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MASS MEDIA'S RELATIONSHIP WITH ADOLESCENTS' VALUES AND BEHAVIORS:

A THEORY OF MEDIATED VALUEFLECTION

by

MELANIE BURLESON RICHARDS

Under the Direction of James W. Ainsworth

ABSTRACT

Mass media has long been thought to have a detrimental effect on an adolescent's values and behaviors. Many social ills including violence, misogyny and negative health behaviors, as well as egoistic cultural values have been attributed to mass media's influence. Yet the media is not all powerful, nor are its powers unable to be combated. In this manuscript, I analyze the Educational Longitudinal Study data from 2002 to 2006 to determine the real effects mass media has on adolescents in comparison to other influences. I find that not all media is equal in influence. Television and video games have different relationships with a teenager's values and behaviors in comparison to internet use. Additionally, I find that when parents are involved with their children as significant others, they do not negate, but can typically counteract many negative effects of media.

INDEX WORDS: Media, Mass Media, Adolescents, Teenagers, Television, Video games, Internet, Values, Behaviors, High school, Social psychology, Reflected appraisals, Significant others, Altruism, Egoism, Parent, Parental involvement

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2010

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by

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CHAPTER 1.

STATEMENT OF ISSUE AND IMPORTANCE

Teenagers maintain various systems of values which they access in order to assist decision making in their lives. A system of values is a "hierarchical arrangement of values along a continuum of importance" (Rokeach 1968). While some values are central to defining the self, others are not. Values find a place in the individual's hierarchy according to the individual's performance displaying those values, while concurrently the individual will also seek to excel in values that have higher priority (Rosenberg 1979). Values thus make up a part of self-concept or who (you believe) you are as a person (Gecas 1986; Burke 2004). From a social psychological perspective, a system of values is an integral part of Mead's socially developed "self" (Mead 1934).

In a system of values, some people may believe romantic love is the most important thing in life while others may prioritize family, friendships, education, work, new/exciting experiences or money. When a person places these values as more or less important and concurrently defines their self-concept, systems of values are created. In this system, values such as making money (in the near term) or working toward an advanced education may be pitted against one another with one falling as hierarchically more important. More egoistic values such as making money may also come into conflict with more altruistic values, such as working to correct social inequalities.

Although systems of values are formed and adapted throughout life, the teenage years are one of the most influential times of self development in a person's life. Adolescence is "a moment in the life course in which boys and girls test models of conduct as they construct their personal, institutional, and communal personas" (Fine 2004). Young people are looking beyond family norms and defining "selves" which may differ from their parents' ideal versions. This is a time in a young person's life when comprehension of the world increases and needs and goals change. A shift in the relative priority of values also occurs in adolescence (Beech and Schoeppe 1974). Many influences may affect a teenager's development of self during this time and thus his or her associated system of values (Fine 2004). These influences can include parents, peers, and mass media.

Stereotypes run rampant when the general populace discusses today's youth, their values, and their subsequent behaviors. In recent generations, adolescents have been assumed to be more promiscuous, more abusive of drugs and alcohol, more violent, self-absorbed, and generally lacking in altruistic social values in comparison to previous generations (Stern 2005, Sternheimer 2003, Coontz 1992). Stereotypes are created based on the "kernel of truth" basis (e.g., if one teenager commits an extremely violent act there must be thousands of teenagers with the same desire) (Levine and Campbell 1972). This supposed decline in teenagers' altruistic values is blamed on cultural influences, particularly mass media. Parents and policymakers argue that video games such as Grand Theft Auto, television shows such as The Hills, and websites such as Myspace and Facebook promote ideals of violence, drinking and drug abuse, misogyny, and risky sexual behaviors (Torr 2001).

Blaming the media is both an "easy out" and a self-propagating strategy for media vehicles. The news media run many stories which support an almost apocalyptic version of current teen culture. Parents and many other adults tune in and internalize the sound bites they hear on talk shows and the news, which distracts them from other potential causes for teenagers' problems. Problems with teenagers immediately become a result of the "bad influences" the teens experience through both media and subsequent peer-mediated media relationships (Nathanson 2001).

In this scenario, parents feel powerless to make changes, as teenagers generally have access and freedom to select their own media diets and circles of friends. Attempted removal or restriction of these freedoms would be both somewhat futile and could also cause immediate retribution in the form of rebellion by the teen (Nathanson 2002). Therefore, parents may generally acknowledge a belief in negative influences of media culture on adolescents, but at the same time feel there is little they can do to protect their children from its effects.

Media does provide a cognitive frame through which to observe the world and many theorists believe that this frame supports an egoistic society (Grindstaff and Turow 2006, Carragee and Roefs 2004, Gamson et al 1992). This may be true, but contrary to popular thought, the media are not the root of most social problems amongst children and teens (Sternheimer 2003). Though fear of the media and

its power to create amoral individuals has become an adopted cognitive narrative, this position does not much empirical support behind it (Sternheimer 2003, Glassner 1999). True, electronic media culture has vastly infiltrated many aspects of teenagers' daily lives. However, this has not increased violence, risky sexual behaviors, and other teenage "vices." In opposition, most of these statistics have actually decreased over the past few decades, even though media usage has increased (Sternheimer 2003).

For example, teenage pregnancies have consistently decreased over the past fifty years even though words like "epidemic" are used today in contrast to a re-pictured, pristine past (Sternheimer 2003, Coontz 1992). Youth violence and binge drinking also dropped considerably in the 1990s, a decade when both were supposedly an "epidemic" (Sternheimer 2003). In sum, there is little to no direct, non-contradictory evidence that links the current media environment to the many social problems it is said to have caused (Sternheimer 2003, 8, 54).

Therefore the problems with the above "blaming the media scenario" seem clear. First, there is the futility experienced when trying to "correct" it; but even more so, there are the dangerous distraction tactics it enables. By pointing the finger at media culture as a root cause for most teenage ills and antisocial values, parents and general society miss the bigger problems teenagers experience in life. Additionally, parents acquire an easily accessible scapegoat instead of taking some of the responsibility for their children's values and behaviors.

This is not to say that a thorough review of the media is not needed or helpful in trying to understand "teen culture" or that media has no influence whatsoever on value system development. However, there are many other, far more powerful pressures on an adolescent (e.g., poverty, neglect, family violence) that could truly be improved with investment of the misplaced time and attention given to supposed media effects. This is also not to say that parents alone are responsible for their children's behaviors, but that they may have more influence that they potentially realize.

This brings me to the research question at hand. How does mass media operate in relation to adolescents' developing values and behaviors in comparison to other influences? In the following pages,

I will empirically investigate the relationship of media consumption and various structural factors to development of teenagers' values and eventual behaviors.

First, I will examine what factors affect a teenager's media consumption. Concepts such as family structure, race, gender, socioeconomic class and parental involvement will be investigated as predictors of media consumption. Next, I will investigate how media consumption affects value formation. In this stage of research, I will examine various values that may be important to teenagers, such as family, work, education, and money. I will investigate how media consumption in the high school years affects value formation and relative importance of values. I will also examine if concepts such as race, gender, socioeconomic class, and parental involvement help to explain the potential effect of media consumption on value formation. Finally, I will examine how media consumption affects future behaviors, with stated values and other variables as controls. Throughout this research effort, I will concentrate on several media types, including video games, television/videos/DVDs, and the internet.

Of these select media types, the effect of television and movies on teenagers is perhaps the most studied topic in the field of media effects research, followed by studying the effect of video games and then internet effects. Part of this focus can be explained by the timing of when each of these media was made available to the public for mass consumption. Additionally, television is the most widely accessible form of media (out of the three); with a further reach across socioeconomic class barriers. It will be interesting to examine not only the effects of consuming each media type on values and related behaviors, but also how they may or may not differ from one another in their respective effects.

CHAPTER 2.

THEORETICAL BACKGROUND

Across various fields of study, I perceive there to be two main theoretical approaches to mass media and its relationship both to a society and to individuals. One perspective focuses on the structural power of media to influence thought (Van Gorp 2007; Grindstaff and Turow 2006; Real 1996; Kosicki 1993; Gamson et al 1992; Bandura 1986, 1994; Gerbner and Gross 1976; Gramsci 1971). The other focuses on an individual's agency in choosing media to consume (Blumler and Katz 1974, Tan et al. 1997, Krosnick et al 2003). What has not been as thoroughly developed in the field of media studies is a combined approach that examines the various interactions between social structure and individual agency (Milkie 1999, Kellner 1995, and Jensen 1991).

