6.21a). The finding suggests that the notion of television may have to be adjusted when describing the viewing process

associated with large-screens in the home. The finding is related to the research question regarding attention to the screen that now follows.

> RESEARCH QUESTION #10b: Do viewers pay more attention to large-screen televisions during the programming and commercials?

Surveys respondents were asked to self-report their attention levels to the screen using a five point scale ranging from "Pay No Attention" to "Pay Full Attention" (see Table 6.22a and 6.22b). Four categories of viewing were offered for review: attention to traditional broadcast or cable/satellite programming, attention to commercials, attention to movies, and attention to DVR viewing of recorded programs. The one-way ANOVA was used to compare means and estimate effects sizes.

The results showed that large-screen viewers paid more attention to the screen across all four categories of viewing compared to the traditional television viewers. (for traditional broadcast and cable/satellite viewing: F= 25.536, df = 1, p = .000, eta=.019, means 4.01 vs. 3.74; for attention to commercials: F= 17.304, df = 1, p = .000, eta=.013, means 2.36 vs. 2.12; for attention during movies: F= 24.644, df = 1, p = .000, eta=.018, means 4.07 vs. 3.73; for attention during DVR viewing comparing only those who own DVR's: F= 9.465, df = 1, p=.002, eta=.024, means 4.25 vs. 3.95). The results reflect an overall significant but weaker relationship than the previous findings regarding the large-screen television experience.

The results, then, suggest that the presence of the large-screen in the home modestly impacts attention levels to the programming, commercial, movies, and viewing with a DVR.

Competitive vs. Complimentary Activities

The respondents were asked to report the level of other activities that they engage in while the television is on. The activities listed were taken from those categories of activities that were shown to be significant in a study about VCR viewing (Krugman & Johnson, 1991). The

categories ranged from reading books and newspapers to playing with children, preparing snacks, talking on the phone, or napping. An additional category of "Use Computer" was added due to the focus group feedback that reported many viewers simultaneously watched television and used a laptop computer to look up program related information.

The results showed only three categories being statistically significant at the .05 level. Compared to traditional television viewers, large-screen television owners reported napping more (F= 7.150, df = 1, p=.008, eta=.005), talking more with others about other subjects (F= 10.178, df= 1, p=.001, eta=.008), and talking more on the phone (F= 4.657, df= 1, p=.031, eta=.004; see Table 6.23a and Table 6.23b).

Further analysis that controlled for the number of people in the home found that the significant difference in napping was only significant when there was one person in the home (F= 4.005, df= 1, p=.046, eta=.015). A person living by themselves who owns a large-screen television is more likely to nap during programming than a similar person who owns a smaller television. Number of people in the home was also controlled for in the finding regarding talking with others during programming. The mean difference between large and traditional television respondents was only significant when three people lived in the home (F= 7.910, df= 1, p=.005, eta=.034).

The findings, however, should be considered with caution due to the very small effect sizes reported. It should also be noted that there was also no statistical difference in computer use during television viewing between the large-screen and traditional viewers. Therefore, the competitive activities framework was not useful for analyzing and explaining the viewing experience of large-screen televisions. The failure of the complimentary/competitive activity framework may be related to the comparison of the study. The original items from the VCR

viewing study were derived when comparing television viewing with a new technology for movie viewing in the home. The current study measured television viewing against other television viewing (large-screens vs. small) and therefore the differences may not have been as distinct.

RESEARCH QUESTION #11a: Has the presence of large-screen televisions influenced family viewing and family/group togetherness?

The respondents were asked to report how often they were watching television with someone else the day before they took the survey. While the presence of family members were not measured directly (e.g. the question asked about "watching with someone else yesterday"), the person or persons most likely to be coviewing would be other residents of the home (e.g. family members). The response categories ranged from "Most of the time" to "Never, I watched by myself the whole time." Large-screen television viewers were found to watch television with others in the home at greater levels than traditional television viewers (chi square = 25.711, df = 3, p = .000, *C*=.144; see Table 6.24a). Therefore, people with large-screens in the home were more apt to watch television with others.

The finding is intuitively related to the study's other findings showing owners of large-screens also were more likely to be married, have children in the home, and to live with more people. Further analysis was done to control for these factors. Coviewing in the home occurred at greater levels for large-screen owners when there were one, two, and three people living in the home (see Table 6.24b). For homes with four or more people, the moderate relationship between screen size and coviewing no longer held. Therefore, screen size was not an indicator of coviewing for homes of four or more people. They watched television with others within the home at the same levels regardless of whether they owned a large-screen television or not.

Large-screen owners who lived in homes of three or fewer people watched television with others at a greater rate than similar sized households with smaller televisions.

Additional analysis controlling for marital status or the presence of children in the home found that these variables did not moderate coviewing in the home.

RESEARCH QUESTION #11b: Has the presence of large-screen televisions influenced social viewing (with extended family, friends or neighbors)?

The survey asked respondents to report how often they invited extended family, friends or neighbors to their home where the largest television was used as a main activity. The range of possible responses went from "Never" to "Seven or more times a month". People with large-screen televisions were found to have more visitors and to engage in social viewing more than traditional television owners ($F= 55.237$, $df=1$, $p = .000$, $eta=.040$, see Table 6.25). This is consistent with a previous finding of the study that showed one of the most importation motivations for purchasing the large-screen was for entertaining friends and visitors (see Research Question #3 results in this chapter).

RESEARCH QUESTION #12a: Do large-screen television owners have a greater commitment to viewing as a media form?

The respondents were asked several questions to determine what level of viewing and focus they gave to television as a media form. The first questions related to television centrality focused on the amount of time spent with television. The first of those questions asked about how many hours the largest television in the home was on the day prior to the survey. No differences were found between large-screen and traditional screen viewers on the measure ($F=.000$, $df=1$, $p=.994$, $eta=.000$).

A more relevant question about the role of television in the home asked how many hours the day prior to the survey did the respondents have *any* television on in the home (not just the

largest television). Large-screen owners were found to have any television on in the home more than those with traditional sets (F= 5.700, df=1, p=.017, eta=.004).

The same question was adjusted to reflect overall proportions in the total sample. Respondents who reported six hours or more per day were labeled "High viewership" which represented 45% of the sample. Respondents reporting three to six hours of any television on were labeled "Medium viewership" which represented 34% of the sample. The remaining groups were labeled "Low viewership". When compared with large-screen versus tradition screen household, similar results were found (chi square= 13.992, df=3, p=.003, *C*=.102). Therefore, large-screen owners were found to have a television on in the home more than traditional television households even though the strength of the relationship may be moderate to weak based on the small effect size.

The survey also asked three questions that composed a television centrality score used by Roberts, Foehr, & Rideout (2005). The three questions addressed how much a television was turned on in general and during meals. It also asked about television rules. As the scale was developed for use with children, the sample was screened for households who had children in the home. There was no difference between large-screen and traditional television households on the television centrality score (chi-square= 410, df=1, p=.522, phi=.-.031). There were also no significant differences when each question was analyzed separately. The findings could be interpreted to suggest that having a large-screen television may indicate marginal increases in viewing (any television turned on more, more viewing of certain programming), but does not differ significantly enough to suggest an increased role of television in the home. The finding may also be limited by the measures themselves that were originally formulated for children and

teenagers as the respondents. An analysis of television centrality as a concept and how it relates to the findings of the study are found in the discussion in Chapter 7.

The analysis also sought to find a predictive model for television viewership. Standard multiple regression was conducted with predicted variable of "hours of *any* television on yesterday" (Survey Question #9). Therefore, the measure indicates time with television rather than intensity or efficiency of use. Sixteen independent variables were compiled from the survey data to be assessed in the regression. Using the Mahalanobis distance values to test for multivariate outliers, eight cases were detected and deleted from the sample. Multicollinearity was assessed by running intercorrelations between the independent variables. The largest correlation between any of the variables was .72 (# of people and # of children), well below the .9 threshold that is suggested for deleting one of the variables to reduce collinearity (Myers, Gamst, & Guarino, 2006).

The stepwise multiple regression analysis was used to identify the variables in the study that significantly explained amount of time a television is turned on in the home. Nine variables were found to significantly predict television viewing. Multiple R for the regression was significant, $F(9, 1310) = 40.698$, $p<.000$, R^2 *adj* = .213. The model, therefore, explains 21.3% of the variation for why a television is turned on in the home. The variable of turning a television on during meals explained 9.4% of the relationship (*adj* R^2). The number of people in the home also explained 4.4% of the relationship. Another 2.9% was predicted through the magnitude of preference for watching regular broadcast or cable programming. The remaining 4.7% of the model included six variables ranging from cable subscriptions, income, education, money spent on TV per month, age, income, and number of televisions.

Of note, the variable of screen size was not a predictor of the amount of time any television was turned on in the home. Therefore, the first analysis showing a small but significant relationship between screen size and the amount of time a television was turned on in the home was not confirmed via the regression model.

RESEARCH QUESTION #12b: Does having a large-screen television compete for attention to and use of other media?

The presence of a large-screen in the home presents the question of whether media patterns change and where media occurs. This issue is of particular interest to the print news industry that is paying close attention to how new consumer technologies impact news consumption. Respondents were asked where they typically access daily news and information. A list of media forms were then listed for the respondents to check if they used each media form. The results found that there were no differences between large-screen and traditional television viewers for where they accessed daily news and information (see Table 6.26). The presence of a large television in the home did not effect news consumption.

Theater Attendance

Survey respondents were also asked to report how often they attended the movies in a theater. The analysis showed that as compared to traditional television owners, large-screen owners attended movies in the theater more frequently (chi square = 11.041, df = 3, p = .012, *C*=.091; see Table 6.27). The significant relationship could nonetheless be considered a weak relationship based on the effect size (contingency coefficient) reported. Large-screen owners were more likely to attend the movie theater than traditional screen owners.

Additional Analysis

The survey question format provided opportunities to explore additional analysis beyond the initial research questions of the study. Some findings regarding advertising and digital video recorders now follow.

Advertising

Established scales for advertising skepticism—the first nine statements (Obermiller & Spangenberg, 1998)— and attitudes toward advertising—the last three statements (Pollay & Mittal, 1993)— were included as a survey question. Respondents were asked to mark their agreement or disagreement with the twelve statements about advertising. The statements targeted respondents' views and affection for advertising (see survey question #19 in Appendix I). Diehl, Mueller, & Terlutter (2008) used the same twelve questions in a transnational pharmaceutical advertising study.

A principal components factor analysis was employed for the two groups of advertising questions and their responses. Both groups loaded onto one component each. The nine advertising skepticism statements loaded with an Eigen value of 7.136 and the three attitude-toward-advertising statements loaded with an Eigen value of 2.678. Eigen values of 1 or larger are considered significant. Cronbach's alpha was also calculated for both scales and showed similar results (Cronbach's alpha for advertising skepticism = .967; Cronbach's alpha for attitude-toward-advertising = .939). The results confirmed the validity of both advertising scales which had been previously confirmed in a separate study (Diehl, Mueller, & Terlutter, 2008).

With the components established, the advertising statement responses were averaged into one score for each variable (advertising skepticism, attitude toward advertising) and one-way ANOVA was used to compare mean differences between large-screen and traditional television

owners. The scores for advertising skepticism were reverse-coded to reflect a higher score signifying higher skepticism.

Traditional television owners were found statistically to have greater skepticism toward advertising than large-screen viewers (F= 9.976, df= 1, p=.002, eta=.007). Therefore, people with smaller televisions were more skeptical of advertising than people with large-screen televisions. A deeper analysis breaking the respondents into three groups (large, medium, and small screens) using ANOVA showed the significance was found between large-screen (40"+) and smaller screen (29" or less) (F = 6.306, df = 2, p = .002, eta=.009; mean difference of .2219 between large and small screen significant at .001 level using Tukey HSD).

Traditional television owners were also found to have lower attitudes toward advertising than large-screen owners (F= 15.558, df= 1, p=.000, eta=.012). In other words, large-screen owners embrace advertising more than traditional television owners. Deeper analysis that broke the respondents into three groups (large, medium, and small screens) using ANOVA confirmed the initial finding that large-screen viewers (40"+) embraced advertising more than medium and smaller screen owners (36" or less) (F = 7.961, df = 2, p = .000, eta=.012).

DVR's

Other analysis looked at the variable of DVR ownership rather than screen size. DVR owners were compared with non-DVR households on four variables in the data. DVR owners turned their largest television on more than non-DVR viewers (F= 4.908, df= 1, p=.027, eta=.001). In addition, DVR owners turned on any television in the home more than those who did not own DVR's (F= 8.374, df= 1, p=.004, eta=.006). The findings should be taken with caution due to the large sample size and the very small reported effect size. However, the findings do give evidence that television consumption did not *decrease* with the purchase of a

DVR. The ability to record and control programming may bring about greater viewing efficiency, but the overall time spent watching television either stays the same or is slightly more with DVR ownership.

The variable of DVR ownership was also analyzed using the advertising scales employed in the study. The relationship of advertising to the digital video recorder is a significant issue as the DVR brings greater editorial control to the viewer (Smith, 2005). The control is often assumed to be exercised in ad skipping. Some of the focus group respondents cited an aggressive approach to advertising avoidance using the DVR due to an intense dislike of television advertising. These sentiments, however, were not born out in the data.

Owners of DVR's were not effectively different than non-DVR owners in their overall attitude toward advertising ($F=.042$, $df= 1$, $p=.837$, $eta=.000$). In addition, DVR owners were also not effectively different than non-DVR owners in advertising skepticism ($F= .206$, $df = 1$, $p= .872$, $eta=.000$). Although the finding does not address the direct question of how much advertising avoidance occurs with DVR's, there is no evidence from the data to suggest that DVR ownership alone impacts consumers' overall attitude toward advertising or their skepticism of advertising. The finding may be welcome news to both marketers and broadcasters who have questioned the adverse effects of DVR ownership on consumer's attitudes towards advertising.