Media's Structural Influence

One of the most well-known theories of media influence is found in the field of communications. Cultivation theory has three basic assumptions (Gerbner and Gross 1976):

- Television presents a composed world unto itself of interrelated stories which highlights and enhances specific aspects of society while downplaying others.
- Frequent viewing of this television world leads viewers to believe that the real world is more similar to the television world than it is in actuality.
- Viewers develop attitudes based on this television world that they carry out into the real world.

Cultivation theory would therefore support the perspective that mediated values shape societal values. In this theory, media reflect certain aspects of society more strongly than other aspects and thus create a false reality that is based in the real world. Other communications theories, such as Agenda Setting and Framing theories, also support a structural perspective and propose that media tell people both what is important to think about (i.e., Agenda Setting) and how to think about these different issues (i.e., Framing) (Kosicki 1993).

Another structurally based theory, Cognitive Social Learning theory, states that people will imitate behaviors of others if they see that those behaviors either lead to reward or lack of punishment

(Bandura 1986; 1994). Modeling of a specific behavior is more likely when the behavior is attractive to and/or resonates with the person viewing it. Modeling also increases when the viewed behavior is similar to the viewer's current behavior, is simple for him or her to emulate, is prevalent in what they see and hear, and has functional value. Therefore, this would support the structural influence of media, in that if teenagers see attitudes and behaviors being rewarded on television (and the behaviors are attractive and easily imitated), teenagers are more likely to emulate these same attitudes and behaviors.

In the field of cultural studies, structural theories applicable to media can also be found. The production of culture perspective focuses on how cultural symbols "are shaped by the systems within which they are created, distributed, evaluated, taught, and preserved" (Peterson and Anand 2004, 311). In sociology, the theory of "cultural hegemony" also supports this same effect (Gramsci 1971). In cultural hegemony, people may consume and reproduce patterns of domination within their respective societies in almost unconscious ways (Gramsci 1971). Recent sociological research supports that television "produces (and proscribes) social representations and ideas about the world, particularly as they relate to power, place, and identity" (Grindstaff and Turow 2006). These theories and research findings support mass media as a structural enforcement of various forms of domination.

The concept of hegemony also relates to media culture in that media culture propagates and maintains cultural hegemony through "intellectual and moral leadership" (Gramsci 1971). Viewers (including adolescents) succumb to and may self-enforce certain forms of domination without even realizing it (Real 1996). Hegemony bridges ideology and power by making the dominant group's ideology appear "legitimate and natural" (Hebdige in Durham and Kellner 2006). Even if adolescents may acknowledge the effects of media, they are likely to believe the media affects others more than it affects them personally (i.e., the "third person" effect) (Chapin 2002, 1999; Davison 1983)

Thus, through hegemony, structurally focused theorists would support that the mass media bolsters inequalities in society. A televised version of reality is created by people and thus is never the "full, unbiased story," but a story that is socially constructed by those in power (Iyengar and Kinder 1987). Various authors have discussed the myths that can become "common knowledge" within social

groups simply by framing an issue in a different light or inserting a different caption to a photograph (Radford 2003; Sontag 2003; Zerubavel 1997). The problem with these media-created myths is that they in turn influence the creation of a new social reality that is very real in its consequences. Adolescents may embrace these social realities and react accordingly.

These theories are also supported in a social constructionist approach, where power dynamics operate within mediated information and thus enforce a specific social reality. "Framed" packages of meaning help viewers easily access "a definition, an explanation, a problematization, an evaluation of the event, and… logical conclusions" (Van Gorp 2007). In most media, specifically in the United States, this construction of reality provides a positive feeling about capitalism and reinforces an egoistic society (Gamson et al 1992). Carragee and Roefs have gone on to criticize much recent framing research for not diving more deeply into the relationship between media frames and the way in which they support unequal social power and dominance (Carragee and Roefs 2004).

Agency in Media Selection

Theorists have also acknowledged that there is an opposing force to the power of structural influence. In an agentic viewpoint, adolescents would be viewed as active consumers of media culture who use media to help define their environment. This approach, used in media research, is referred to as "uses and gratifications." The uses and gratifications approach focuses on why people use particular media rather than what the media content may display. This assumes that the person consuming the media has greater agency within the interaction and that media does not act as a hypodermic needle injecting proscribed beliefs into a homogenous society.

A uses and gratifications approach presents the use of media in terms of the needs it meets for the individual (Blumler and Katz 1974). Finding reinforcement for personal values is one specific way viewers may use media; however, values on television are not directly absorbed by adolescents according to the frequency of which they are displayed (McQuail 1987, Tan et al. 1997). Adolescents internalize values on television only when they recognize and evaluate them as important to being successful (Tan et

al. 1997). Due to the application of heterogeneity in this approach, it is also acknowledged that the same media content may fulfill different needs for different people.

In this approach, teenagers view media which enforces their developing beliefs. This more agentic viewpoint also aligns with the "need satisfaction" perspective found in social psychology (Krosnick et al 2003). Television-viewing frequency is related to needs such as social integration (i.e., when integration with peers is lacking, adolescents will fill that social interaction void with television) (Krosnick et al 2003). The need satisfaction perspective would also suggest that teenagers who spend less time with parents spend more time filling socialization needs through media.

Subrahmanyam and Lin's research (2007) on adolescent use of online communication media supports this perspective as well, and also suggests that with proper supervision the internet can potentially provide a support network for adolescents who feel they do not receive adequate support from parents or peers. Different forms of media thus allow teens to actively try different social lenses from which to view their world and establish their social identity (Zerubavel 1991). However, it is important to remember that in this agency-driven perspective, the adolescent may also actively access other sources of information to guide decision making or enforce developing beliefs (e.g., parents, peers).

Approaches to Combining Structure and Agency

Social Psychology: Significant Others and The Generalized Other

Mead theorized that a person's self is developed through social interaction with other people, with larger social institutions (and thus organized groups of people), and with the generalized other (Mead 1934). As these various sources affect development of a person's self, they will concurrently affect development of a person's system of values. Mead described the attitude of the "generalized other" as the perceived attitude of an entire community (e.g., not one specific person) (Mead 1934). It is expected that mass media such as television and movies do not take the position of a singular significant other in a teenager's life, but rather convey a representation of this generalized other.

Through using reflected appraisals, Felson suggests that people judge themselves "using standards learned from others" and that this constitutes a "normative effect" (Felson 1993). Therefore, a

person may also apply previous knowledge of the significant other's values and use it to guide their future behaviors toward an accepted "norm" (Felson 1993; Gecas 1986). When applied to media and a system of values, this means that a person may hierarchically rank his or her own values by envisioning how significant others or the generalized other would evaluate their value ranking. For example, a person may place romantic love before education if he or she believes his or her significant others and/or the generalized other would approve of this.

In this process of evaluation and implementation, Rosenberg suggests that "not all significant others are equally significant, and those who are more significant have greater influence on our self-concepts" (Rosenberg 1979). Specifically, Rosenberg found that those significant others who are highly respected and whose opinions are highly valued have a greater influence on our self-esteem (Rosenberg 1979). In this way, a parent, as a significant other, can have a great effect on a teenager's value system and counterbalance (or perhaps even counteract) the effect of mass media (as a representation of the generalized other) on a teenager's value system.

In the case of media's effect on a system of values, teenagers may view values on television as somewhat unrealistic for them personally, but still feel that they are the values of society. Milkie found that even though many teenage girls may consider mediated images unrealistic, they still believe these images are viewed by others as normative (Milkie 1999). Thus, the media can be seen to reflect the viewpoints of the generalized other, even if these viewpoints are not personally held by the viewer due to other competing factors, such as the values of significant others (e.g., parents).

Co-Authoring: Media from a Cultural Studies Perspective

The actual landscape of media culture is neither a top-down "production of culture" nor a continuous construction of meaning by individuals such as in a "reception of culture" model (Kellner 1995). Media has the ability to reproduce forms of social power and inequalities, but can also be a liberating force when people interpret media actively and use it to create their own meanings and understandings of phenomena (Kellner 1995, 4-5). Therefore, media can either serve in social reproduction or question societal inequalities and help to liberate its audience. True, concepts such as

power and domination are applicable when examining media's relationship to society: but, there are also methods of subversion and creation of new meanings which may occur through critical readings of texts, sounds, and images by an active audience. The top-down effect of media may be further subverted when parents are actively involved as significant others in their teenagers' lives.

Symbolic Interactionism

The Chicago School and those theorists and researchers who follow the Chicago School tradition also examine the interaction of societal forces and individual agency in the construction of meaning (Long 1997). Symbolic interactionism views humans as social actors who read and interpret the actions and meanings of other humans around them and then react to those meanings (Blumer 1969). In a media context, symbolic interactionism regards humans as active interpreters of media who decode the symbols they view in society and apply them to their own lives based on self development processes, not through outside structural force. It takes into account that teenagers create the meanings of what they view and apply this information against their current knowledge. There is also a sense of agency in which media the teen selects and views in this model.

Audience Reception

Audience reception analysis also supports a more combined structural/agentic approach by looking at the social creation of meaning through mass media's relationship with audiences. "Reception analysis assumes that there can be no 'effect' without 'meaning'" (Jensen 1991). Reception analysis does not just focus on the content of the media being delivered (e.g., content analysis), but also upon the audience member as a subject and his or her interpretations of said media. Only through the interaction of the audience, the media message and (according to McLuhan) the media vehicle (i.e., medium), can real meaning be induced through the study of these relationships and interactions (McLuhan in Durham and Kellner 2006).

Therefore, in a combined structural/agentic perspective, media is seen as a structural force when viewed as a representation of the generalized other. Additionally, other structural forces may be viewed as competing with media's influence on values in this combined perspective (e.g., socioeconomic status,

race, gender). However, agentic methods of subversion may be applied against the force of media influence (and other structural forces) when parents (or other positive enforcers of values) are viewed as significant others. Although parents may not be able to negate the notion that the mass media represents the generalized other, as significant others they may be able to affect the adoption of media supported values.

Proposed Theoretical Contribution: Mediated Valueflection

Media's relationship to society has been repeatedly examined throughout the academic disciplines of sociology and sociological social psychology, communications, and cultural studies. The main basis for oppositional viewpoints in these fields (with regard to media) goes back to the classic discussion on the influence of structure versus the application of individual agency. In sociology, theories such as cultural hegemony support a more structural approach. In cultural studies, structural forces are also at work in the production of culture model. In the field of communications, cultivation theory, agenda setting theory and framing theory would enforce that mass media works to produce social culture. However, a uses and gratifications approach would state the individual is much more involved in the creation of social reality.

No "either/or" strategy can truly capture the relationship of audiences and the media they consume. Therefore, a synthesis of the two major theoretical approaches to date (i.e., media as structural force and audience as active agent) must be achieved. Therefore, I have approached my research with a new contribution to the field of media studies: an interactive structural/agentic perspective which I shall call "Mediated Valueflection."

In this combined structural/agentic approach, media would be expected to affect a teenager's system of values in a structural way, reinforcing the egoistic values of a capitalist society (as a representation of the generalized other) when other control variables are not present. However, when control variables are applied (i.e., involvement with parents as a representation of parents as significant other) and other structural and exogenous influences are taken into account (e.g., race, gender, socioeconomic status), the effect of media is expected to reduce to non-significance. This approach is

theoretically supported in social psychology's focus on "significant others," "reflected appraisals," and the "generalized other," in the theory of symbolic interactionism, the practice of audience reception analysis, and also in Kellner's work in the field of cultural studies.

CHAPTER 3.

REVIEW OF RELEVANT LITERATURE

Before examining media's effects on values, I will first examine what affects an adolescent's media consumption. Through reviewing previous literature, I have found that various demographic and structural factors affect adolescents' types and amounts of media consumption. Differences in media diet exist according to lines of race, gender, socioeconomic class and geography.

With regard to race, black adolescents consume significantly higher amounts of television daily compared to those who are white or Hispanic, with almost 40% of black high school students watching greater than or equal to five hours of television daily (Lowry et al. 2002). Blacks also rate both television and video games as significantly more important to them compared to their white peers (Pardun and Scott 2004). Hispanic and Black adolescents, adolescents in central city urban areas, and those with lower socioeconomic status are all less likely to use the internet compared to other demographic groups (Cleary et al. 2006, Calvert et al. 2005). Additionally, whites rate the internet as more important to them as compared to their black peers (Pardun and Scott 2004).

Along gender lines, adolescent males are far more likely to play computer games compared to adolescent females. Additionally, compared to females who do play, males play at much higher frequencies (Willoughby 2008). Many video games are heavily targeted to males through their gendered subject areas. For example, fighting, war, and the usage of guns are heavily enforced in many video games.

Other factors such as parental interaction and involvement also affect adolescent media use. Adolescents with "less positive parental relationships" are likely to have a higher frequency of internet use (Willoughby 2008). Parents who are more involved with their children have a greater tendency to mediate their children's media usage, such as television viewing (Warren et al 2002). Generally, a higher amount of parental involvement appears to coincide with less adolescent media use overall and adolescent use of media in more supervised ways.

With regard to how adolescents use media, a ten-year review of literature in media studies found that research prior to 1990 generally looked at behaviors adolescents learn from media, while research completed after 1990 looked more at media content and viewing patterns (Villani 2001). It appears that the media propagated "epidemic" of adolescent-related social ills since the last half of the 1990s has now reversed that trend. Once again, greater focus has been placed on media effects research in the past decade. This change in focus, from a more structural approach to a more agentic approach and then back again, shows how mass media itself has influenced public opinion and consequently, this field of study.

In this literature review, I have focused on four major areas in which media may influence teenagers' lives. These include self-concept and identities, negative health behaviors, violence, and value formation. Much work has been completed in the areas of media influence on self-concept and identities, negative health behaviors, and violence. However, little attention has been given to the ways in which media may influence a system of values (i.e., as a representation of the generalized other).

Therefore, although I discuss the other three areas of media influence below (i.e., self-concept/identities, negative health behaviors, and violence), I do not plan to focus specifically on these areas in my research. Instead, I feel the greatest addition to the field will come from a research focus on media influence on values and an associated empirical test of the theoretical concept of Mediated Valueflection. I do feel, however, that it is important to address these areas in my literature review so as to inform the ways in which I may expect media to operate with respect to values.

Media and Self-Concept/Identities

Through images teenagers view and icons they may emulate, they work to define their self-concept and identities (Kellner 1995). Many other theorists have also viewed adolescence as the crucial time period where identity formation is concentrated (Lloyd 2002). Therefore, adolescents use media more than ever during this time period (from a uses and gratifications perspective) with goals of identity construction and maintenance.

With regard to empirical research on self-concept and identities, a large amount of work in this realm has been created from a feminist point of view and focuses primarily on female audiences and

media's structural influence. This research has supported that mass media advocate an unrealistic female body type and therefore promote body dissatisfaction and/or disordered eating due to a negative self-concept (Sinton and Birch 2006; Levine and Smolak 1998). Additional research has found that overweight or obese individuals were likely to be vastly underrepresented on television as compared to their true percentage of the population (Greenberg et al 2003). Overweight or obese characters of both genders are also more likely to be portrayed with negative characteristics and character flaws as compared to average or underweight characters (Greenberg et al 2003). This work follows from another study which shows that exposure to the overrepresentation of underweight body types through television causes adolescent females to develop a negative body image (Hofschire and Greenberg 2002).

Media use also interacts with development of identities in the form of "identity complexity," or a multidimensional view of the self (Harrison 2006). This study examined how identity complexity, and also fluidity, is affected by television consumption. The author supports that a more complex set of identities is a predictor of better emotional health due to aspects such as resiliency. For most groups surveyed though, increased television viewing (more than twenty hours per week) led to a decrease in identity complexity and thus provided an indicator of decreased emotional health (Harrison 2006). Media also limits creation of identity to certain "typologies" (e.g., lower job roles are acceptable for non-Caucasian, non-male individuals) (Real 1996).

However, the case is not closed on whether media affects creation of self-concept in both a structural and negative way all of the time. Media may be used by viewers in positive ways with regard to self-concept as well, such as to uphold or confirm one's social, racial, or ethnic identity in purposeful and constructive ways. Davis and Gandy have examined social identity from both a cognitive and utilitarian perspective, which applies greater agency on the part of the user in evaluating and deciding to consume different media (1999). In their findings, people use media to shape who they want to be.

This more agentic perspective is also supported by other research which shows there are vast differences across media diets based upon both race and gender (Brown and Pardun 2004). Scholars additionally theorize that adolescents actively select media based on their individual or shared life

experiences, interact with the selected media to help them better develop and understand their own self-concept, and then apply those derived meanings to their everyday lives for both self-concept creation and self-socialization purposes (Brown 2002; Arnett 1995).