Table 6.1: Large-screen vs. Traditional screen AGE

Large-screen vs. Traditional screen: AGE F =.864, df=1, sig. (two-tailed) p=.353, eta = .001		
Television Size:	**40"+**	**36"-**
18-29:	15%	14%
30-39:	24%	25%
40-49:	22%	20%
50-59:	20%	19%
60-69:	10%	11%
70+:	10%	12%

Table 6.2: Large-screen vs. Traditional screen RACE

Large-screen vs. Traditional screen: RACE						
	40"+	**36"-**	**Chi**	**Df**	**Sig.**	**Phi**
White:	89%	92%	2.264	1	p=.132	.041
Black:	5%	3%	1.687	1	p=.194	-.036
Hispanic:	4%	3%	3.304	1	p=.069	-.050
Asian:	4%	4%	.171	1	p=.679	-.011
Polynesian/Hawaiian:	1%	1%	.154	1	p=.695	-.011
Native American: (categories not mutually exclusive)	1%	1%	.002	1	p=.967	-.001

*****Indicates significance

Table 6.3: Large-screen vs. Traditional screen MARITAL STATUS

Large-screen vs. Traditional screen: MARITAL STATUS						
	40"+	**36"-**	**Chi**	**Df**	**Sig.**	**Phi**
Married:	67%	54%	21.273	1	p=.000*	-.127
Divorced:	8%	14%	11.802	1	p=.001*	.094
Widowed:	3%	5%	1.536	1	p=.215	.034
Single:	22%	27%	3.305	1	p=.069	.050

*****Indicates significance

Table 6.4: Large-screen vs. Traditional screen CHILDREN 0-17 YRS

Large-screen vs. Traditional screen: CHILDREN 0 -17 YEARS OLD IN HOME						
	40"+	**36"-**	**Chi**	**Df**	**Sig.**	**Phi**
Have child 0-17 yrs old:	37%	29%	8.300	1	p=.004*	.079
Children between 0 – 5:	17%	15%	1.297	1	p=.255	-.031
Children between 6 -10:	14%	11%	3.238	1	p=.072	-.049
Children from 11 – 17:	20%	14%	7.912	1	p=.005*	-.077
Children 18 and over: (categories not mutually exclusive)	15%	10%	5.510	1	p=.019*	-.064

*Indicates significance

Table 6.5: Large-screen vs. Traditional screen # OF PEOPLE IN HOME

Large-screen vs. Traditional screen: # OF PEOPLE IN HOME F = 12.733, df=1, sig. (two-tailed) p=.000, eta = .010		
Television Size:	**40"+**	**36"or less**
One person:	14%	23%
Two people:	38%	38%
Three people:	19%	16%
Four people:	18%	15%
Five people:	7%	6%
Six people:	4%	3%

Table 6.6: Large-screen vs. Traditional screen GROSS HOUSEHOLD INCOME

Large-screen vs. Traditional screen: GROSS HOUSEHOLD INCOME F = 111.184, df=1, sig. (two-tailed) p=.000, eta=.077		
Television Size:	**40"+**	**36"or less**
$25,000 or less:	7%	17%
$25,001 to $50,000:	17%	32%
$50,001 to $75,000:	27%	24%
$75,001 to $100,000:	20%	15%
$100,001 to $125,000:	12%	7%
$125,001 to $150,000:	4%	3%
$150,001 and over:	13%	3%

Table 6.7: Large-screen vs. Traditional screen EDUCATION

Large-screen vs. Traditional screen: EDUCATION F = 5.037, df=1, sig. (two-tailed) p=.025, eta=.004		
Television Size:	**40"+**	**36"or less**
Attended High School:	1%	1%
Graduated High School:	11%	16%
Some Undergraduate College:	30%	30%
Graduated Undergraduate College:	34%	32%
Attended Graduate School:	7%	6%
Completed Graduate School:	17%	15%

Table 6.8: Size of Television in Inches

SIZE OF TELEVISION IN INCHES Total N= 1328	
Standard Size Television Households	
1"-19":	4%
20"-29":	25%
30"-39"	36%
Large-screen Television Households	
40"-49":	17%
50"-59":	13%
60" and up:	6%

Table 6.9: # of Televisions in Home

# OF TELEVISIONS IN HOME F = 123.613, df=1, sig. (two-tailed) p=.000, eta=.085		
	40"+	**36" or less.**
One:	6%	20%
Two:	20%	31%
Three:	26%	25%
Four:	23%	16%
Five:	15%	7%
Six or more:	11%	3%
MEAN	**3.53**	**2.69**

Table 6.10: Monthly Bill for Television Services

MONTHLY BILL FOR TELEVISION SERVICES F = 98.164, df=1, sig. (two-tailed) p=.000, eta=.069		
	40"+	**36" or less.**
$0:	6%	14%
$1 to $19.99:	1%	3%
$20 to $39.99:	10%	13%
$40 to $59.99:	24%	37%
$60 to $79.99:	22%	18%
$80 to $99.99:	20%	8%
$100 and above:	18%	6%

Table 6.11: Years of Largest Television Ownership

YEARS OF LARGEST TELEVISION OWNERSHIP Chi = 74.857, df=3, sig. (two-tailed) p=.000, *C*=.231		
	40"+	**36" or less.**
Less than a year:	23%	10%
1 year to less than 2 years:	23%	14%
2 years to less than 3 years:	17%	16%
3 years or more:	37%	60%

Table 6.12: Original Cost of Largest Television

ORIGINAL COST OF LARGEST TELEVISION F = 949.451, df=1, sig. (two-tailed) p=.000, eta=.417		
	40"+	**36" or less.**
Free:	6%	13%
Less than $500:	5%	50%
Between $501 and $1000:	18%	30%
Between $1001 and $1500:	21%	4%
Between $1501 and $2000:	18%	2%
Between $2001 and $3000:	22%	1%
$3001 or more:	11%	1%

Table 6.13: Reasons and Motivations for Largest Television Acquisition

Reasons and Motivations for Largest Television Acquisition						
	40"+	**36"-**	**Chi**	**Df**	**Sig.**	**Phi**
To get high-definition programming:	38%	8%	170.269	1	p=.000*	.358
Old television needed replacement:	38%	64%	85.071	1	p=.000*	-.253
For family entertainment:	40%	17%	81.778	1	p=.000*	.248
For entertaining friends and visitors:	16%	5%	50.375	1	p=.000*	.195
Moved to new home and wanted updated technology:	13%	6%	17.293	1	p=.000*	.114
Wanted a newer TV for a specific event:	8%	3%	17.237	1	p=.000*	.114
Didn't own television prior:	2%	6%	9.980	1	p=.002*	-.087
To decorate room:	5%	2%	9.546	1	p=.002*	.085
Television was a gift: (categories not mutually exclusive)	8%	12%	5.942	1	p=.015	-.067

*Indicates significance

Table 6.14: Length of Purchase Decision

Length of Purchase Decision F = 78.406, df=1, sig. (two-tailed) p=.000, eta=.063		
	40"+	**36" or less.**
1 day	16%	30%
Within 1 week	26%	28%
Within 1 month	24%	17%
2 to 6 months	19%	5%
6 months to less than 1 year	3%	3%
1 year to less than 2 years	3%	1%
2 years to less than 3 years	1%	0%
3 or more years	1%	1%

Table 6.15: Television Technology Ownership Index

Television Technology Ownership Index F = 371.493, df=1, sig. (two-tailed) p=.000, eta=.219		
	40"+	**36" or less.**
0= Low	0.8%	4.0%
1	7.4%	16.3%
2	9.1%	34.0%
3= Moderate	17.1%	26.5%
4	23.2%	12.3%
5	28.8%	5.7%
6= High	13.7%	1.2%

Table 6.16: Ownership of Television Cluster Technologies

OWNERSHIP OF TELEVISION CLUSTER TECHNOLOGIES						
	40"+	**36"-**	**Chi**	**Df**	**Sig.**	**Phi**
Have High-Definition TV:	56%	14%	271.848	1	p=.000*	.452
Own DLP TV:	21%	1%	167.865	1	p=.000*	.356
Own a plasma TV:	24%	4%	119.406	1	p=.000*	.300
Own an LCD TV:	44%	17%	113.349	1	p=.000*	.292
Have Digital Video Recorder:	48%	20%	110.351	1	p=.000*	.288
Own a tube TV:	64%	79%	37.319	1	p=.000*	-.168
Have gaming system:	44%	29%	27.529	1	p=.000*	.144
Have satellite services:	30%	21%	14.828	1	p=.000*	.106
Have DVD Player:	90%	85%	5.834	1	p=.016*	.066
Have VCR Player:	74%	76%	1.014	1	p=.314	-.028
Have cable services:	61%	59%	.181	1	p=.670	.012

*Indicates significance

Table 6.17: Home Placement of Largest Television

HOME PLACEMENT OF LARGEST TELEVISION chi square = 55.148, df=7, p=.000, *C*=.200						
	40"+	**36"-**	**Chi**	**df**	**Sig.**	**Phi**
Living room	60%	70%	15.857	1	p=.000*	.109
Great room/Den	23%	15%	14.230	1	p=.000*	-.104
Bedroom	4%	9%	11.726	1	p=.001*	.094
Basement	6%	1%	22.511	1	p=.000*	-.130
Recreation room	3%	2%	2.891	1	p=.089	-.047

*Indicates significance

Table 6.18: Interior Adjustments Made to Accommodate the Largest Home Television

Interior Adjustments Made to Accommodate the Largest Home Television						
	40"+	**36"-**	**Chi**	**Df**	**Sig.**	**Phi**
No adjustments were made:	42%	58%	31.840	1	p=.000*	-.155
Television put in new spot:	13%	5%	31.348	1	p=.000*	.154
Some furniture rearrangements made:	20%	10%	27.723	1	p=.000*	.144
Major furniture/room layout changes made:	7%	3%	14.784	1	p=.000*	.106
Cabinetry or other furniture was purchased to hold or cover TV:	20%	14%	9.758	1	p=.002*	.086
An entire, separate room was dedicated for media use:	2%	1%	2.575	1	p=.109	.044
TV put in same spot as previous TV: (categories not mutually exclusive)	32%	35%	.981	1	p=.322	-.027

*Indicates significance

Table 6.19a: Largest Home Television Usage for Large-screen Owners

LARGEST HOME TELEVISION USAGE Large-screen (40" or more) Television Owners (percent)						
	Never 1	2	3	4	All the time 5	Mean
Watching TV (broadcast, cable, or satellite)	1.5%	4.0%	11.8%	22.2%	55.6%	4.31
Watching TV using a DVR (such as TiVo)	41.9%	6.1%	12.0%	17.5%	22.5%	2.73
Watching DVD, VHS or Satellite movies	5.7%	19.8%	26.7%	24.4%	23.4%	3.40
Playing video games	56.2%	12.8%	12.0%	9.1%	9.9%	2.04
As a computer screen	83.6%	5.5%	5.1%	2.7%	3.2%	1.36
As a digital picture frame or photo display	78.9%	10.5%	4.4%	2.7%	3.4%	1.41

Table 6.19b: Largest Home Television Usage for Traditional Screen Owners

LARGEST HOME TELEVISION USAGE Standard screen (36"or less) Television Owners (percent)						
	Never 1	2	3	4	All the time 5	Mean
Watching TV (broadcast, cable, or satellite)	3.4%	6.1%	10.4%	25.3%	54.7%	4.22
Watching TV using a DVR (such as TiVo)	68.7%	6.0%	7.3%	8.0%	10.1%	1.85
Watching DVD, VHS or satellite movies	12.3%	21.7%	29.1%	20.0%	16.9%	3.08
Playing video games	66.7%	11.6%	10.4%	7.0%	4.2%	1.70
As a computer screen	93.1%	2.0%	2.2%	1.5%	1.2%	1.16
As a digital picture frame or photo display	89.4%	5.3%	3.0%	1.1%	1.2%	1.19

Table 6.20a: Programming Preference on Largest TV for Large-screen Owners

PROGRAMMING PREFERENCE ON LARGEST HOME TELEVISION Large-screen (40" or more) Television Owners (percent)						
	Never 1	2	3	4	All the time 5	Mean
News	5.1%	14.9%	22.7%	23.4%	33.9%	3.66
Entertainment	1.9%	5.7%	20.4%	35.2%	36.8%	3.99
Sports	9.9%	14.9%	18.7%	27.4%	29.1%	3.51
Music/Satellite radio	44.0%	24.6%	14.5%	10.3%	6.5%	2.11
Education	29.7%	29.3%	25.3%	9.3%	6.5%	2.34
Movies	2.1%	7.2%	27.2%	33.5%	30.1%	3.82
Cooking	26.9%	23.2%	22.5%	16.2%	11.2%	2.61
Reality television	27.6%	18.9%	21.3%	18.3%	13.9%	2.72
Shopping	65.9%	16.0%	8.8%	3.6%	5.7%	1.67
Children's	42.1%	18.1%	15.2%	13.1%	11.6%	2.34

Table 6.20b: Programming Preference on Largest TV for Traditional Screen Owners

PROGRAMMING PREFERENCE ON LARGEST HOME TELEVISION Standard screen (36"or less) Television Owners (percent)						
	Never 1	2	3	4	All the time 5	Mean
News	6.4%	14.8%	23.0%	24.6%	31.1%	3.59
Entertainment	4.7%	9.3%	21.5%	33.5%	30.9%	3.77
Sports	19.6%	20.8%	21.7%	19.1%	18.8%	2.97
Music/Satellite radio	59.8%	21.9%	12.0%	3.6%	2.6%	1.67
Education	34.6%	29.3%	19.8%	12.2%	4.0%	2.22
Movies	3.5%	12.2%	31.9%	31.3%	21.0%	3.54
Cooking	34.2%	21.6%	21.9%	13.8%	8.3%	2.4
Reality television	34.3%	21.2%	19.0%	17.4%	8.0%	2.43
Shopping	74.8%	12.8%	7.3%	3.4%	1.6%	1.44
Children's	51.0%	18.1%	12.7%	10.4%	7.7%	2.06