Media and Negative Health Behaviors

Research shows that although television frequently shows sexual situations and content, it rarely provides information on the risks or consequences of this type of behavior (Cope-Farrar and Kunkel 2002). Also, viewing teen sexual activity on television increases teen's perceptions that this type of activity occurs more frequently than it does in reality (Greenberg and Smith 2002). Overall, much work in this area supports the idea that the mass media is structurally enforcing risky sexual behaviors by providing a distorted representation of the generalized other to adolescents.

Research has found that mass media increases the propensity towards other negative health behaviors as well. In 2005, a study found that smoking behaviors were present in 74% of the over 500 top-rated movies that were reviewed (Sargent et al 2005). This study and others have subsequently supported that adolescents who had higher exposure to media portrayals of smoking were significantly more likely to try smoking themselves (Tickel et al 2006; Sargent et al 2005). A similar study shows that images of drinking in movies also have a moderate effect on early-onset teenage drinking (Sargent 2006).

A critique is necessary regarding the assumptions of the previous studies. Teenage instigation of sexual behaviors is not a new phenomenon or "epidemic" created by current media, as it has frequently been framed. In fact, teenage promiscuity has always existed, though in the past the effects were more hidden (Coontz 1992). Therefore, it does not appear to be a logical conclusion that risky sex behaviors are directly and primarily caused by media viewing of sexual scenarios. Also, in the smoking and drinking examples, correlation also does not equal causation. There is no way of knowing if teenagers who would be more likely to view movies with smoking and drinking would also be more likely to try smoking and drinking in the first place. A spurious relationship is not direct evidence of cause and effect, as has been presented in these findings.

Media and Violence

Media influence on violent behavior has been one of the most heavily researched areas of media influence on adolescents. Yet, as it is not a focus of my planned research, I will again discuss this topic only briefly. Repeatedly, studies have shown positive correlations between quantity of viewing media violence and aggressive behavior (Bushman and Anderson 2001; Johnson et al. 2002; Slater et al. 2003; Huessman et al. 2003). Even if actual aggression is not displayed, research has found that at the minimum repeat exposure to violence can cause blunted emotional responses to actual violence in a person's own life (Scharrer 2008).

According to Slater's work in particular, the use of violent media and aggressiveness are mutually reinforcing (violent media usage leads to aggressiveness and aggressiveness leads to violent media content usage), directional (increase on one dimension leads to increase in the other), and cumulative over time (Slater et al 2003). This effect creates a virtual downward spiral with one behavior leading to increased propensity of the other, which creates increased propensity for the first, and so on. However, again, in many of these studies control variables have generally not been applied appropriately, samples are cross-sectional and/or have not been nationally representative, and correlation has again been used as an explanation for causation.

Media and Values

There is little focus on this aspect of media effects in prior research compared to the other areas previously discussed. The closest area of research has been in self-concept and identities. The scholarly literature that is available supports that "media culture helps shape the prevalent view of the world and deepest values: it defines what is considered good or bad, positive or negative, moral or evil" (Kellner 1995, 1). In other words, media socializes teenagers and helps define their beliefs about their self-concepts and the world around them (Kellner 1995, 2). Supporting this understanding, research has found that televised values resonate more highly with those who watch greater amounts of television compared to those who watch less television (with some interactions based on type of show viewed) (Potter 1990).

This work shows how media (representing the generalized other) has a powerful influence on development of the self and of a system of values.

Additionally, participation with media can be considered a ritual and thus the effects of media are strengthened because we "co-author" our media experiences in a hegemonic way (Real 1996). Additional research supports that a teenager's peers may mediate and potentially enhance the effects of media; so that teens receive both direct and secondary levels of enforcement regarding mediated norms and values (Nathanson 2001). However, it has also been found that parents mediate the potential negative effect of peers in adolescence and are thus also expected to mediate the effect of mass media (Warr 1993).

In these more recent research examples, there are clear interaction effects between the viewer and the media and media is not seen as a direct and inevitable influencer of values. Outside values (e.g., previously held values of adolescents potentially due to other structural factors, values of significant others such as parents) also shape media value consumption, retention, adoption and maintenance. In this approach, media does not have a direct influence on values through the Frankfurt school's proposed "hypodermic needle" effect, but instead completes the role of a representation of the generalized other and influences values and behaviors indirectly. This would therefore support a combined structural/agentic approach, or what I have termed Mediated Valueflection, as to how media relates to an adolescent's system of values.

Previous Literature Summary

When reviewing several cross-curriculum theoretical standpoints and previous research on media influence on adolescent behavior/attitudes, I found several interesting points. For the most part, research has been approached from a structurally-driven theoretical basis over the years. Little attention (except in the case of self-concept and identities) has been given to a more agency-driven approach in the majority of studies I found.

Prior research is consistent in findings of negative relationships for specific types of media use, deviant behaviors and associated attitudes. However, the effect on an adolescent's overall system of values has not been thoroughly investigated. Researchers have also focused on correlations in cross-

sectional data (e.g., heightened viewing occurs in tandem with increased likelihood of deviant attitudes/behavior) and have failed to look at longitudinal samples. Past researchers have additionally failed to analyze a representative sample across the United States in the majority of studies discussed, instead focusing on limited samples by region or school type. Typical exogenous variables such as class, race, gender, family structure and other variables which could help to explain some of media's effect on values and behaviors have also not been thoroughly examined in multivariate analysis. I would additionally suggest that parental involvement should be introduced as a control variable, as this may alleviate some of the proposed effects of media (as supported in the work by Warr regarding peers) (1993).

Mass media is an area of much criticism and blame for adolescents' values and behaviors in society. However, much of this blame takes into account only one side of media's possible effects and ignores other potential reasons for adolescent values and behaviors. In summary, I recommend that empirical research is needed within the field of media studies from a Mediated Valueflection theoretical standpoint that looks at dynamic interactions between structure and agency. Current media studies generally approach the field from either a structural or (rarely) agentic perspective, and leave little room for a realm of possibilities between these two perspectives or for the effects of additional structural concepts. I plan to take the above limitations and suggestions into consideration when attempting to extend the body of research on this topic and test my theoretical contribution.

CHAPTER 4.

RESEARCH DESIGN- DATA AND METHODS

Research Expectations

Based on previous literature, I expect that demographic and structural concepts such as race, gender, socioeconomic class, family structure, region and urbanicity will predict some of the variation in different types of media consumption (Willoughby 2008, Cleary et al. 2006, Calvert et al. 2005, Pardun and Scott 2004, Lowry et al. 2002). My hypotheses with regard to direction of each of these structural concepts are outlined later in this chapter. I plan to additionally examine parental involvement as a concept, as I believe this factor will also help to explain how media is consumed (Willoughby 2008, Warren et al 2002). I specifically believe higher parental involvement will align with less media consumption overall.

With regard to media effects on values, I hypothesize my research will show that various forms of mass media all function as representations of the generalized other and reinforce selected values while downplaying others. I expect that heavy users of any kind of media will have more egoistic values compared to those who are light users of that media. Egoistic values are not necessarily immediately harmful to society, but they do not improve society (e.g., capitalist ideals of making money or having leisure time are valued over helping the community). Egoistic values are also expected to decrease likelihood of future altruistic behaviors (e.g., social responsibilities such as volunteerism). These expected findings would support previous media effects research from a structural perspective.

However, I also expect that exogenous concepts (e.g., race, socioeconomic class, gender) will explain much of the negative effect of increased media consumption on values and behaviors. I further believe that the addition of parents as significant others (through parental involvement as a control variable) will reduce the negative effect of media consumption to non-significance. This hypothesis is based on previous findings from a more agentic perspective which allows for co-authorship of the media experience. In order to determine if teenagers are adopting egoistic values they view in the media (versus

the explanation that teenagers with high levels of viewing have different values to begin with), I will conduct longitudinal multivariate analysis.

An overview of how I expect these concepts to relate with one another may be found in the heuristic model outlined below (Figure 4.1). The relationships outlined in this model will also be explained in detail in the analytic strategy and hypotheses in the following pages.

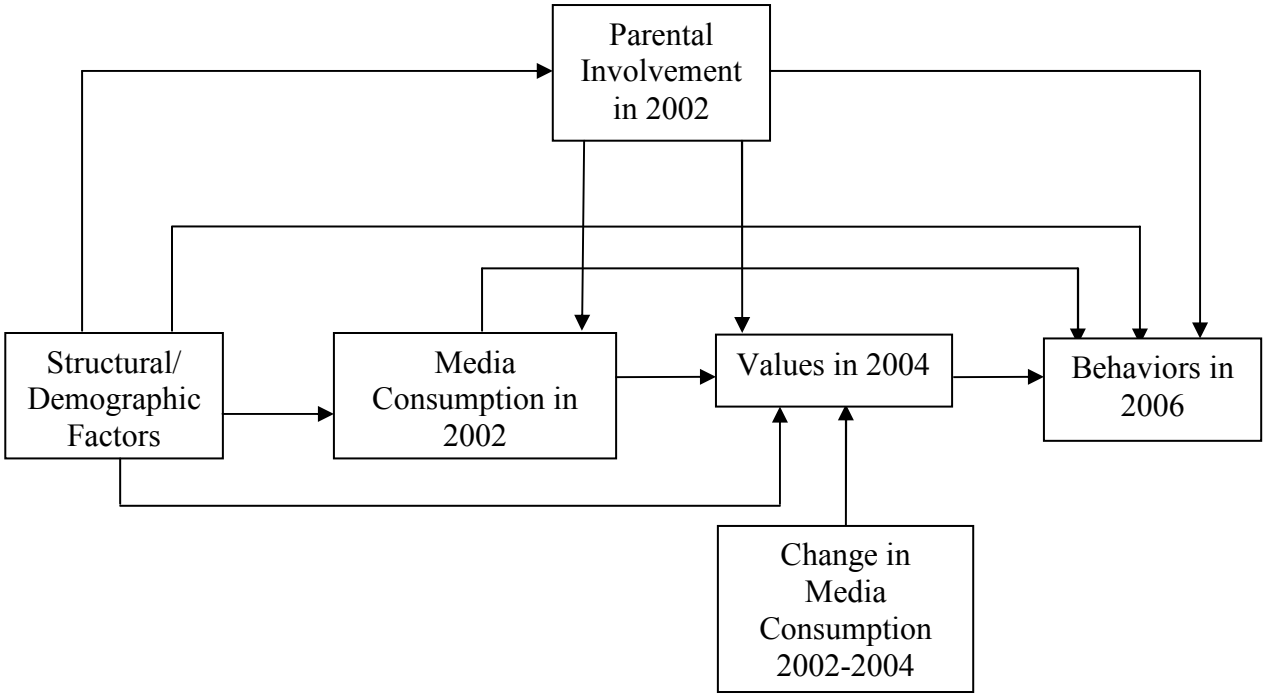

Figure 4.1: Heuristic Model of Concept Relationships

Data Collection/Survey Tool

I will examine the Education Longitudinal Study data from 2002-2006 (ELS:2002) which was collected by the National Center for Educational Statistics. This data set successfully operationalizes the concepts discussed in the heuristic model on the previous page. It is also a nationally representative probability sample of over 15,000 10th-graders in 752 public, Catholic, and other private schools who were studied in the spring term of 2002 and then again in the spring terms of 2004 and 2006. Students who took the survey in the first year (2002) were asked to participate again in the second wave (2004) and the third wave (2006). Additionally, new students were added in the second wave to supplement the original sample. The additional students were in the same cohort as the original sample (National Center for Education Statistics 2005).

The ELS:2002 survey includes information on a variety of topics related to adolescents. Some of these include the students' background, school experiences and activities, plans and goals for the future, employment and out-of-school experiences, and other self-stated topics (National Center for Education Statistics 2005). I believe the student survey includes data with high validity because it represents the student's actual opinions and attitudes (not the attitudes or opinions projected upon them by others).

Advantages of Probability Sampling

As mentioned, the data I plan to examine is derived from a national probability sample. The major advantage of probability sampling is that the findings from this study can be generalized (after appropriate weighting of the data) for all tenth/twelfth grade/two years post high-school students in the U.S. during the years of survey deployment. Therefore this type of design has more generalizability compared to non-probability sampling (Henry 1990). This type of nationally generalizable study has never been completed for this topic of research before. Therefore, I believe this research will add immense value to the body of work currently available.

The Sampling Technique

The sampling technique used for the ELS:2002 study was a two-stage stratified probability sample. The first stage of selection was schools, which were selected randomly with the probability of

being selected proportional to their size/percentage of students they represented. The public school sample was stratified by the nine U.S. Census divisions, and by urbanicity (metropolitan status of urban, suburban, or rural). Private schools (Catholic and other private schools) were stratified by four levels of geography (Census region) and urbanicity. Private schools were also oversampled so that certain detailed analyses could be completed (National Center for Education Statistics 2005).

NCES' Common Core of Data (CCD) 1999-2000 and the Private School Survey (PSS) 1999-2000 were used as the sampling frame from which schools were selected for ELS:2002. The Common Core of Data is a comprehensive, annual, national statistical database of information concerning all public elementary and secondary schools (approximately 94,000) and school districts (approximately 17,000) (National Center for Education Statistics 2008). The Private School Survey collects data on private schools in the United States with grades kindergarten through twelve by selected characteristics such as school size, school level, religious orientation, association membership, geographic region, community type, and program emphasis (National Center for Education Statistics 2004).

The ELS:2002 target sample size was 800 schools overall. Schools were deemed eligible for the study if at the time of contacting they were in operation and included a 10th grade with students enrolled. Many eligible schools were contacted to participate in the study (1,221). Out of this number, the final sample comprised 752 schools for an overall school participation rate of approximately 62 percent (unweighted) (National Center for Education Statistics 2005).

The second stage of selection was students. Of 17,591 selected eligible students, 15,362 participated, for an overall student response rate of approximately 87 percent (unweighted). Some groups (e.g., Asians) were oversampled for analysis purposes. Students for whom ELS surveys would be unsuitable (i.e., students with mental disabilities/not proficient in English/whose physical or emotional problems would have made participation extremely difficult) were determined to be ineligible to complete the student survey in the base year. However, these students (less than 1% of the sample) were re-evaluated to determine participation in the first follow-up survey in 2004 (National Center for Education Statistics 2005).

Post-sampling Issues: Weighting

Because the ELS:2002 sample design involved stratification (e.g. private versus public schools), oversampling of certain targets, and clustered multistage probability sampling, the resulting statistics are more variable than a simple random sample would have been (National Center for Education Statistics 2005). However, this type of sample was necessary for several reasons. Certain target groups needed to be oversampled in order to analyze their results thoroughly. Clustered multistage stratified probability sampling also needed to be completed in order to concentrate resources on certain schools and therefore save costs for the overall study.

Weighting of the ELS student questionnaire data is therefore necessary to compensate for unequal likelihood of selection of schools and students into the sample. It is also necessary to adjust for the fact that not all schools and students selected into the sample actually participated and to ensure data may be analyzed longitudinally. Proper weighting (i.e. second follow-up cross-sectional weight F2QWT) was applied to the data before I began my multivariate analysis according the recommendations of the National Center for Education Statistics (National Center for Education Statistics 2005). This ensured my results were an accurate representation of the nationwide population of adolescents and allowed for sample to be analyzed longitudinally.

Data Transformation and Reduction

Gender was transformed into a binary variable where presence of the variable means female and the omitted category is male. Race was transformed into several binary variables for use in later OLS regression: Black, Hispanic, and Asian. The omitted race category was white and all other races were changed to be system missing, as they were not a focal point in this analysis. Family Structure was also changed to a binary variable. Presence of the family structure variable means the presence of a two parent mother/father family and the omitted category is all other structures other than two parent mother/father. Urbanicity was transformed into several binary variables as well: urban, suburban and the omitted category, rural. Region was transformed the same way into Northeast, Midwest, West, and the

omitted category, South. All variables with skips, partial interviews, or where data was system missing were recoded as system missing.

The dependent variables were created in this analysis as described. Hours of TV/Video/DVD viewed per weekday was multiplied by five and then added to two times the Hours of TV/Video/DVD viewed per weekend day to create Hours of TV/Video/DVD viewed per week. The same process was completed to create Hours of Video Games played per week. The variable "Frequency of Computer Use for Fun" was limited to only include households where the teenager had a computer and had internet access (reducing the overall sample for this variable by just over one quarter). The question analyzed read, "Whether at home, school, or some other place, how often do you use a computer for fun, such as talking to friends or relatives through E-mail, playing games, surfing the Internet, or listening to music?" (National Center for Education Statistics 2005). This created variable is thus understood to be a proxy measure for Frequency of Internet Use and will be referred to as such in much of the analysis.