Table 6.21a: Viewing Experience Offered via Largest Home Television

VIEWING EXPERIENCE OFFERED VIA LARGEST HOME TELEVISION						
	40"+ Mean	36"- Mean	F	Df	Sig.	Eta
Enjoyable	4.59	4.16	102.686	1	p=.000*	.072
Easy to watch	4.60	4.21	81.473	1	p=.000*	.058
Similar to watching movies at the cinema/theater	3.76	2.55	345.300	1	p=.000*	.207
Feels like being at the event	3.52	2.40	281.548	1	p=000*	.175
Sound is clear and compelling	4.25	3.64	126.502	1	p=.000*	.087
Clarity and picture detail are life-like	4.20	3.40	190.236	1	p=.000*	.125
I get absorbed in the programming	3.88	3.31	86.192	1	p=.000*	.061
Watching the television is an event rather than passing time	3.52	2.85	104.387	1	p=.000*	.073

*Indicates significance

Table 6.21b: Viewing Experience Offered for Large-screen Owners

VIEWING EXPERIENCE OFFERED VIA LARGEST HOME TELEVISION Large-screen (40" or more) Television Owners (percent)						
	Strong Disagree 1	2	Neutral 3	4	Strongly Agree 5	Mean
Enjoyable	0.0%	0.8	6.3	25.7	67.2%	4.59
Easy to watch	0.0%	0.8	6.7	23.8	68.6%	4.60
Similar to watching movies at the cinema/theater	2.9%	8.8	27.2	31.6	29.5%	3.76
Feels like being at the event	5.9%	12.6	30.5	25.5	25.5%	3.52
Sound is clear and compelling	0.0%	2.5	14.7	37.9	44.8%	4.25
Clarity and picture detail are life-like	0.4%	4.0	16.8	32.6	46.15	4.20
I get absorbed in the programming	0.8%	7.2	28.4	30.1	33.5%	3.88
Watching the television is an event rather than passing time	4.4%	14.5	29.7	27.2	24.2%	3.52

Table 6.21c: Viewing Experience Offered for Traditional Screen Owners

VIEWING EXPERIENCE OFFERED VIA LARGEST HOME TELEVISION Standard screen (36"or less) Television Owners (percent)						
	Strong Disagree 1	2	Neutral 3	4	Strongly Agree 5	Mean
Enjoyable	.5%	1.6	16.8	43.6	37.5%	4.16
Easy to watch	.6%	2.0	14.9	40.8	41.7%	4.21
Similar to watching movies at the cinema/theater	23.0%	25.0	32.1	13.2	6.6%	2.55
Feels like being at the event	27.5%	27.5	27.8	11.6	5.5%	2.40
Sound is clear and compelling	2.8%	10.1	29.5	35.4	22.2%	3.64
Clarity and picture detail are life-like	4.8%	14.8	34.2	28.5	17.7%	3.40
I get absorbed in the programming	7.5%	15.4	31.1	30.9	15.1%	3.31
Watching the television is an event rather than passing time	15.1%	22.2	34.8	18.8	9.1%	2.85

Table 6.22a: Attention to Largest Home Television for Large-screen Owners

ATTENTION TO THE LARGEST HOME TELEVISION Large-screen (40" or more) Television Owners (percent)						
	Pay No Attention 1	2	3	4	Pay Full Attention 5	Mean
Traditional broadcast or cable programs	2.1%	1.9	19.2	46.1	30.5%	4.01
Commercials	23.2%	36.0	25.7	10.5	4.0%	2.36
When watching DVD's, pre-recorded movies or Pay-per-view shows	4.0%	5.5	15.6	29.3	45.5%	4.07
DVR viewing of pre-recorded programs	1.1%	1.1	5.9	14.9	22.7%	4.25

Table 6.22b: Attention to Largest Home Television for Standard Screen Owners

ATTENTION TO THE LARGEST HOME TELEVISION Standard screen (36"or less) Television Owners (percent)						
	Pay No Attention 1	2	3	4	Pay Full Attention 5	Mean
Traditional broadcast or cable programs	3.8%	4.6	26.0	44.8	20.8%	3.74
Commercials	29.0%	40.9	21.0	6.4	2.2%	2.12
When watching DVD's, pre-recorded movies or Pay-per-view shows	9.5%	5.5	19.0	33.5	31.9%	3.73
DVR viewing of pre-recorded programs	1.1%	.5	2.7	9.3	5.7%	3.95

Table 6.23a: Competitive vs. Complementary Activities for Large-screen Owners

COMPETITIVE VS. COMPLEMENTARY ACTIVITIES Large-screen (40" or more) Television Owners (percent)						
	Never 1	2	3	4	All the time 5	Mean
Read books, newspapers, or magazines	20.0%	26.1	30.5	15.2	8.2%	2.65
Do household chores such as cleaning, washing, or ironing	15.4%	21.3	32.4	21.5	9.5%	2.88
Nap or sleep during program/movie	21.3%	28.2	31.2	14.1	5.3%	2.54
Work on hobbies such as sewing, etc.	36.8%	24.8	20.8	12.8	4.8%	2.24
Prepare snacks or meals	18.9%	20.8	31.4	20.6	8.2%	2.78
Talk with other viewers about other subjects	18.5%	19.6	31.6	21.7	8.6%	2.82
Play with children	7.5%	16.7	33.3	32.8	9.8%	3.21
Talk on telephone	14.9%	28.2	30.1	20.6	6.1%	2.75
Use computer	34.3%	12.2	25.1	17.9	10.5%	2.58

Table 6.23b: Competitive vs. Complementary Activities for Traditional Screen Owners

COMPETITIVE VS. COMPLEMENTARY ACTIVITIES Standard screen (36"or less) Television Owners (percent)						
	Never 1	2	3	4	All the time 5	Mean
Read books, newspapers, or magazines	18.5%	23.7	33.2	17.8	6.8%	2.71
Do household chores such as cleaning, washing, or ironing	13.4%	21.6	38.7	20.4	6.0%	2.84
Nap or sleep during program/movie	27.3%	28.8	27.3	12.9	3.6%	2.37
Work on hobbies such as sewing, etc.	36.3%	21.9	22.5	14.5	4.7%	2.29
Prepare snacks or meals	18.2%	21.1	34.3	21.3	5.0%	2.74
Talk with other viewers about other subjects	23.7%	20.3	31.4	20.9	3.8%	2.61
Play with children	15.8%	14.1	32.8	29.1	18.1%	3.00
Talk on telephone	17.9%	28.6	32.2	16.9	4.3%	2.61
Use computer	32.5%	13.8	21.8	19.9	12.0%	2.65

Table 6.24a: Coviewing/Family Viewing (Internal Function)

COVIEWING/FAMILY VIEWING (INTERNAL SOCIAL FUNCTION) Chi = 25.711, df=3, sig. (two-tailed) p=.000, *C*=.144		
	40"+	36" or less.
Most of the time:	44%	33%
Some of the time:	27%	26%
A little of the time:	14%	16%
Never, I watched by myself the whole time:	14%	25%

Table 6.24b: Coviewing/Family Viewing for Large-screen vs. Traditional Screen

COVIEWING/FAMILY VIEWING (Large-screen vs. tradition screen) controlling for # of people living in the home						
	40"+	36"-	Chi	Df	Sig.	*C*
One person in the home	25%	75%	16.133	5	.006*	.240
Two people in the home	36%	64%	25.344	5	.000*	.219
Three people in the home	41%	59%	34.887	5	.000*	.367
Four people in the home	41%	59%	6.046	5	.302	.168
Five people in the home	39%	61%	7.775	5	.169	.285
Six+ people in the home	44%	56%	8.350	5	.138	.411

*Indicates significance

Table 6.25: Coviewing/Social Viewing (External Social Function)

COVIEWING/SOCIAL VIEWING (EXTERNAL SOCIAL FUNCTION) F = 55.237, df=1, sig. (two-tailed) p=.000, eta=.040		
	40"+	**36" or less.**
Never:	16%	35%
Less than once a month:	40%	39%
One or Two times a month:	23%	14%
Three or Four times a month:	10%	6%
Five or Six times a month:	5%	3%
Seven or more times a month:	7%	3%

Table 6.26: News

NEWS						
	40"+	**36"-**	**Chi**	**Df**	**Sig.**	**Phi**
Newspaper:	50%	49%	.148	1	.700	.011
Internet:	74%	72%	.496	1	.481	.019
Television:	75%	72%	1.613	1	.204	.035
Radio:	34%	34%	.060	1	.806	-.007
Email:	17%	15%	.750	1	.387	.024
Talking to other people:	23%	23%	.067	1	.795	.007
Don't access daily news:	2%	2%	.157	1	.692	-.011

Table 6.27: Cinema

CINEMA Chi = 11.041, df=3, sig. (two-tailed) p=.012, *C*=.091		
	40"+	**36" or less.**
Rarely or never:	46%	51%
Once in the last three months:	24%	24%
Once in the last month:	15%	15%
Twice or more in the last month:	16%	10%

		Use-Diffusion (UD) Typology for Television Use chi-square = 84.356, df = 3, p = .000, *C*=.244	
Variety of Use		**Non-Specialized Use**	**Intense Use**
	High *4) Social Use* *3)Interactivity* *2) Movies*	Total Sample: 8.9% Large-screen: 10.5% Traditional TV: 8.0%	Total Sample: 42.5% Large-screen: 57.3% Traditional TV: 34.2%
		Limited Use	**Specialized Use**
	Low *1)Watch TV*	Total Sample: 9.7% Large-screen: 6.1% Traditional TV: 11.7%	Total Sample: 38.6% Large-screen: 25.5% Traditional TV: 45.8%
		Low	**High**

Source: Adapted from Shih & Venkatesh (2004) ***Rate of Use***

Figure 5 Use-Diffusion (UD) Typology for Television Use

CHAPTER 7

DISCUSSION

The study examined the changes and impact that large-screen televisions brought to the home television viewing environment. The study of the viewing and usage of large-screen televisions in the home was focused into four general categories: 1) Conceptualization of large-screen television by users 2) Viewing and usage of large-screen television as an innovation 3) Screen size, Attention, and "Presence" 4) Household Centrality of Television. The research design using focus groups and a national online survey was employed to create complementary data sources that could be verified and cross-checked.

The focus group interviews highlighted the interest and enthusiasm for large-screen televisions as they related to other television technologies such as digital video recorders, High-Definition television signals, and the wide-screen formats (much like a cinema screen in shape). A consumer hierarchy of television technologies was developed.

Findings from the focus group interviews were tested using a national online survey. The online survey results showed that large-screen television owners lived with more people, were more likely to be married, and were more likely to have teenagers and older children living in their homes. They were also more affluent, owned more television sets (both large and small), and paid more for monthly television services.

Large-screen television owners spent significantly more money for their televisions and owned significantly more television-related technologies across the spectrum of the home television cluster (e.g. HDTV, digital video recorders, gaming consoles, and satellite television

access). They were found to watch more programming when using a DVR, watched more movies, and played more video games. They were found to consume more entertainment, sports, and movie programming. Finally, there was some evidence that households with large-screen televisions were more likely to have any television turned on in the home during any given day.

The increased consumption for certain television genres can be explained in the enhanced large-screen television experience that also increased attention levels. The large-screen television was found to provide more enjoyment, ease of watching, a theater-like atmosphere in a comfortable home setting, and a more life-like picture and compelling sound that made viewers feel closer to the events on screen. Large-screen television owners reported greater attention levels to the television screen across the categories of viewing. The enhanced televisual experience was often shared with others in the home (internal social function) and friends/visitors (external social function).

Conceptualizing Large-screen Viewing

One of the initial questions of the study was to determine how consumers conceptualized large-screen televisions. Initially, the inquiry relates to the actual size of the screen. How big must a television screen be in order to be considered a "large-screen" or a "big-screen" television? That question was addressed very specifically in the initial portion of the focus group discussions. According to owners of large-screen televisions in the focus group discussions, a large-screen television was minimally 37" or greater. In practical terms, however, the agreed measurement of 40" or greater became the definition as few sets are sold in increments between 37" to 39".

There was also an additional view expressed in the focus groups that 37" or 40" televisions would likely not be considered "large-screen" televisions among some viewers who had become accustomed to 50" and 60" screens. Therefore, the conceptualization of large-screen television as operationalized through the metric of screen size is a measure in flux. Screen sizes continued to grow creating an upwardly adjusting perception of what constituted "big" or "large" in the consumers' view. The future standard that is conceptualized by viewers may be in the range of 50" to 60". As large-screens continue to grow and diffuse in to the consumer market, future viewers may well consider 40" televisions to be moderately sized and possibly small.

The second finding regarding large-screen television conceptualization related less to the "size" of the screen and more to the technologies involved. For example, the variable of resolution (e.g. high-definition and other digital signals) was seen to be largely inextricable from screen size. Large-screen television owners reported in the focus groups that a large-screen television without premium resolution capabilities (e.g. HDTV) would greatly diminish the utility of large-screen televisions. The "quality" associated with a large-screen televisions was often related to the high-definition programming as displayed on the larger screens.

In addition, some consumers conceptualized "large-screen televisions" as composites of cutting-edge television technologies including digital resolution, digital video recorders, and wide-screen format. The synergies created with multiple technologies in the television cluster created a premium bundle of programming and functionalities. The benefits derived from large-screen televisions could only be fully derived in conjunction with high-definition television, digital video recorders, and other cutting-edge television technologies.

In essence, television screen itself is only one component of a greater and essential whole. Future study of large-screen television should embrace screen size as only one element of what constitutes large-screen television. A more expanded conceptualization that includes all of the other elements of the consumer hierarchy of television technologies should be employed (e.g. digital video recorders, high-definition digital, wide-screen format, see Chapter 5 results).

Although the large-screen television has been identified as continuous television innovation leading toward continuous television consumption (see Table 5.15), it is not unreasonable to project that future conceptualizations of television from the consumers' view might automatically include wide-screens, high-definition resolution, recordable and editorial features such as DVRs, and large screens. The continuous consumption reflected in the current environment may well become standard television consumption of the future. In effect, the introduction of large-screen televisions into the consumer market represents a change in the notion of television due to the various improvements and the premium viewing experience.

Changes in Television Consumption

Some of the clearest findings of the study involved the change in the home television consumption experience. The focus group respondents reported significant experiential differences in large-screen viewing over traditional television viewing, findings that were validated via the online survey. The results showed a clear and definitive difference in the consumer experience as compared to traditional television viewers. The large-screen television experience was found to be more enjoyable, easy to watch, and to approximate a theater-like atmosphere. Life-like picture and compelling sound helped viewers feel like they were being transported to the location of the content. In short, the large-screen television cluster—with the

complement of other television technologies—represents a significant change in the home television marketplace as compared to prior home television experience. As noted previously, large-screen television viewing has been found in this study to reflect continuous consumption, exceeding the standard consumption experience of prior television viewing. The synergies of the home television cluster may, however, represent dynamically continuous consumption depending on the technologies involved, including both current and not-yet-invented devices and capabilities.

In addition to the enhanced technological delivery of content and experience, the superior television experience was matched by enhanced audience engagement. The large-screen television experience was not just a one-way flow of tele-experiential content. Large-screen television owners were shown to respond to the enhanced experience through greater attention levels and absorption. As reported in Chapter 6, large-screen viewers paid more attention to the screen across all four categories of viewing as compared to traditional television viewers (traditional broadcast, cable, and satellite viewing; attention to commercials, attention during movies, attention during DVR viewing). The large-screen viewers were also found to get more absorbed in the content. Therefore, when coupling the results, the combined data suggest that the enhanced large-screen television experience was strongly associated with a more attentive and engaged home viewer. The finding held for all categories of home viewing such as broadcast/cable/satellite television, commercials, movies, and DVR viewing.

The findings portray a class of television viewing and television viewer that is more tightly coupled which may be usefully differentiated in the overall marketplace. New television technologies that result in greater television experience may alter the notion of television as conventionally understood. A more compelling experience coupled with greater viewer

attention, interest, and recall suggests that large-screen television viewing may be differentiated from other portions of television viewers. Broadcasters and advertisers may take comfort in the finding that large-screen viewing produces a more life-like, visually compelling, and complete television experience that is matched by greater viewer absorption in the programming content.

Premium Consumption of Television

The study design did not allow for finding viewers' pre-dispositions toward television before and after purchase of large-screen televisions. Some of the focus group respondents explained how the introduction of the large-screen television had impacted their viewing experience to bring about meaningful changes in the amount of television they watched and their appreciation and use of the technology. However, there were not any conclusive findings to show that the introduction of the large-screen televisions (with the high-definition and increased consumer control) directly influenced these changes. Many of the focus group respondents were equally certain that the introduction of the large-screen television cluster in their home did not impact their overall television habits. Therefore, causality could not be suggested in the focus group findings nor established statistically in the online survey.

Another more likely explanation—which was born out in the demographic and television data of the study—involved the likelihood that people buying large-screen televisions were heavy television consumers that gravitated toward the enhanced television experience for their homes. The large-screen television cluster provided television enthusiasts with an enhanced and focused experience where the viewing enjoyment could be amplified. As discussed in the focus group results in Chapter 5, the large-screen experience offered quality programming experience as opposed to simply quantity of pixels.

As such, the collective findings of the study portrayed large-screen television in the current environment as a premium product reserved for the more prosperous segments of society. Large-screen television owners were found to be higher income earners. They also owned newer televisions that cost significantly more than previous televisions. The collective results from the television related questions also showed large-screen television owners to be heavier consumers of television technology and services than other television owners. The monetary costs for the large-screen televisions and then the monthly television fees for services were also significant as compared to traditional television costs. Costs mattered, and it was reflected in the amount of time it took to buy the sets and to afford the services. The results show that large-screen television represents a differentiated television experience mediated by costs. Heavy television consumers without the means to upgrade their technology would be prevented by the costs from enjoying the enhanced televisual experience.

The increased viewing experience has a social component. The results of the study paint a picture of people buying large-screen televisions as a premium product to get high-definition programming, for family entertainment, and for friend and visitor entertaining. Therefore, the enhanced technology served technical as well as social purposes. A survey question addressed the motivations for acquiring large-screen televisions (see Research Question #3 and Table 6.13 in Chapter 6 results). The most prominent motivation listed by large-screen owners was to obtain high-definition programming. This hearkens back to the prior discussion of the inseparability between large-screen television and high-definition programming as unique concepts in the consumers' view. The next most prominent motivations for purchasing large-screen televisions were for family entertainment and then for entertaining friends and visitors. As a premium product, the large-screen television cluster provided a focal point around which

families and friends/visitors might gather. Therefore, it seems clear that large-screen televisions present more opportunities for event viewing in the home. Both the focus group findings and the online survey findings suggest event viewing has become more important as an activity when large-screen televisions are available.

The coviewing and external social function findings (in both the focus groups and the online survey) when taken together provided further evidence that the large-screen television cluster is both a premium product and a social utility. It is unclear, however, how long that the premium status of large-screen televisions will last. As the costs for the technologies decline and a greater majority of the population acquire the sets, the elite view of large-screen television ownership will also likely decline.

Large-screen Television and Families

The findings in the current study regarding family life provide a mixed picture. As was outlined in the literature portion of the study, television research has often concentrated on the nature of its role in family life, including its potential role as a unifier of family experience. As has also been noted previously, television viewing trends do not support that family perspective. Television became largely an individualized experience rather than a family or social event.

The demographic findings from the survey paint a picture of large-screen owners as largely family-oriented in the upper middle-class or higher socioeconomic strata. Large-screen owners were more likely to be married, have teenagers and older children in the home, live with more people, and earn more money. Therefore, it is consistent to find that large-screen owners reported that family entertainment was a major reason for purchasing the sets which produces a larger, fuller family experience. In addition, large-screen owners were more likely to view event

programming (such as sports and movies) and to play videogames, which has become a family and/or multiplayer activity according to the findings of the focus groups.

The online survey results showed that in homes of two or three people only (e.g. presumed to be small families), the presence of a large-screen television can be a significant vehicle toward shared experience. Intuitively, in homes with four or more people (e.g. large families), the size of the television did not significantly impact coviewing (defined as two or more people viewing together). In addition, when controlling for other factors such as marriage and children, coviewing continued to be found in home where there were one, two, or three residents. By definition, coviewing that occurred in homes with one resident could not be family viewing and would have to be social viewing.

The findings help confirm the social nature of the large-screen television viewing in the home. Future study of large-screen television and families would need more specific, family intensive questions and may be better administered as a qualitative design with in-home observation and depth interviews.

The Use-Diffusion Model for Large-screen Television Analysis

The current study examined the concept of television centrality as it related to large-screen television use. The overall conclusion from the current study suggest that the Use-Diffusion model that measures intensity of use and variety of use (rather than quantity only) is the more relevant measure when analyzing large-screen television use in the home. Ultimately, television centrality as conceptualized in the research literature was not found in the present study when comparing large-screen respondents with other viewers. Using the same three-

question sequence as Roberts *et al* (2005), the study found no differences in household television centrality between large-screen and tradition television households.

A similar survey question in the present study asked how many hours per day was any television on during the day. A statistically significant but small result found that large-screen television households had any television turned on more. A regression model was constructed to find out which factors predicted the result. Consistent with Medrich *et al*, television being turned on during meals was the most effective predictor (9.4% of the explanation). However, questions about television rules in the home was not effective and is not likely a useful measure regarding adults and television viewing.

The current study with its empirical methodologies was less sensitive to the normative questions of television centrality that were found in the research literature. No findings in the study shed light on the positive or negative sociological effects of large-screen television use in the home. Other research approaches, measures, and/or methodologies may be needed to research the role of television centrality in the home, specifically when the prime variable of interest involves adults and not necessarily children.

As noted at the beginning of the section, an explanation for the lack of sensitivity in the study for issues of television centrality may be that the overall television viewing across the range of people has increased over time. The original study of television centrality (Medrich *et al*) used in-person interviews with children and parents in inner-city Oakland to determine use of discretionary time by children. In essence, the measure was based on quantity of television viewing as opposed to other activities.

Using quantity of viewing, however, as the measure of television centrality may be only an initial measurement in the current environment. Overall average television viewing may have

increased dramatically from the time the original study was conducted. The survey respondents in aggregate across all the sample reported that a television was turned on in the home approximately 5+ hours a day. Other official reports show that the average time that a television is turned on in a U.S home is 8 hours 11 minutes (OECD, 2007). At some level it is unrealistic to suggest that overall quantity of television viewing would increase significantly beyond the current levels. With only twenty-four hours in the day and obvious demands on time in the lives of average people, it is possible that overall television watching by sheer quantity of hours may be reaching a plateau across all viewers. To find differentiation among populations in the current environment, the variables of "type of use" or "intensity of use" appears to be a more compelling and useful measure. The Use-Diffusion model, which focused on intensity of use and variety of use, was applied in the current study yielding differentiated results (see Research Question #8b in Chapter 6 Survey Results).

Advertising

The advertising questions that were added to the study for the online survey complemented the overall consumptive portrait of the large-screen viewer. Large-screen television viewers were found to embrace advertising more than other television viewers. They were also found to pay more attention to commercials. The results were found using established attitude-toward-advertising and advertising skepticism scales. Therefore, advertising effectiveness is likely to increase when content is viewed on large-screen televisions. Large-screen television viewers were less skeptical of the advertising and were shown to watch the commercials more.

These findings regarding openness toward advertising are provocative. Many of the focus group respondents displayed animosity toward advertising as an enterprise. Some of them asserted that their DVR usage was largely an instrument to avoid advertising at all costs. Yet, the findings from the online survey refute the claim that large-screen owners are less open to advertising than other viewers. These findings are consistent with other results of the study that show large-screen owners to be more consumptive people in general. Interest in advertising is likely related to their ability and propensity to be heavy consumers of many products and services across the spectrum of products. In that scenario, advertising provides a useful service in making them aware of products and sales that they have interest in and have the means to purchase. Therefore, advertising serves as a useful service to these consumers.

Cinema Attendance

The focus group discussions found that owners of large-screen televisions reported that since the large-screen television acquisition, attendance at movies in theaters had declined. The survey results found that large-screen television owners attended movies in the theater more than traditional television owners. The two findings are reconcilable when considering that in the past large-screens owners have likely gone to the movies more than people with smaller televisions. The survey results have indicated that large-screen owners were greater consumers of media products across the board. Melding the two findings together, it is possible that large-screen owners have decreased their cinema attendance even though it was still more than the cinema attendance of traditional television owners. People with large-screens in their home still went to the movies more than people with traditional screens.

Limitations of the Study

The multi-method nature of the study provided an opportunity to include qualitative and quantitative methodologies within an exploratory study. All research designs require judgments which bring specific strengths as well as weaknesses to the design. As is implied in focus group research, the focus group respondents were recruited via a convenience sample in Athens, Georgia as well as an affluent neighborhood in Roswell, Georgia. Due to the locations, the respondents likely over-represented the education levels from the general U.S. population with the accompanying views associated with educated populations. The national online survey showed only a small and negligible difference between large-screen owners and traditional television owners with regards to education levels.

In addition, the Georgia communities are known for devotion to sports events which influences both the amount of sports programming viewed as well as the social aspect of television viewing. The focus group results found clear use of the large-screen television for sports programming and external social functions. In this specific case, however, the preference for sports programming on large-screen televisions was confirmed via the online survey. However, the national population is likely less zealous in their sports viewing than the Southern communities represented in the focus groups.

Another point of interest which may be a limitation to the study involves the use of a national panel service rather than a purely random national sample via mail or telephone. Great care was taken to select a rigorous online survey provider that could produce a reputable national sample of large-screen and traditional television respondents (see Chapter 4, Selection of a National Online Panel Service). *Zoomerang* was selected based on their rigorous approach to its proprietary online verification system and the size of the respondent base (see Chapter 4,

Zoomerang Methodology). The choice of *Zoomerang* also reflected its closest representativeness to the overall U.S. population as compared to four other panels. Overall, the study's sample aligned closely with the overall *Zoomerang* panel which was the closest panel to mirror the U.S. Census (see Chapter 4, Sample Representativeness).

In spite of these efforts to secure a nationally representative panel, the survey sample underrepresented the least affluent segment of society (under $24,999) and overrepresented the *Zoomerang* panel and the U.S. Census in the middle to upper middle class categories ($50,000 - $99,999). This is an expected finding due to the prestige nature and price of large-screen televisions drawing a more affluent consumer base. As the socioeconomic status of large-screen television households became a central point in the findings of the study, a word of caution about a small upward bias in the sample on income should be noted. The survey sample also underrepresented Black/African American respondents and Hispanics as compared to the U.S. Census. Gender was controlled in the study to assure the results were not impacted by the inherent differences between men and women, especially in regards to television viewership and preferences.

One of the judgments made in the study was to stagger the online survey across a three day period starting on Tuesday and ending on Thursday. Some of the principal research questions involved in the measures of television centrality asked the respondents to identify how much television they watched the day prior to taking the survey. The three tranche survey over three days was an effort to eliminate any news events or television events on any one day that could skew the viewing measures of the study. As such, each tranche of the survey was closed after twenty-four hours. Closing the surveys after twenty-four hours, however, also suppressed response rates. The survey response rate of 12.8%—although deemed acceptable within the

range of response rates for online surveys—could have been much larger if multiple requests for response were sent and time for completion were spread over several days (see Chapter 4, Administration of the Survey).