Factor Analysis: Parental Involvement

It should be noted that I actually used principal components analysis to determine my composite variables throughout all stages of my analysis. This technique is slightly different from factor analysis in that it extracts factors based on total variance instead of only shared variance as in factor analysis. Principal components analysis is useful in this exercise as it summarizes the data into factors which each measure something unique (Girden 2001). As this is one of the most frequently used forms of factor analysis, I will refer to it throughout my research as "factor analysis." I also used varimax rotation in order to create composite variables that were most discrete from one another. In varimax rotation, a simple solution is acquired by achieving a small number of variables with large factor loadings (Abdi 2003).

I first transformed all parental involvement statements so that they could be used in factor analysis. I set responses other than actual scale responses (e.g., legitimate skips) to system missing and changed the scores to z-scores as some variables used different scales. Next, I decided not to fill in system missing data with the mean. Upon viewing the data set, it seemed that most respondents who were

missing data had missed all statements for one or the other of the grid questions included to create this larger set of variables, likely because one of the grid questions was at the bottom of a page. I examined results three ways, listwise case exclusion, pairwise exclusion, and by replacing the mean. I did not see any meaningful differences in results for the three methods. Therefore, I chose to continue with my original intention and exclude cases listwise. I believed only one composite variable would emerge from the data to represent parental involvement.

I was surprised to find that four components emerged in factor analysis. The Eigenvalue of all components was above the 1.0 cutoff, with all factor loadings for each factor all over .5, well over the .42 conservative cutoff. I realized that the factors had emerged along lines of the individual who displayed initiative for the interaction. There were two components where the parent displayed initiative for involvement and these were also more task oriented. There were another two where the student displayed initiative for the interaction and these were more communication oriented.

I decided that from a sociological social psychology perspective, it would make the most sense to examine the student-driven actions as they would be choosing to delegate time for parents and this was a better representation of parents as significant other. Of the two student-driven components that emerged, one was solely involved with discussing transferring schools with parents while the other involved a multitude of interactions with parents. I chose to let the component that covered a multitude of interactions with parents represent parental involvement, as I believed this best specified the theoretical intent of the variable. I then added the variables together according and called it Parental Involvement.

The composite variable Parental Involvement includes the variables: how often discusses school courses with parents, how often discusses school activities with parents, how often discusses classes with parents, how often discusses grades with parents, how often discusses test prep with parents, how often discusses college with parents, how often discusses current events with parents, and how often discusses troubling things with parents. Means substitution was completed before the composite variable was added together as long as the respondent answered at least half of the variables. In this case, the selected data was all part of one grid question and many times one or two of the variables would be missing. No

pattern was observed to cause the missing data in this way (respondent fatigue was expected to be the culprit). All other cases with less than half of the variables completed were set as system missing for the new variable, parental involvement.

Selection and maintenance of parent as significant other has an element of agency involved on the part of both the adolescents and the parent (or parents) in this analysis. Though this is not a typical approach to agency, in these attributes a teenager is making communication choices that delegate the parent as a significant other. The parent is also making active choices to be involved in the teenager's life. This is not a perfect measurement of significant other. To accurately measure if a person is a significant other, the student would have needed to state this directly (i.e., "I view my parent as a significant other."). However, the time spent with the parent, the active choice by both parent and teen to make this time, and the decision to communicate openly make this variable a good proxy measurement for parents as significant other.

Parental Involvement has a value of between -13.04 and 10.23. The lowest number on the scale represents the lowest amount of parental involvement and the highest number represents the highest amount of parental involvement. The standard deviation of the new composite variable is 5.63.

Table 4.1: Factor Analysis- Parental Involvement

Composite Variable	Variables Included	Factor Loading	Eigen Value	N
Parental Involvement **(selected)**	How often discussed school courses with parents	.748	5.142	12,537
	How often discussed school activities with parents	.744		
	How often discuss things studied in class with parents	.737		
	How often discussed grades with parents	.630		
	How often discussed preparation for ACT/SAT with parents	.651		
	How often discussed going to college with parents	.714		
	How often discussed current events with parents	.667		
	How often discussed troubling things with parents	.571		
Parental Involvement representation Option 2- **not selected**	How often parents check whether you have done your homework	.696	1.781	
	How often parents help you with homework	.761		
	How often parents give you privileges for good grades	.720		
	How often parents limit privileges for poor grades	.444		
Parental Involvement representation Option 3- **not selected**	How often parents limit privileges for poor grades	.571	1.129	
	How often parents require you to do work or chores	.653		
	How often parents limit time with TV/video games	.688		
	How often parents limit time with friends on school nights	.761		
Parental Involvement representation Option 4- **not selected**	How often discussed transferring (schools) with parents	.942	1.032	

Factor Analysis: Value Statements

I again used Principal Components Analysis with Varimax rotation to determine my composite variables for values. I first transformed all values statements so that they could be used in factor analysis (i.e., set values other than an actual scale response to SYSMIS). Next, I decided not to fill in SYSMIS data with the mean this time, as it seemed that most students who were missing data had missed filling in all values statements (the whole set) instead of just missing one or two of the questions. This was likely due to inability to participate in the survey during that year. Therefore I chose to exclude cases listwise. This only eliminated approximately 1600 cases, approximately 10% of the sample.

I applied learnings from previous research and theory to determine which values variables I thought would "hang together" as a composite variable. I believed more egoistic and more altruistic values would create two distinct composite variables. I also believed there would be a composite variable related to the importance of work and one related to the importance of family.

Five components emerged in factor analysis and the Eigenvalue of all components was above the 1.0 cutoff, with all factor loadings for each factor all over .5, well over the .42 conservative cutoff. Four of these components aligned with my expectations for composite variables outlined previously. I decided to omit the final component as it included only one variable (i.e., a positive factor loading for importance of living close to parents/relatives). A favorable thing about all of the variables is that they were originally measured on the same scale. Therefore I could simply add them together to form my composite variable and did not need to transform them all into z-scores before adding them. I added the variables together according to the components and called them altruism, egoism, work, and family.

The composite variable "Altruism" includes the values of: importance of helping others in community, importance of working to correct inequalities, importance of being an active/informed citizen, and importance of supporting environmental causes. One variable, importance of being patriotic, was on the cusp of inclusion in this variable with a loading of .426. However, I decided to omit this variable as other loadings were much higher (.65 or above) and theoretically "importance of being patriotic" did not fit as well with a theoretical focus on altruism.

The composite variable Egoism includes the values of: importance of having lots of money, importance of getting away from this area, and importance of having leisure time. The composite variable of "Work" includes: importance of being successful in line of work, importance of being able to find steady work, Importance of being an expert in field of work, importance of getting good education, importance of getting good job. The composite variable Family/Friends includes the following variables: importance of marrying the right person/ having happy family, importance of having strong friendships, and importance of having children.

Altruism has a value of between 4 and 12. Egoism has a value of between 3 and 9. Work has a value of between 5 and 15. Family has a value of between 3 and 9. The lowest number on each scale represents the lowest importance of this value to a person and the highest number represents the highest importance of this value. Data was only included in the composite variable if a value was present for all factors included in that variable.

Table 4.2: Factor Analysis- Values

Composite Variable	Variables Included	Factor Loading	Eigen Value	N
Altruism	Importance of helping others in community	.659	3.607	14,551
	Importance of working to correct inequalities	.717		
	Importance of being an active/informed citizen	.716		
	Importance of supporting environmental causes	.777		
Egoism	Importance of having lots of money	.614	1.212	14,663
	Importance of getting away from this area	.636		
	Importance of having leisure time	.591		
Family/friends	Importance of marrying the right person/ having happy family	.752	1.568	14,610
	Importance of having strong friendships	.601		
	Importance of having children	.712		
Work	Importance of being successful in line of work	.677	1.822	14,716
	Importance of being able to find steady work	.644		
	Importance of being an expert in field of work	.515		
	Importance of getting good education	.619		
	Importance of getting good job	.766		

Concept Operationalization Limitations

In this study, several limitations occurred in the operationalization of the various concepts being studied. The first limitation I encountered was in the operationalization of television consumption. Television and videos/DVDs were combined into one media content area as a result of the original Education Longitudinal Study of 2002 (ELS: 2002) survey design. However, due to the similarities of these two media channels in format and their similar influence according to previous literature, this was found to be an acceptable limitation in the study design.

Another operationalization limitation was that this study used representations of parental involvement to show that the child views the parent as a significant other. However, there is no direct survey question that pertains to viewing parents as significant others. To accurately measure if a person is a significant other, the student would have needed to state this directly (i.e., "I view my parent as a significant other."). Therefore this data is not as strong as it could be in support of a significant other sociological social psychology perspective. I did focus the composite variable on the more student-driven actions of parental involvement and thus the student is delegating time and effort to communicate with parents. This is not a perfect operationalization of the concept, but should be a close proxy for viewing parent as significant other.

Analytic Strategy and Hypotheses

As mentioned previously, I analyzed the latest data set of the nationally representative ELS:2002 study (third wave completed in 2006) completed by the National Center for Education Statistics (NCES). I completed ordinary least squares regression technique (OLS regression) and binary logistic regression in my analysis. I regressed various exogenous variables such as race, socioeconomic class, gender, family structure and urbanicity on quantity of media consumption in 2002. Next I regressed quantity of media consumption in 2002 (i.e., hours or frequency of watching tv/videos/DVDs, playing video games, and accessing the internet) on various value statements in 2004 and on various behaviors in 2006. This helped to determine what factors affected media consumption and if high level media users were more likely to

adopt egoistic values and less likely to complete altruistic behaviors than low level media users. I also controlled for change in media consumption between 2002 and 2004 in this model.

The chapters of my analysis are as described below:

Chapter 5: Factors Affecting Adolescents' Media Consumption

Chapter 6: Media's Effect on Adolescents' Values

Chapter 7: Media's Effect on Adolescents' Behaviors

Based on my topic of study and concepts, I examined the variables outlined on the tables in the following pages in my analysis. Again, all responses that were coded as missing due to partial or incomplete interviews, skipped, refused, or "don't know" responses were recoded as system missing.

Table 4.3: Final Media Variables

Variable	Scale	Mean	N
Hours/week spent watching TV/videos/DVDs in 2002	0-42 hours per week (continuous variable)	22.84	14,002
Hours/week played video/computer games in 2002	0-42 hours per week (continuous variable)	8.95	13,979
How often used computer for fun in 2002, for families who have a computer with access to the internet	1 Never 2 Rarely 3 Less than once a week 4 Once or twice a week 5 Everyday or almost everyday	N/A	10,340
Change in Hours/week spent watching TV/videos/DVDs from 2002-2004	-35 to +42 hours per week (continuous variable)	3.83	12,573
Change in Hours/week played video/computer games from 2002-2004	-35 to +42 hours per week (continuous variable)	5.23	12,585
Change in how often used computer for fun for families who have a computer with access to the internet from 2002-2004	-4 to +3 units (continuous variable)	-1.16	7,386

Table 4.4: Final Values Variables (2004)

Variable	Scale	Mean	N
Altruism	4-12 (continuous variable)	8.74	14,551
Egoism	3-9 (continuous variable)	6.59	14,663
Friends/Family	3-9 (continuous variable)	7.95	14,716
Work	5-15 (continuous variable)	14.27	14,610

These composite variables were created through factor analysis and include a variety of variables representing values as discussed previously. The lowest number on each scale equals the least importance of this variable and the highest number equals the highest importance of this variable to the respondent.

Table 4.5: Final Behavioral Variables (2006)

Variable	Scale	Mean	N
Whether has ever attended a postsecondary institution	0 No 1 Yes	N/A	14,039
Marital status (recoded)	0 Not married 1 Married	N/A	13,953
Whether has biological children	0 No 1 Yes	N/A	14,028
Frequency of volunteer service in past 2 years	1 Less than once a month 2 At least once a month, but not weekly 3 At least once a week	N/A	14,181
Held job after high school	0 No 1 Yes	N/A	14,039

Table 4.6: Final Parental Involvement Variables (2002)

Variable	Scale	Mean	N
Parental Involvement (2002)	-13.04 to +10.23 (continuous variable)	-.100	12,537
Lives with Parents (2006)	0 No 1 Yes	N/A	14,008

The composite variable below represents Parental Involvement in Child's Life (2002), with the lowest number on the scale representing the lowest amount of involvement in a child's life and the highest number on the scale representing the highest amount of involvement in a child's life. Living with parents in 2006 is also introduced in the analysis in Chapter 7.

Table 4.7: Final Exogenous Explanatory Variables

Variable	Scale	Mean	N
Family composition (recoded)	0 All other family compositions other than 2 parent mother and father 1 2 parent mother and father	N/A	15,325
Number of siblings	0 1 2 3 4 5 6 or more	2.30	12,411
Sex	0 Male 1 Female	N/A	15,370
Socio-economic status	Continuous from -2.11 to 1.98	0.04	15,244
Student's race/ethnicity (recoded as Asian, Hispanic, Black or African American, and White)	Binary recoded variable where 1 indicates presence of either Asian, Hispanic, Black or African American and 0 indicates lack of presence, omitted variable = White	N/A	14,379
School urbanicity (recoded as Urban, Rural, and Suburban)	Binary recoded variable where 1 indicates presence of either Urban or Suburban and 0 indicates lack of presence, omitted variable = Rural	N/A	16,197
School Region (recoded as Northeast, Midwest, South, and West)	Binary recoded variable where 1 indicates presence of either Northeast, Midwest, or West and 0 indicates lack of presence, omitted variable = South	N/A	16,197

In Chapter Five, I completed OLS regression to first determine what factors affect a teenager's media consumption. Concepts such as race, gender, socioeconomic class, family structure, urbanicity, and parental involvement were operationalized by using the ELS:02 variables. All of these variables were then investigated as potential predictors of media consumption. My hypotheses in this chapter include:

Hypothesis 1: Exogenous variables including race, gender, family structure, socioeconomic class, and urbanicity will significantly explain some of the variance in adolescents' levels of media consumption. Detailed sub-components of this hypothesis and reasons why I expect each subcomponent to be supported are outlined here.

Hypothesis 1A: With regard to race, Black adolescents are expected to consume more television compared to their white peers, as supported by the work of Lowry, Wechsler, Galuska, Fulton, and Kann (Lowry et al. 2002). White adolescents are expected to consume more internet compared to their peers of other races as found by Cleary, Pierce, and Trauth, and also supported by Calvert, Rideout, Woolard, Barr, and Strouse and Pardun and Scott (Cleary et al. 2006, Calvert et al. 2005, Pardun and Scott 2004).

Hypothesis 1B: With regard to gender, Male adolescents are expected to consume more video game media than Female adolescents as maintained in the work of Willoughby (Willoughby 2008).

Hypothesis 1C: With regard to family structure, adolescents from non-"traditional" families (e.g., single parent families) are expected to consume more of all types of media than those from two parent families according to the need satisfaction perspective (Krosnick et al 2003).

Hypothesis 1D: With regard to socioeconomic class, internet media consumption is expected to increase as SES status rises as again found by Cleary, Pierce, and Trauth, and supported by Calvert, Rideout, Woolard, Barr, and Strouse and Pardun and Scott (Cleary et al. 2006, Calvert et al. 2005, Pardun and Scott 2004).

Hypothesis 1E: With regard to urbanicity, urban and suburban adolescents are expected to consume less of all media types compared to rural adolescents, but particularly less internet

media as supported by the need satisfaction perspective and found by Cleary, Pierce, and Trauth (Cleary et al. 2006, Krosnick et al 2003).

Hypothesis 2A: According to need satisfaction perspective and previous research by Warren, Gerke, and Kelly and supported in the work by Warr, parental involvement will significantly explain some of the variance in adolescents' levels of media consumption, with higher parental involvement decreasing adolescents' media consumption (Krosnick et al 2003, Warren et al 2002, Warr 1993).

Hypothesis 2B: Including parental involvement will reduce the initial effects of all other variables and it will specifically reduce the effect of family structure on media consumption to non-significance. This hypothesis is guided by the work of Warren, Gerke, and Kelly, Nathanson, Real, Kellner, Warr and Potter (Warren et al 2002, Nathanson 2001, Real 1996, Kellner 1995, Warr 1993, Potter 1990).

In Chapter Six, I again completed OLS regression to investigate how media consumption affects value formation and how this may be mediated by other relationships (i.e., Mediated Valueflection). I examined various values that may be important to teenagers as suggested by previous literature, including both egoistic values (e.g., making money), altruistic values (e.g., helping others in your community), and values such as family/friend relationships and importance of work. I explored how media consumption in the earlier high school years affects later value importance. I also examined if exogenous variables such as race, gender, socioeconomic class, family structure, urbanicity and parental involvement account for some of the potential effect of media consumption on value formation.