Perhaps the more critical limitation of the study involves the strength of the sample size. As was reported in the methodology chapter of the study, a sample size of N=1328 was achieved in the study due to a higher response of traditional television households on the first tranche of the study. Statistically, however, the findings within a sample size of this magnitude need to be assessed with caution. Large sample sizes can produce statistically significant results when the actual size of the differences between the studied groups may be negligible. For this reason, the researcher reported an effect size statistic for every reported result of the study (eta, phi, and contingency coefficient). The analyzed and reported survey results were based on effect size and not statistical significance only.

Areas of Future Research

Execution of the present study led to various related questions that merit further research exploration.

Consumer Hierarchy of Television Technologies

The focus group findings produced a Consumer Hierarchy of Television Technologies that showed that television viewers ranked digital video recorders as their most preferred television technology. High-definition resolution, large-screens, and wide-screen format followed DVR's in consumer preference. The findings were a result of a qualitative analysis and were not tested in the online survey. Future research may test this television hierarchy to verify the findings. This hierarchy, when tested, would be of interest to the DVR providers as they

market their services within the premium television market. In addition, newer television technologies will likely emerge that will challenge the notion of television itself and that will have distinct utility to the viewers. An established hierarchy of television technologies from the viewers' perceptions helps researchers understand the changes occurring in the minds of consumers as new technologies diffuse into the home.

Satellite Television Preference

Large-screen television owners were found to subscribe to satellite televisions services more than traditional television owners. As a premium product reaching the premium television consumers, satellite may have matured as a direct competitor to cable in the television consumer market. As a premium product, therefore, satellite services must offer either a service or quality that consumers perceive to be superior. There is no data from the survey to indicate why large-screen television owners would prefer satellite services more than traditional television owners. Aggressive marketing may account for some of the preference as consumers buy new systems and are willing to change television providers with compelling introductory offers. However, picture quality or quality of the digital feed may also factor into the satellite preference in the premium market. Future study regarding the cable and satellite television industry competition could be focused on identifying the precise advantages—perceived or real—of satellite digital delivery.

Screen Research to Include Other Television Technologies

As was previously mentioned in this chapter, the television screen itself as a stand-alone variable may be diminishing in the consumers' view. Future study of large-screen television should embrace screen size as only one element of what constitutes large-screen television. A

more expanded conceptualization that includes all of the other elements of the consumer hierarchy of television technologies should be employed.

Television Centrality

Future research involving the concept of television centrality when adults are the main variable of interest needs more focused research questions and methodology than the current study offered. Large-screen viewers and the viewing experience have been defined. The breadth of the current study—including the more descriptive portions defining the demographic profile of large-screen viewers—provides an entry point for further research to answer more specifically the normative and sociological questions of home television use. In addition to surveys, qualitative methods such as depth interviews may be the best method for addressing questions of television centrality when adults are the variable of interest rather than children.

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APPENDIX A

FOCUS GROUP 1: Basic Topic Schedule
UGA Television Study

A. Introduction (10 minutes)
B. Purpose of the discussion
C. Nature of the discussion
D. Rules:
    a. How participants were selected
    b. Session is being taped, speak one at a time
    c. Topics will be introduced
    d. Refreshments/Restrooms
    e. Session length
    f. Consent form
    g. Questionnaire at the end
    h. Designation for $15 charity donation
    i. Traffic cop to direct discussion

Each participant is asked to give a brief introduction to the group, to include family and work situation, etc., and to tell what size television they have in their home and how television is a part of their life.

LARGE-SCREEN TELEVISION (20 minutes)

1. What is a large-screen television? How big must a television be in order to be called a large-screen? Why is a large-screen so appealing?

2. What were your reasons and motivations for purchasing the large-screen television? How do you justify the cost?

3. How long did it take you to purchase a large-screen from the first time you decided you wanted to buy one? Why?

4. Where do you place the large-screen television in your home? Did you make any architectural adjustments or re-arrange rooms? What interior adjustments were required to accommodate the large-screen television?

TELEVISION VIEWING EXPERIENCE & USAGE (30 minutes)

1. What ways (beyond the obvious viewing of television programming) are large-screens used in the home?

   Are there any uses of the large-screen that were not known before purchase? (e.g. video games, or picture montage, art, or computer screens)

2. Do you find the large-screen more engaging and easier to connect to the programming?

3. How much attention do you pay to the screen itself as compared to previous televisions?

4. Since your purchase, has your television viewing changed? If so, how?

   Has you increased or decreased your amount of television viewing? What types of programs do you now watch more because you have a large-screen unit?

5. Do you watch other programming such as movies or sporting events more since buying the large-screen?

HOUSEHOLD CENTRALITY OF TELEVISION (30 minutes)

1. Do you have a greater commitment to television as an activity in your home since the purchase of the large screen?

2. Have you seen any change in your attention to newspaper reading?

3. Have you seen any change in your read of books?

4. Have you seen any change in amount of outside activities?

5. Has the presence of large-screen television impacted family life in any way?

6. Do you have any limitation and/or rules regarding television in the home? Have any new rules or changes to prior rules occurred since the purchase of the large-screen television?

7. Compared to previous television viewing, do more members of the household watch television together? If so, what types of programming are viewed in groups and when?

8. Are other people outside of the home invited over to view/participate in an activity associated with the large-screen (viewing, games, etc.)? Doe this type of social activity occur more/less/the same since the large-screen purchase?

APPENDIX B

FOCUS GROUPS 2-3: Basic Topic Schedule
UGA Television Study

E. Introduction (10 minutes)
F. Purpose of the discussion
G. Nature of the discussion
H. Rules:
    a. How participants were selected
    b. Session is being taped, speak one at a time
    c. Topics will be introduced
    d. Refreshments/Restrooms
    e. Session length
    f. Consent form
    g. Questionnaire at the end
    h. Designation for $15 charity donation
    i. Traffic cop to direct discussion

Each participant is asked to give a brief introduction to the group, to include family and work situation, etc., and to tell what size television they have in their home and how television is a part of their life.

LARGE-SCREEN TELEVISION (20 minutes)

1. What is a large-screen television? How big must a television be in order to be called a large-screen?

2. How long did it take you to purchase a large-screen from the first time you decided you wanted to buy one? Why?

3. Where do you place the large-screen television in your home? Did you make any architectural adjustments or re-arrange rooms? What interior adjustments were required to accommodate the large-screen television?

4. What were your reasons and motivations for purchasing the large-screen television? How do you justify the cost?

TELEVISION VIEWING EXPERIENCE & USAGE (30 minutes)

1. What ways (beyond the obvious viewing of television programming) are large-screens used in the home?

   Are there any uses of the large-screen that were not known before purchase? (e.g. video games, or picture montage, art, or computer screens)

2. Why is a large-screen so appealing? Do you find the large-screen more engaging and easier to connect to the programming?

3. How much attention do you pay to the screen itself as compared to your immediate previous televisions?

4. **(ADDED FOR GROUPS 2 -3**) What is the relationship between High-Definition digital programming and screen size?

5. Since your purchase, has your television viewing changed? If so, how?

   Is the television screen ON more compared to the immediate previous TV?

6. What types of programs do you now watch more (or less) because you have a large-screen unit? (i.e. movies, sporting events)

HOUSEHOLD CENTRALITY OF TELEVISION (30 minutes)

1. Do you have a greater commitment to television as an activity in your home since the purchase of the large screen?

2. Have you seen any change in amount of outside activities?

3. Has the presence of large-screen television impacted family life in any way?

4. Do you have any limitation and/or rules regarding television in the home? Have any new rules or changes to prior rules occurred since the purchase of the large-screen television?

5. Compared to previous television viewing, do more members of the household watch television together? If so, what types of programming are viewed in groups and when?

6. Are other people outside of the home invited over to view/participate in an activity associated with the large-screen (viewing, games, etc.)? Doe this type of social activity occur more/less/the same since the large-screen purchase?

7. Have you seen any change in your attention to newspaper reading?

APPENDIX C
FOCUS GROUPS 4-5: Basic Topic Schedule
UGA Television Study

I. Introduction (10 minutes)
J. Purpose of the discussion
K. Nature of the discussion
L. Rules:
    a. Session is being taped, speak one at a time
    b. Topics will be introduced
    c. Refreshments/Restrooms
    d. Session length
    e. Consent form
    f. Questionnaire at the end
    g. Traffic cop to direct discussion

Each participant is asked to give a brief introduction to the group, to include family and work situation, etc., and to tell what size television they have in their home.

HOUSEHOLD CENTRALITY OF TELEVISION (20 minutes)

What is the role of the large-screen in your home?

Does the role of television in the home change with the addition of a large-screen?

Since your purchase, has your television viewing changed? If so, how?

Is the television screen ON more compared to the immediate previous TV?

What types of programs do you now watch more (or less) because you have a large-screen unit? (i.e. movies, sporting events)

Compared to previous television viewing, do more members of the household watch television together? If so, what types of programming are viewed in groups and when?

TELEVISION VIEWING EXPERIENCE & USAGE (40 minutes)

1. How are large-screens used in the home? (Page 1 of the booklet.)

2. Do you have preparatory activities you do before using the large-screen television? (Page 2 of the booklet)j

3. What is the viewer attention level during program viewing and commercial viewing in a large-screen environment? (Page 3 of the booklet.)

4. How can large-screen users be characterized in terms of competitive and complementary activities? (Page 4 of the booklet.)

5. How do large-screen users characterize "presence" with respect to television viewing? Do you find the large-screen more engaging and easier to connect to programming?

APPENDIX D

UGA RESEARCH STUDY
LARGE-SCREEN TELEVISION OWNERS

Tuesday, March 4, 2008 (Time: 6 pm - 7:30 pm)
Tuesday, March 18, 2008 (Time: 6 pm - 7:30 pm)
Wednesday, April 2, 2008 (Time: 6 pm - 7:30 pm)

Place: Athens YMCA

915 Hawthorne Avenue · Athens, Georgia 30606

EARN & LEARN

You will receive a chance to make a charitable donation or to receive cash.
Thank you for participating.

If you are an owner of a large-screen television, we want to speak with you.

We will be holding small focus groups to discuss the benefits of large-screen televisions and how they are used and impact your viewing in the home.

The sessions will last about 1.5 hours and will be held at the Athens YMCA. You will find the discussion interesting, informative and engaging while you consider the role of television in your life and in your home.

Please contact: mcniven@uga.edu **or Call (706) 542-4562 (during weekdays)**

APPENDIX E

FOCUS GROUP BOOKLET (GROUPS 1 - 3)

PLEASE DO NOT OPEN THIS BOOKLET UNTIL REQUESTED

USES for Large-screens

PAGE 1

How is the viewing experience of large-screens DIFFERENT?

_____

_____

_____

_____

_____

_____

_____

_____

PAGE 2

DO YOU FIND PROGRAMMING MORE OR LESS ABSORBING AND ENGAGING ON A LARGE SCREEN?

NOT ABSORBED WITH THE PROGRAMMING * * * * * * * ‖ * * * * * * * ABSORBED WITH THE PROGRAMMING

HOW MUCH ATTENTION DO YOU GIVE TO THE LARGE-SCREEN TELEVISION DURING PROGRAMMING?

NOT REALLY PAYING MUCH ATTENTION * * * * * * * ‖ * * * * * * * EYES ON THE SCREEN MOST OF THE TIME

HOW MUCH ATTENTION DO YOU GIVE TO THE LARGE-SCREEN TELEVISION DURING COMMERCIALS?

NOT REALLY PAYING MUCH ATTENTION * * * * * * * ‖ * * * * * * * EYES ON THE SCREEN MOST OF THE TIME

APPENDIX F

FOCUS GROUP BOOKLET (GROUPS 4 & 5)

PLEASE DO NOT OPEN THIS BOOKLET UNTIL REQUESTED

USES for Large-screens

PAGE 1

How is the viewing experience of large-screens DIFFERENT?

_____

_____

_____

_____

_____

_____

_____

_____

PAGE 2

DO YOU FIND **MOVIES** MORE (OR LESS) ABSORBING AND ENGAGING ON A LARGE SCREEN?

NOT ABSORBED WITH THE PROGRAMMING * * * * * * * ‖ * * * * * * * ABSORBED WITH THE PROGRAMMING

DO YOU FIND THE **TIME-SHIFTED TV PROGRAMMING** MORE (OR LESS) ABSORBING AND ENGAGING ON A LARGE SCREEN?

NOT ABSORBED WITH THE PROGRAMMING * * * * * * * ‖ * * * * * * * ABSORBED WITH THE PROGRAMMING

DO YOU FIND THE **TELEVISION PROGRAMMING** MORE (OR LESS) ABSORBING AND ENGAGING ON A LARGE SCREEN?

NOT ABSORBED WITH THE PROGRAMMING * * * * * * * ‖ * * * * * * * ABSORBED WITH THE PROGRAMMING

HOW MUCH **ATTENTION** DO YOU GIVE TO THE LARGE-SCREEN TELEVISION DURING MOVIES?

NOT REALLY PAYING MUCH ATTENTION * * * * * * * ‖ * * * * * * * EYES ON THE SCREEN MOST OF THE TIME

HOW MUCH **ATTENTION** DO YOU GIVE TO THE LARGE-SCREEN TELEVISION DURING TIME-SHIFTED TELEVISION PROGRAMMING?

NOT REALLY PAYING MUCH ATTENTION * * * * * * * ‖ * * * * * * * EYES ON THE SCREEN MOST OF THE TIME

HOW MUCH **ATTENTION** DO YOU GIVE TO THE LARGE-SCREEN VIEWING TELEVISION PROGRAMMING?

NOT REALLY PAYING MUCH ATTENTION * * * * * * * ‖ * * * * * * * EYES ON THE SCREEN MOST OF THE TIME

If you are watching MOVIES:

PREPARATORY ACTIVITES	*(1 = occurs all the time, 5 = never occurs)*
Make sure everyone is present	1 2 3 4 5
Get room quiet	1 2 3 4 5
Get kids settle down	1 2 3 4 5
Prepare drinks or snack	1 2 3 4 5
Get household chores done first	1 2 3 4 5
Use restroom	1 2 3 4 5
Turn out or lower the lights	1 2 3 4 5
Turn off phone/answering machine	1 2 3 4 5
Put kids to bed	1 2 3 4 5

If you are watching TIME-DELAYED TV programming via DVR:

PREPARATORY ACTIVITES	*(1 = occurs all the time, 5 = never occurs)*
Make sure everyone is present	1 2 3 4 5
Get room quiet	1 2 3 4 5
Get kids settle down	1 2 3 4 5
Prepare drinks or snack	1 2 3 4 5
Get household chores done first	1 2 3 4 5
Use restroom	1 2 3 4 5
Turn out or lower the lights	1 2 3 4 5
Turn off phone/answering machine	1 2 3 4 5
Put kids to bed	1 2 3 4 5

O

If you are watching TELEVISION PROGRAMMING (without time delay using DVR):

PREPARATORY ACTIVITES	*(1 = occurs all the time, 5 = never occurs)*
Make sure everyone is present	1 2 3 4 5
Get room quiet	1 2 3 4 5
Get kids settle down	1 2 3 4 5
Prepare drinks or snack	1 2 3 4 5
Get household chores done first	1 2 3 4 5
Use restroom	1 2 3 4 5
Turn out or lower the lights	1 2 3 4 5
Turn off phone/answering machine	1 2 3 4 5
Put kids to bed	1 2 3 4 5

If you are watching **MOVIES**: (PLEASE CIRCLE THE NUMBER)

ACTIVITY DURING MOVIE VIEWING	*(1 = occurs all the time, 5 = never occurs)*
Read books, newspapers, or magazines	1 2 3 4 5
Do household chores such as cleaning, washing or ironing	1 2 3 4 5
Nap or sleep during program/movie	1 2 3 4 5
Work on hobbies such as sewing, model building, etc.	1 2 3 4 5
Prepare snacks or meals	1 2 3 4 5
Talk with other viewers about other subjects	1 2 3 4 5
Take care of children	1 2 3 4 5
Play with children	1 2 3 4 5
Talk on telephone	1 2 3 4 5
Smoke or chew tobacco products	1 2 3 4 5
Turn off movie/program if dissatisfied	1 2 3 4 5
Drink wine, beer or other alcoholic beverages	1 2 3 4 5
Discuss movie/program content with others	1 2 3 4 5
Eat snack or meals	1 2 3 4 5
Answer the telephone	1 2 3 4 5
Get "involved" with the program/movie (answer program questions, comment on movie, talk to the set)	1 2 3 4 5
Sit together and "snuggle" with someone	1 2 3 4 5

If you are watching **TIME-DELAYED programming via DVR**: (Circle the number)

ACTIVITY DURING DVR VIEWING	*(1 = occurs all the time, 5 = never occurs)*
Read books, newspapers, or magazines	1 2 3 4 5
Do household chores such as cleaning, washing or ironing	1 2 3 4 5
Nap or sleep during program/movie	1 2 3 4 5
Work on hobbies such as sewing, model building, etc.	1 2 3 4 5
Prepare snacks or meals	1 2 3 4 5
Talk with other viewers about other subjects	1 2 3 4 5
Take care of children	1 2 3 4 5
Play with children	1 2 3 4 5
Talk on telephone	1 2 3 4 5
Smoke or chew tobacco products	1 2 3 4 5
Turn off movie/program if dissatisfied	1 2 3 4 5
Drink wine, beer or other alcoholic beverages	1 2 3 4 5
Discuss movie/program content with others	1 2 3 4 5
Eat snack or meals	1 2 3 4 5
Answer the telephone	1 2 3 4 5
Get "involved" with the program/movie (answer program questions, comment on movie, talk to the set)	1 2 3 4 5
Sit together and "snuggle" with someone	1 2 3 4 5

If you are watching **TELEVISION PROGRAMMING** (without time delay using DVR): (please circle the number)

ACTIVITY DURING TV VIEWING	*(1 = occurs all the time, 5 = never occurs)*
Read books, newspapers, or magazines	1 2 3 4 5
Do household chores such as cleaning, washing or ironing	1 2 3 4 5
Nap or sleep during program/movie	1 2 3 4 5
Work on hobbies such as sewing, model building, etc.	1 2 3 4 5
Prepare snacks or meals	1 2 3 4 5
Talk with other viewers about other subjects	1 2 3 4 5
Take care of children	1 2 3 4 5
Play with children	1 2 3 4 5
Talk on telephone	1 2 3 4 5
Smoke or chew tobacco products	1 2 3 4 5
Turn off movie/program if dissatisfied	1 2 3 4 5
Drink wine, beer or other alcoholic beverages	1 2 3 4 5
Discuss movie/program content with others	1 2 3 4 5
Eat snack or meals	1 2 3 4 5
Answer the telephone	1 2 3 4 5
Get "involved" with the program/movie (answer program questions, comment on movie, talk to the set)	1 2 3 4 5
Sit together and "snuggle" with someone	1 2 3 4 5

APPENDIX G

Focus Group Questionnaire with designation for charitable donation follows.

Thank you for participating in tonight's group. The role of media and television in modern home life is an important consideration. Your participation tonight helps researchers continue to analyze and understand that impact.

As a final portion of tonight's activity, we ask you to fill out the following questionnaire. Please read the questions carefully to make your responses as accurate as possible. Some of the questions overlap some of our previously discussed topics, but we invite you to fill them all out. Feel free to use the margins to give additional information.

---

1. Which of the following television equipment or services do you own or have access to? Please put a check next to each that applies:

( ) Large-screen Television.
What size is it measured diagonally? _____
Approximately how long have you owned it? _____
Approximately how much did it cost? $ _____
How many total televisions are in the house? _____

( ) Cable / Satellite services (Please circle either cable or satellite)
What is your average monthly charge for television services? $_____

( ) High-Definition (HDTV) Digital Programming

( ) Digital Video Recorder (such as TiVo or other DVR service)
What is your average monthly charge for DVR services? $_____

( ) Gaming consoles (e.g. Xbox, Wii, GameCube, Playstation, etc.)

( ) DVD Player

( ) VCR Player

( ) Home video recorder

( ) Other technology or service (Please list below)
a._____
b._____
c._____
d._____

INFORMATION ABOUT YOU

2. What is your age at your last birthday? _____ years

3. What is your marital status?
( ) Single→ Are you: ____ Never married
( ) Married ____ Divorced
____ Other

4. How many children of the following ages do you have living in your home? (Indicate the number in each age group. Continues with older ages on the back page.)
____ None

____ Children under the age of 5
____ Children between 6 and 10
____ Children between 10 and 18
____ Children over 18

5. Which of the following races describes you?
( ) Hispanic ( ) Black
( ) Oriental ( ) White
( ) Other (please specify): _____

6. Are you: ( ) Female ( ) Male

7. Please mark your highest educational status in the categories below:
( ) Attended High School
( ) Graduated from High School
( ) Attended vocational school
( ) Graduated vocational school
( ) Attended undergraduate college
( ) Graduated undergraduate college
( ) Attended graduate school
( ) Graduated graduate school

8. Are you currently employed? ___ Yes ___ No

9. What type of work do you do?_____

10. What is the total yearly gross income of persons living in your house? (Please check one)

( ) $25,000 or less
( ) $25,001 to $50,000
( ) $50,001 to $75,000
( ) $75,001 to $100,000
( ) $100,001 to $125,000
( ) $125,001 to $150,000
( ) $150,001 and over

****

Please designate the local charity of your choice where the $15 donation will be made in your behalf:

( ) Boys Scouts
( ) Girl Scouts
( ) Food Bank
( ) Habitat for Humanity
( ) Boys and Girls Club
( ) Other (please specify): _____

****

Thank you for your participation in this research!

APPENDIX H

CONSENT FOR RESEARCH PARTICIPATION

I agree ***to take part in a research study titled*** **"Make More Room for Television: The Adoption and Use of Large-screen Televisions in the Home"*****, which is being conducted by Michael McNiven, Advertising/Public Relations Department, UGA's Grady College of Journalism & Mass Communication (706.542.4562) under the direction of Dr. Dean Krugman, AD/PR Department within UGA's Grady College (706.542.5049.)***

My participation is voluntary; I can refuse to participate or stop taking part at any time without giving any reason, and without penalty. I can ask to have information related to me returned to me, removed from the research records, or destroyed.

The reason for this study is to investigate the rate and variety of use of large-screen televisions within homes. Large-screen televisions have proven to be a viable and high-quality television innovation that continues to gain prominence in homes. Larger screens coupled with digital reception and wide screens (similar to cinema) represent a significant change in how television fare is delivered to viewers and its impact on home life.

The benefits that I may expect from it are an engaging discussion and time to explore the role and impact of television in my life including my media consumption habits. In addition, I recognize that due to my participation that a $15 donation will be sent to a local charity of my choice.

The procedure is as follows: I will participate in a group discussion about large-screen television ownership and viewing for approximately 1 and a half hours.

No discomforts or stresses are expected. No risks are expected.

I recognize that my participation in this focus group will be confidential. Although the researchers will know my name, I will not be identified by name in any research reports.

The researcher will answer any further questions about the research, now or during the course of the project, and can be reached by telephone at 706.208.0092.

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

SIGNATURE LINES FORMAT:

_____	_____	_____
Name of Researcher	**Signature**	**Date**
Telephone: 706.208.0092		
Email: mcniven@uga.edu		
_____	_____	_____
Name of Participant	**Signature**	**Date**

Additional questions or problems regarding your rights as a research participant should be addressed to The Chairperson, Institutional Review Board, University of Georgia, 612 Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu

Please sign both copies, keep one and return one to the researcher.

APPENDIX I

HOME TELEVISION VIEWING AND USAGE SURVEY

(ONLINE FINAL)

Dissertation
Michael D. McNiven
2008

THIS SURVEY FOCUSES ON VIEWING AND USAGE OF THE LARGEST TELEVISION IN THE HOME. PLEASE READ THE QUESTIONS CAREFULLY AND FOLLOW THE INSTRUCTIONS. DIRECTIONS WILL BE FOUND IN ALL CAPITAL LETTERS WITHIN PARENTHESES. PLEASE ANSWER ALL QUESTIONS UNLESS INDICATED OPTIONAL.

1. How many televisions are in your home? **(RQ10)**
   (CHECK ONE ANSWER ONLY)
   - ☐ One
   - ☐ Two
   - ☐ Three
   - ☐ Four
   - ☐ Five
   - ☐ Six or more

2. Approximately what is your average monthly charge for television services such as cable or satellite (But NOT for computer or phone services)? **(RQ1)**
   (CHECK ONE ANSWER ONLY)
   - ☐ None
   - ☐ $1 to $19.99
   - ☐ $20 to $39.99
   - ☐ $40 to $59.99
   - ☐ $60 to $79.99
   - ☐ $80 to $99.99
   - ☐ $100 and above

3. Please estimate the screen size of the LARGEST television in your home? **(RQ1)**
   (CHECK ONE ANSWER ONLY)
   - ☐ 1" – 19"
   - ☐ 20" – 29"
   - ☐ 30" – 36"
   - ☐ 40" – 49"
   - ☐ 50" – 59"
   - ☐ 60" and up

4. Approximately how long have you owned the LARGEST television in your home?
   (CHECK ONE ANSWER ONLY) **(RQ14)**
   - ☐ Less than a year
   - ☐ 1 year to less than 2 years
   - ☐ 2 years to less than 3 years
   - ☐ 3 years or more years

5. Approximately how much did you pay for the LARGEST television in your home?
   (CHECK ONE ANSWER ONLY) **(RQ14)**
   - ☐ Free
   - ☐ Less than $500
   - ☐ Between $501 and $1000
   - ☐ Between $1,001 and $1,500
   - ☐ Between $1,501 and $2,000
   - ☐ Between $2,001 and $3,000
   - ☐ Between $3,001 or more

6. Approximately how long did it take to decide to purchase your LARGEST television from the time you first considered buying it to the date of actual purchase? **(RQ14)**

(CHECK ONE ANSWER ONLY)

- ☐ 1 day
- ☐ Within 1 week
- ☐ Within 1 month
- ☐ 2 to 6 months
- ☐ 6 months to less than 1 year
- ☐ 1 year to less than 2 years
- ☐ 2 years to less than 3 years
- ☐ 3 or more years
- ☐ Not applicable

7. Where is your LARGEST television placed in your home? **(RQ3)**

(CHECK ONE ANSWER ONLY)

- ☐ Living room
- ☐ Great room/Den
- ☐ Bedroom
- ☐ Basement
- ☐ Recreation room
- ☐ Kitchen
- ☐ Media/Television room
- ☐ Other

8. Approximately how many hours <u>yesterday</u> was your LARGEST television turned on?

(CHECK ONE ANSWER ONLY) **(RQ10)**

- ☐ None
- ☐ Less than 1 hour
- ☐ 1 hour to less than 2 hours
- ☐ 2 hours to less than 3 hours
- ☐ 3 hours to less than 4 hours
- ☐ 4 hours to less than 5 hours
- ☐ 5 hours to less than 6 hours
- ☐ 6 hours to less than 7 hours
- ☐ 7 hours or more

9. Approximately how many hours <u>yesterday</u> was ANY television turned on in your home? (CHECK ONE ANSWER ONLY) **(RQ10)**

- ☐ None
- ☐ Less than 1 hour
- ☐ 1 hour to less than 3 hours
- ☐ 3 hours to less than 6 hours
- ☐ 6 hours to less than 9 hours
- ☐ 9 hours to less than 12 hours
- ☐ 12 hours to less than 15 hours
- ☐ 15 hours or more

FOR THE NEXT QUESTIONS, PLEASE CHECK ALL ANSWERS THAT APPLY.

10. Where do you typically access daily news and information? **(RQ5)**
(CHECK ALL THAT APPLY)
- ☐ Newspaper
- ☐ Internet
- ☐ Television
- ☐ Radio
- ☐ Emails
- ☐ Talking to other people
- ☐ Do not access daily news and information

11. Which of the following television equipment or services do you own or have access to in the home? (CHECK ALL THAT APPLY) **(RQ4)**
- ☐ Traditional tube television
- ☐ Plasma screen
- ☐ Liquid crystal display (LCD) screen
- ☐ Digital light processing (DLP) rear-projection screen
- ☐ Cable services
- ☐ Satellite services
- ☐ High-Definition (HDTV) Digital Programming
- ☐ Digital Video Recorder (DVR) such as *TiVo*
- ☐ Gaming console (such as Xbox, Wii, GameCube, Playstation, etc.)
- ☐ DVD Player
- ☐ VCR Player

12. What were the reasons or motivations for purchasing your LARGEST television?
(CHECK ALL THAT APPLY) **(RQ13**)
- ☐ Didn't own a television prior to the purchase
- ☐ Old television needed replacement
- ☐ Wanted a newer television for a specific event
- ☐ Moved to newer home and wanted updated technology
- ☐ To get High-Definition programming
- ☐ To decorate room
- ☐ For family entertainment
- ☐ For entertaining friends and visitors
- ☐ Television was a gift

13. After buying your LARGEST television, what interior adjustments were made to accommodate the set? **(RQ3)**
(CHECK ALL THAT APPLY)
- ☐ No adjustments.
- ☐ Television put in same spot as previous television.
- ☐ Television placed in new spot.
- ☐ Some furniture rearrangements were made.
- ☐ Major furniture and room layout changes were made.
- ☐ Cabinetry or other furniture was purchased to hold or cover TV.
- ☐ An entire, separate room was dedicated for media use

14. How frequently is the LARGEST television in the home used for the following purposes? (PLEASE CIRCLE THE NUMBER THAT BEST APPLIES) **(RQ8)**

	Never				**All the Time**
Watching TV (broadcast, cable, or satellite)	**1**	**2**	**3**	**4**	**5**
Watching TV using a DVR (such as *TiVo*)	**1**	**2**	**3**	**4**	**5**
Watching DVD, VHS or Satellite movies	**1**	**2**	**3**	**4**	**5**
Playing video games	**1**	**2**	**3**	**4**	**5**
As a computer screen	**1**	**2**	**3**	**4**	**5**
As a digital picture frame or photo display	**1**	**2**	**3**	**4**	**5**

15. How frequently are the following types of programs watched on your LARGEST home television?
(PLEASE CIRCLE THE NUMBER THAT BEST APPLIES) **(RQ6&9)**

Programming Types	**Never**				**All the Time**
News	**1**	**2**	**3**	**4**	**5**
Entertainment	**1**	**2**	**3**	**4**	**5**
Sports	**1**	**2**	**3**	**4**	**5**
Music/Satellite Radio	**1**	**2**	**3**	**4**	**5**
Education	**1**	**2**	**3**	**4**	**5**
Movies	**1**	**2**	**3**	**4**	**5**
Cooking	**1**	**2**	**3**	**4**	**5**
Reality television	**1**	**2**	**3**	**4**	**5**
Shopping	**1**	**2**	**3**	**4**	**5**
Children's	**1**	**2**	**3**	**4**	**5**

16. How would you describe the experience of watching the LARGEST television in your home? (PLEASE CIRCLE THE NUMBER THAT BEST APPLIES) **(RQ7)**

	Strongly Disagree		**Neutral**		**Strongly Agree**
Enjoyable.	**1**	**2**	**3**	**4**	**5**
Easy to watch.	**1**	**2**	**3**	**4**	**5**
Similar to watching movies at the cinema/theater	**1**	**2**	**3**	**4**	**5**
Feels like being at the event.	**1**	**2**	**3**	**4**	**5**
Sound is clear and compelling.	**1**	**2**	**3**	**4**	**5**
Clarity and picture detail are life-like.	**1**	**2**	**3**	**4**	**5**
I get absorbed in the programming.	**1**	**2**	**3**	**4**	**5**
Watching the television is an event rather than passing time.	**1**	**2**	**3**	**4**	**5**

17. When using your LARGEST television, how much attention do you give to the television screen during the following types of viewing? (PLEASE CIRCLE THE NUMBER THAT BEST APPLIES) **(RQ8)**

	Pay No Attention				**Pay Full Attention**
Traditional broadcast or cable programs	**1**	**2**	**3**	**4**	**5**
Commercials	**1**	**2**	**3**	**4**	**5**
When watching DVDs, pre-recorded MOVIES or Pay-Per-View shows	**1**	**2**	**3**	**4**	**5**
(OPTIONAL IF YOU OWN A DVR) DVR-such as *TiVo*- viewing of pre-recorded programs	**1**	**2**	**3**	**4**	**5**

18. While you are watching traditional broadcast and cable programs (NOT DVDs, pre-recorded programs, or Pay-per-view shows) on your largest television, what other types of activities do you engage in?(PLEASE CIRCLE THE NUMBER THAT BEST APPLIES)**(RQ8)**

	Never				**All The Time**
Read books, newspapers, or magazines	**1**	**2**	**3**	**4**	**5**
Do household chores such as cleaning, washing or ironing	**1**	**2**	**3**	**4**	**5**
Nap or sleep during program/movie	**1**	**2**	**3**	**4**	**5**
Work on hobbies such as sewing, etc.	**1**	**2**	**3**	**4**	**5**
Prepare snacks or meals	**1**	**2**	**3**	**4**	**5**
Talk with other viewers about other subjects	**1**	**2**	**3**	**4**	**5**
Play with children	**1**	**2**	**3**	**4**	**5**
Talk on telephone	**1**	**2**	**3**	**4**	**5**
Use Computer	**1**	**2**	**3**	**4**	**5**

19. Please mark your agreement or disagreement with the following statements:
(PLEASE CIRCLE THE NUMBER THAT BEST APPLIES)

	Strongly Disagree		**Neutral**		**Strongly Agree**
We can depend on getting the truth in most advertising.	**1**	**2**	**3**	**4**	**5**
Advertising's aim is to inform the consumer.	**1**	**2**	**3**	**4**	**5**
I believe advertising is informative.	**1**	**2**	**3**	**4**	**5**
Advertising is generally truthful.	**1**	**2**	**3**	**4**	**5**
Advertising is a reliable source of information about the quality and performance of products.	**1**	**2**	**3**	**4**	**5**
Advertising is truth well told.	**1**	**2**	**3**	**4**	**5**
In general, advertising presents a true picture of a product being advertised.	**1**	**2**	**3**	**4**	**5**
I feel I've been accurately informed after viewing most advertisements.	**1**	**2**	**3**	**4**	**5**
Most advertising provides consumers with essential information.	**1**	**2**	**3**	**4**	**5**
Overall, I consider advertising a good thing.	**1**	**2**	**3**	**4**	**5**
My general opinion about advertising is favorable.	**1**	**2**	**3**	**4**	**5**
Overall, I do like advertising.	**1**	**2**	**3**	**4**	**5**

20. While watching television yesterday on your LARGEST screen, how often were you watching with someone else present?

(CHECK ONE ANSWER ONLY) **(RQ11)**

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Never, I watched by myself the whole time
- ☐ I did not watch yesterday

21. About how often do you have friends, extended family, or neighbors over (as visitors in your home) where the LARGEST television is used as a main activity?

(CHECK ONE ANSWER ONLY) **(RQ12)**

- ☐ Never
- ☐ Less than once a month
- ☐ One or Two times a month
- ☐ Three or Four times a month
- ☐ Five or Six times a month
- ☐ Seven or more times a month

22. How often do you go to the movies at the cinema?

(CHECK ONE ANSWER ONLY) **(RQ5)**

- ☐ Rarely or Never
- ☐ Once in the last three months
- ☐ Once in the last month
- ☐ Twice or more in the last month

THE NEXT THREE QUESTIONS REFER TO GENERAL TELEVISION USE INCLUDING ALL TELEVISIONS IN THE HOME.

23. How often is a TV usually on in your home (even if no one is watching)?

(CHECK ONE ANSWER ONLY) **(RQ10)**

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little bit of the time
- ☐ Never

24. In your home, is a TV usually on during meals, or not?

(CHECK ONE ANSWER ONLY) **(RQ10)**

- ☐ Yes, the TV is usually on during meals
- ☐ No, the TV is not usually on during meals

25. Are there any rules about watching television at your home?

(CHECK ONE ANSWER ONLY) **(RQ10)**

- ☐ Yes, we have rules about watching television
- ☐ No, we do not have rule about watching television

THE REMAINING QUESTIONS ARE GENERAL DEMOGRAPHIC QUESTIONS.

26. What is your age? (CHECK ONE ANSWER ONLY) **(RQ1)**
- ☐ 18 – 29 years old
- ☐ 30 – 39 years old
- ☐ 40 – 49 years old
- ☐ 50 – 59 years old
- ☐ 60 – 69 years old
- ☐ 70+ years old

27. Are you: (CHECK ONE ANSWER ONLY) **(RQ1)**
- ☐ Female
- ☐ Male

28. Are you Hispanic or Latino? (CHECK ONE ANSWER ONLY) **(RQ1)**
- ☐ Yes
- ☐ No

29. How do you describe your race?
(YOU MAY CHOOSE MORE THAN ONE RACE) **(RQ1)**
- ☐ Black or African-American
- ☐ White
- ☐ Asian
- ☐ Native Hawaiian or other Pacific Islander
- ☐ American Indian or Alaska Native
- ☐ No response

30. What is your marital status? (CHECK ALL THAT APPLY) **(RQ1)**
- ☐ Single→ Are you:
  - ☐ Never married
  - ☐ Widowed
  - ☐ Divorced/Separated
- ☐ Married

31. How many people live in your home? **(RQ1)**
(CHECK ONE ANSWER ONLY)
- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four
- ☐ Five
- ☐ Six or more

32. Do you have children of the following ages living in your home? **(RQ1)**
(CHECK ALL THAT APPLY)
- ☐ No Children
- ☐ Children age 5 or under
- ☐ Children between 6 and 10
- ☐ Children between 11 and 18
- ☐ Children over 18

33. What is the highest level of school completed by anyone in your household? **(RQ1)**
(CHECK ONE ANSWER ONLY)

- ☐ Some high school
- ☐ Finished high school
- ☐ Some college or special school after high school
- ☐ Finished college
- ☐ Some graduate school
- ☐ Finished graduate school

34. What is the total yearly gross income of persons living in your house? **(RQ1)**
(CHECK ONE ANSWER ONLY)

- ☐ $25,000 or less
- ☐ $25,001 to $50,000
- ☐ $50,001 to $75,000
- ☐ $75,001 to $100,000
- ☐ $100,001 to $125,000
- ☐ $125,001 to $150,000
- ☐ $150,001 and over

Thank you for your assistance.

APPENDIX J

ONLINE SURVEY QUESTION INPUT SOURCES

Question #	Source
1	Focus group
2	Focus group
3	Focus group
4	Focus group
5	Focus group
6	Focus group
7	Focus group
8	(R. L. Allen, 1981)
9	(R. L. Allen, 1981)
10	Focus group
11	Focus group
12	Focus group
13	Focus group
14	Focus group
15	Focus group and (Newcombe, 2008)
16	Focus group with reference to (Rubin, 1984)
17	Focus group
18	(Krugman & Johnson, 1991)
19	(Diehl et al., 2008; Obermiller & Spangenberg, 1998; Pollay & Mittal, 1993)
20	(Roberts et al., 2005)
21	Focus Group
22	(ARBITRON, 2007)
23	(Roberts et al., 2005)
24	(Roberts et al., 2005)
25	(Roberts et al., 2005)
26	Standard demographic question
27	Standard demographic question
28	Standard demographic question
29	Standard demographic question
30	Standard demographic question
31	Standard demographic question
32	Standard demographic question
33	Standard demographic question
34	Standard demographic question

APPENDIX K

Research Questions Related to Survey Questions
(UGA Television Study)

RQ1: What is the demographic and psychographic profile of people in homes with large-screen televisions? Are demographic and psychographic profiles of large-screen television viewers different from regular television screen viewers?

What is your age? (CHECK ONE ANSWER ONLY) **(RQ1)**

- ☐ 18 – 29 years old
- ☐ 30 – 39 years old
- ☐ 40 – 49 years old
- ☐ 50 – 59 years old
- ☐ 60 – 69 years old
- ☐ 70+ years old

Are you: (CHECK ONE ANSWER ONLY) **(RQ1)**

- ☐ Female
- ☐ Male

Are you Hispanic or Latino? (CHECK ONE ANSWER ONLY) **(RQ1)**

- ☐ Yes
- ☐ No

How do you describe your race?
(YOU MAY CHOOSE MORE THAN ONE RACE) **(RQ1)**

- ☐ Black or African-American
- ☐ White
- ☐ Asian
- ☐ Native Hawaiian or other Pacific Islander
- ☐ American Indian or Alaska Native
- ☐ No response

What is your marital status? (CHECK ALL THAT APPLY) **(RQ1)**

- ☐ Single→ Are you:
  - ☐ Never married
  - ☐ Widowed
  - ☐ Divorced/Separated
- ☐ Married

How many people live in your home? **(RQ1)**
(CHECK ONE ANSWER ONLY)

- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four
- ☐ Five
- ☐ Six or more

Do you have children of the following ages living in your home? **(RQ1)**

(CHECK ALL THAT APPLY)

- ☐ No Children
- ☐ Children age 5 or under
- ☐ Children between 6 and 10
- ☐ Children between 11 and 18
- ☐ Children over 18

What is the highest level of school achieved by anyone in your household? **(RQ1)**

(CHECK ONE ANSWER ONLY)

- ☐ Some high school
- ☐ Finished high school
- ☐ Some college or special school after high school
- ☐ Finished college
- ☐ Some graduate school
- ☐ Finished graduate school

What is the total yearly gross income of persons living in your house? **(RQ1)**

(CHECK ONE ANSWER ONLY)

- ☐ $25,000 or less
- ☐ $25,001 to $50,000
- ☐ $50,001 to $75,000
- ☐ $75,001 to $100,000
- ☐ $100,001 to $125,000
- ☐ $125,001 to $150,000
- ☐ $150,001 and over

Please estimate the screen size of the LARGEST television in your home? **(RQ1)**

(CHECK ONE ANSWER ONLY)

- ☐ 1" – 19"
- ☐ 20" – 29"
- ☐ 30" – 36"
- ☐ 40" – 49"
- ☐ 50" – 59"
- ☐ 60" and up

How many televisions are in your home? **(RQ1)**

(CHECK ONE ANSWER ONLY)

- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four
- ☐ Five
- ☐ Six or more

Approximately what is your average monthly charge for television services such as cable or satellite (But NOT for computer or phone services)? **(RQ1)**

(CHECK ONE ANSWER ONLY)

- ☐ None
- ☐ $1 to $19.99
- ☐ $20 to $39.99
- ☐ $40 to $59.99
- ☐ $60 to $79.99
- ☐ $80 to $99.99
- ☐ $100 and above

Approximately how long have you owned the LARGEST television in your home?

(CHECK ONE ANSWER ONLY) **(RQ1)**

- ☐ Less than a year
- ☐ 1 year to less than 2 years
- ☐ 2 years to less than 3 years
- ☐ 3 years or more years

Approximately how much did you pay for the LARGEST television in your home?

(CHECK ONE ANSWER ONLY) **(RQ1)**

- ☐ Free
- ☐ Less than $500
- ☐ Between $501 and $1000
- ☐ Between $1,001 and $1,500
- ☐ Between $1,501 and $2,000
- ☐ Between $2,001 and $3,000
- ☐ Between $3,001 or more

RQ2: How do viewers conceptualize "big-screen" or "large-screen" televisions? Do viewers differentiate between digital, widescreen and large-screen innovations?

Addressed in focus group analysis.

RQ3: What are the reasons, motivations, justifications and context for purchasing large-screen televisions?

What were the reasons or motivations for purchasing your LARGEST television?

(CHECK ALL THAT APPLY) **(RQ3)**

- ☐ Didn't own a television prior
- ☐ Old television needed replacement
- ☐ Wanted a newer television for a specific event
- ☐ Moved and wanted updated technology
- ☐ To get High-Definition programming
- ☐ To decorate room
- ☐ For family entertainment
- ☐ For entertaining friends and visitors

RQ4: What are the considerations taken, barriers to entry, and difficulties when purchasing a large-screen television?

Addressed in focus group analysis.

Approximately how long did it take to purchase your LARGEST television from the time you first considered buying it to the date of actual purchase? **(RQ4)**

(CHECK ONE ANSWER ONLY)

- ☐ 1 day
- ☐ Within 1 week
- ☐ Within 1 month
- ☐ 2 to 6 months
- ☐ 6 months to less than 1 year
- ☐ 1 year to less than 2 years
- ☐ 2 years to less than 3 years
- ☐ 3 or more years

RQ5: What other technologies are used in conjunction with large-screen televisions? How does the ownership of large-screen televisions relate to other technology (computers, phone, etc.) used in the home?

Addressed in focus group analysis.

Which of the following television equipment or services do you own or have access to in the home? (CHECK ALL THAT APPLY) **(RQ5)**

- ☐ Traditional tube television
- ☐ Plasma screen
- ☐ Liquid crystal display (LCD) screen
- ☐ Digital light processing (DLP) rear-projection screen
- ☐ Cable services
- ☐ Satellite services
- ☐ High-Definition (HDTV) Digital Programming
- ☐ Digital Video Recorder (DVR) such as *TiVo*
- ☐ Gaming console (such as Xbox, Wii, GameCube, Playstation, etc.)
- ☐ DVD Player
- ☐ VCR Player

RQ6: How are large-screens situated in the home? What interior adjustments—if any—were required to accommodate the large-screen television?

After buying your LARGEST television, what interior adjustments were made to accommodate the set? **(RQ6)**

(CHECK ALL THAT APPLY)

- ☐ No adjustments were made.
- ☐ Television put in same spot as previous television.
- ☐ Television placed in new spot.
- ☐ Some furniture rearrangements were made.
- ☐ Major furniture and room layout changes were made.
- ☐ Cabinetry or other furniture was purchased to hold or cover TV.
- ☐ An entire, separate room was dedicated for media use.

Where is your LARGEST television placed in your home? **(RQ6)**

(CHECK ONE ANSWER ONLY)

- ☐ Living room
- ☐ Great room/Den
- ☐ Bedroom
- ☐ Basement
- ☐ Recreation room
- ☐ Kitchen
- ☐ Other

RQ7: How do owners perceive large-screen television using the ideas of a) relative advantage, b) compatibility, c) complexity, d) trialability, e) observability?

Addressed in focus group analysis.

RQ8: How are large-screen televisions used in the home? What constitutes intense, specialized, nonspecialized, or limited users in regards to large-screens?

How frequently is the LARGEST television in the home used for the following purposes? (PLEASE CIRCLE THE NUMBER THAT BEST APPLIES) **(RQ8)**

	Never				**All the Time**
Watching TV (broadcast, cable, or satellite)	**1**	**2**	**3**	**4**	**5**
Watching TV using a DVR (such as *TiVo*)	**1**	**2**	**3**	**4**	**5**
Watching DVD, VHS or Satellite movies	**1**	**2**	**3**	**4**	**5**
Playing video games	**1**	**2**	**3**	**4**	**5**
As a computer screen	**1**	**2**	**3**	**4**	**5**
As a digital picture frame or photo display	**1**	**2**	**3**	**4**	**5**

How frequently are the following types of programs watched on your LARGEST home television?

(PLEASE CIRCLE THE NUMBER THAT BEST APPLIES) **(RQ8)**

Programming Types	**Never**				**All the Time**
News	**1**	**2**	**3**	**4**	**5**
Entertainment	**1**	**2**	**3**	**4**	**5**
Sports	**1**	**2**	**3**	**4**	**5**
Music/Satellite Radio	**1**	**2**	**3**	**4**	**5**
Education	**1**	**2**	**3**	**4**	**5**
Movies	**1**	**2**	**3**	**4**	**5**
Cooking	**1**	**2**	**3**	**4**	**5**
Reality television	**1**	**2**	**3**	**4**	**5**
Shopping	**1**	**2**	**3**	**4**	**5**
Children's	**1**	**2**	**3**	**4**	**5**

RQ9a: How should large-screen televisions be classified according to the Robertson/Krugman framework?

Addressed in focus group analysis.

RQ9b: Is large-screen television viewing a different viewing experience than regular screen viewing? Do viewers feel more connected to the television content having a large-screen television?

How would you describe the experience of watching the LARGEST television in your home? (PLEASE CIRCLE THE NUMBER THAT BEST APPLIES) **(RQ9)**

	Strongly Disagree				**Strongly Agree**
Enjoyable.	**1**	**2**	**3**	**4**	**5**
Easy to watch.	**1**	**2**	**3**	**4**	**5**
Like watching movies at the cinema/theater.	**1**	**2**	**3**	**4**	**5**
Feels like being at the event.	**1**	**2**	**3**	**4**	**5**
Sound is clear and compelling.	**1**	**2**	**3**	**4**	**5**
Clarity and picture detail are life-like.	**1**	**2**	**3**	**4**	**5**
I get absorbed in the programming.	**1**	**2**	**3**	**4**	**5**
Watching the television is an event rather than passing time.	**1**	**2**	**3**	**4**	**5**

RQ10a: Do viewers pay more attention to large-screen televisions during the programming and commercials? What other activities are most associated with large-screen use?

When using your LARGEST television, how much attention do you give to the television screen during the following types of viewing? (PLEASE CIRCLE THE NUMBER THAT BEST APPLIES) **(RQ10)**

	Pay No Attention				**Pay Full Attention**
Traditional broadcast or cable programs	**1**	**2**	**3**	**4**	**5**
Commercials	**1**	**2**	**3**	**4**	**5**
When watching DVDs, pre-recorded MOVIES or Pay-Per-View shows	**1**	**2**	**3**	**4**	**5**
(ANSWER IF YOU OWN A DVR) DVR-such as *TiVo*- viewing of pre-recorded programs	**1**	**2**	**3**	**4**	**5**

While you are watching traditional broadcast and cable programs (NOT DVDs, pre-recorded programs, or Pay-per-view shows) on your largest television, what types of other activities do you engage in?

(PLEASE CIRCLE THE NUMBER THAT BEST APPLIES) **(RQ10)**

	Never				**All The Time**
Read books, newspapers, or magazines	**1**	**2**	**3**	**4**	**5**
Do household chores such as cleaning, washing or ironing	**1**	**2**	**3**	**4**	**5**
Nap or sleep during program/movie	**1**	**2**	**3**	**4**	**5**
Work on hobbies such as sewing, etc.	**1**	**2**	**3**	**4**	**5**
Prepare snacks or meals	**1**	**2**	**3**	**4**	**5**
Talk with other viewers about other subjects	**1**	**2**	**3**	**4**	**5**
Play with children	**1**	**2**	**3**	**4**	**5**
Talk on telephone	**1**	**2**	**3**	**4**	**5**
Use computer	**1**	**2**	**3**	**4**	**5**

RQ11a: Has the presence of large-screen televisions influenced family viewing and family/group togetherness?

While watching television yesterday on your LARGEST screen, how often were you watching with someone else present?

(CHECK ONE ANSWER ONLY) **(RQ11)**

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Never, I watched by myself the whole time
- ☐ I did not watch yesterday

RQ11b: Has the presence of large-screen televisions influenced other kinds of social viewing (with family, friends or neighbors)?

About how often do you have friends, extended family, or neighbors over in which the LARGEST television is used as a main activity?

(CHECK ONE ANSWER ONLY) **(RQ11)**

- ☐ Never
- ☐ Less than once a month
- ☐ One or Two times a month
- ☐ Three or Four times a month
- ☐ Five or Six times a month
- ☐ Seven or more times a month

RQ12a: Do large-screen television owners have a greater commitment to viewing as a media form than prior to the purchase?

How often is a TV usually on in your home (even if no one is watching)?
(CHECK ONE ANSWER ONLY) **(RQ12)**

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little bit of the time
- ☐ Never

In your home, is a TV usually on during meals, or not?
(CHECK ONE ANSWER ONLY) **(RQ12)**

- ☐ Yes, the TV is usually on during meals
- ☐ No, the TV is not usually on during meals

Are there any rules about watching television at your home?
(CHECK ONE ANSWER ONLY) **(RQ12)**

- ☐ Yes, we have rules about watching television
- ☐ No, we do not have rule about watching television

Approximately how many hours yesterday was your LARGEST television turned on?
(CHECK ONE ANSWER ONLY) **(RQ12)**

- ☐ None
- ☐ Less than 1 hour
- ☐ 1 hour to less than 2 hours
- ☐ 2 hours to less than 3 hours
- ☐ 3 hours to less than 4 hours
- ☐ 4 hours to less than 5 hours
- ☐ 5 hours to less than 6 hours
- ☐ 6 hours to less than 7 hours
- ☐ 7 hours or more

Approximately how many hours yesterday was ANY television turned on in your home? (CHECK ONE ANSWER ONLY) **(RQ12)**

- ☐ None
- ☐ Less than 1 hour
- ☐ 1 hour to less than 3 hours
- ☐ 3 hours to less than 6 hours
- ☐ 6 hours to less than 9 hours
- ☐ 9 hours to less than 12 hours
- ☐ 12 hours to less than 15 hours
- ☐ 15 hours or more

RQ12b: Does having a large-screen television compete for attention to and use of other media? Does the presence of large-screen television impact newspaper readership or news consumption?

Where do you access daily news and information? **(RQ12)**
(CHECK ALL THAT APPLY)

- ☐ Newspaper
- ☐ Internet
- ☐ Television
- ☐ Radio
- ☐ Emails
- ☐ Talking to other people
- ☐ Do not access daily news and information

How often to you go to the movies at the cinema?
(CHECK ONE ANSWER ONLY) **(RQ12)**

- ☐ Rarely
- ☐ Once in the last three months
- ☐ Once in the last month
- ☐ Twice or more in the last month

APPENDIX L

ONLINE CONSENT FORM

Dear Sir/Madam:

We invite you to participate in a research study entitled "Make More Room for Television." The research focuses on television use in the home. To participate in this research, you must be 18 years or older and must own a television. This survey is part of a research project housed in the Grady College of Journalism & Mass Communication at the University of Georgia.

Your participation will involve completing this online survey that should only take between 8 – 10 minutes. Your participation, of course, is completely voluntary. In addition to furthering media research efforts, we hope you find the questions interesting as you reflect on media use in your home. The information gained from this project will be shared with others via reports and publications.

Any incentive benefits you will receive for participation in this survey will be the responsibility of MarketTools, Inc. in their relationship with you using their ZoomPoints Rewards Program. Hence, no direct benefits will be provided to you by the researcher.

Your data and answers to these questions will remain confidential. At no point will we, the researchers, have access to your name or personal identifying information. Only anonymous data will be supplied to us from the online panel company. We note that this is an online survey and the internet is not a secure technology. There is a limit to the confidentiality that can be guaranteed during the process of transmission. We will have no identifying information supplied to us by the survey organization and will use all established procedures of data confidentiality.

No discomforts or distress are expected with this research. No psychological, social, or legal risks are expected with this research. Data supplied to us from the online panel company for this study will be maintained for three years. The researcher—Michael McNiven, a doctoral candidate under the direction of Dr. Dean Krugman—will answer any further questions about the research, now or during the course of the project, and can be reached by email at mcniven@uga.edu. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 612 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email irb@uga.edu.

By completing this online survey you are agreeing to participate in the above described research project.

Thank you.