I controlled for changes in media consumption between 2002 and 2004 to account for effects of dramatic increases or reductions in media consumption over these years. My hypotheses for this chapter are listed below. Hypotheses 3 A and B are supported by the theoretical work of Van Gorp, Grindstaff and Turrow, Carragee and Roefs, Radford, Sontag, Zerubavel, Kosicki and Gamson, Croteau, Hoynes and Sasson (Van Gorp B. 2007, Grindstaff and Turow 2006, Carragee and Roefs 2004, Radford 2003; Sontag 2003; Zerubavel 1997, Kosicki 1993, Gamson et al 1992). Hypotheses 4 and 5 are supported through the synthesis of structural and agentic focused theory and research discussed previously which provides the

basis for the theory of Mediated Valueflection (Warren et al 2002, Nathanson 2001, Real 1996, Kellner 1995, Warr 1993, Potter 1990).

Hypothesis 3A: As supported in previous framing research and theory, consumption of all media types (i.e., TV/videos/DVD, video games, and internet) in 2002 will significantly and negatively predict adoption and maintenance of altruistic values in 2004 when no control variables are in place (Van Gorp B. 2007, Grindstaff and Turow 2006, Carragee and Roefs 2004, Radford 2003; Sontag 2003; Zerubavel 1997, Kosicki 1993, Gamson et al 1992).

Hypothesis 3B: As supported in previous framing research and theory, consumption of all media types (i.e., TV/videos/DVD, video games, and internet) in 2002 will significantly and positively predict adoption and maintenance of egoistic values in 2004 when no control variables are in place (Van Gorp B. 2007, Grindstaff and Turow 2006, Carragee and Roefs 2004, Radford 2003; Sontag 2003; Zerubavel 1997, Kosicki 1993, Gamson et al 1992).

Hypothesis 4: According to Mediated Valueflection theory, all initially significant effects of media on values will be reduced upon introduction of exogenous variables including race, gender, socioeconomic class, family structure, urbanicity, and region (Warren et al 2002, Nathanson 2001, Real 1996, Kellner 1995, Warr 1993, Potter 1990).

Hypothesis 5: Again, according to Mediated Valueflection theory, all initially significant effects of media on values will be reduced to non-significance upon introduction of the control variable, parental involvement in 2002 (Warren et al 2002, Nathanson 2001, Real 1996, Kellner 1995, Warr 1993, Potter 1990). (e.g., Increased parental involvement will negate media's influence on development of egoistic values).

In Chapter Seven, I completed both OLS regression and binary logistic regression to determine how media consumption affects future behaviors. Behaviors including volunteerism and gaining an advanced education were examined. Stated values and other variables were also researched as potential mediators of media's influence. Propensity to complete altruistic behaviors such as volunteerism should

be partially explained by altruistic value adoption according to previous literature. My hypotheses for this chapter include the following:

Hypothesis 6: Higher levels of all three types of media consumption in 2002 will have a significantly negative predictive influence on subsequent altruistic behaviors in 2006 (i.e., volunteerism) when no control variables are in place as suggested by previous framing research and theory (Van Gorp B. 2007, Grindstaff and Turow 2006, Carragee and Roefs 2004, Radford 2003; Sontag 2003; Zerubavel 1997, Kosicki 1993).

Hypothesis 7: Negative impact of media consumption on volunteerism will be reduced upon introduction of exogenous variables including race, socioeconomic class, family structure, urbanicity, and gender according to previous structural and exogenous variable research findings (Willoughby 2008, Cleary et al. 2006, Calvert et al. 2005, Pardun and Scott 2004, Krosnick et al 2003).

Hypothesis 8: Again, according to Mediated Valueflection theory, negative impact of media consumption on volunteerism will be reduced to non-significance upon introduction of parental involvement (in 2002) and values (in 2004) (Warren et al 2002, Nathanson 2001, Real 1996, Kellner 1995, Warr 1993, Potter 1990).

The longitudinal nature of my regression analyses will investigate if increased media consumption is causing a shift away from altruistic values and toward egoistic values (e.g., importance of leisure time over importance of getting a good education) and also away from altruistic values and behaviors (e.g., volunteerism). I will also investigate, if parents then have the ability to reduce this impact. Longitudinal design allows for inferences about causality that cross sectional design that rely mainly on correlation analysis can not. Aside from the analyses mentioned, I may also examine interaction effects if supported by previous literature.

Strengths of the Study Design

The major strength of this study is that it adds new insight to the current body of work on media influence by creating and testing a new theoretical perspective. This work moves beyond a focus on specific behaviors or attitudes and examines creation and maintenance of an overall system of values. By

completing a longitudinal based regression, media consumption behavior (e.g., viewing television/movies) can also be tied to development of a system of values and eventual behaviors (through quantitative research). This is something that has not been definitively examined due to the limitations of cross-sectional studies. The longitudinal design enables the research to provide inferences about causality.

As another major strength of this work, this study examines explanatory variables previously neglected in other research. Explanations for media consumption as well as explanations for values are investigated through multivariate analysis that looks at competing structural explanations. The independent effect of parental involvement is also introduced, which had previously been absent in the majority of media effects studies.

An additional important aspect of this research is that the ELS data set is a probability sample which can be generalized to the national sample of tenth (2002 wave), twelfth grade (2004 wave), and two years post-high school (2006 wave) students, respectively. Studies completed in this realm previously were either qualitative in nature or they were small-scale quantitative studies which focused on localized or regionalized samples. Thus study pushes beyond these limitations and can be looked at on a national level.

In summary, my work adds to the field by addressing the deficiencies listed in the previous literature summary while testing new theory. I examine a nationally representative sample, use longitudinal data, control for theoretically explanatory variables, and empirically investigate how media affects adolescents' values and behaviors. Longitudinal design allows for inferences about causality that cross sectional design that rely mainly on correlation analysis can not. Additionally, multivariate analysis will account for spuriousness and the effects of various exogenous variables. I feel that this work is invaluable as the debate continues on how media affects adolescents.

Institutional Review Board Approval

The Internal Review Board (IRB) has reviewed the research plan for this dissertation even though I am using a secondary data source. The ELS study obtained all necessary approvals from participants

beforehand and informed them of what information would be collected, how the data would be used, and how their identity would remain confidential. The IRB has approved for this research to proceed.

Research Design Summary

The findings of my study explore the relationships between mass media, teenagers and systems of values. The completed regression models determine actual strength and direction of media influence on a teenagers' system of values and eventual behaviors. The study also determines if parental influence and other structural explanations help to mediate the media's effect on values and behaviors. This study therefore empirically tests the theory of Mediated Valueflection.

The previous body of research regarding media influence has not been able to adequately address this topic because of several reasons. Previous studies were limited in scope and not generalizable, they primarily used cross-sectional data instead of gaining deeper understanding of causality through longitudinal data, they failed to use appropriate explanatory/control variables, and they looked mainly at media's influence on deviant behaviors instead of value creation as a whole. This study thus adds to and improves the body of research available by covering all of these previously unaddressed issues while testing new theory.

CHAPTER 5.

FACTORS AFFECTING ADOLESCENTS' MEDIA CONSUMPTION

In this stage of analysis, I examined the ordinary least squares linear regression of frequency of various levels of media consumption on structural, demographic, and agentic (i.e., parents as significant other) variables. Through this analysis, I hoped to uncover explanations for variance in levels of media consumption. I believe this issue is an important first step to understanding why adolescents display various consumption levels and also in understanding adolescents' overall relationship with media. From a structural perspective, I expect various groups to differ in media consumption levels according to the hypotheses stated previously. I also expect parental involvement (as significant others) to mediate the importance of these structural and demographic variables. By achieving a greater understanding of variance in media diet for different groups of adolescents, parents, teachers, and policy makers can better understand which groups of adolescents are susceptible to the highest levels of media consumption and work to better reconcile any potentially negative effects of media.

I examined three media consumption types: hours watching television/videos/DVDs per week, hours playing video games per week, and frequency of using the computer for fun in homes where the teenager has internet access. All variables were measured in the initial wave of the ELS study, 2002. I regressed all media consumption variables on structural and demographic measures captured in 2002, including gender, race, family structure, socioeconomic status, urbanicity, and region. I also regressed the media consumption variables on parental involvement. Results of the analyses completed in this stage may be found at the end of the chapter in Tables 5.1, 5.2, and 5.3 and are discussed below.

Analysis and Findings

Demographic Effects: Race/Ethnicity

All of the results discussed below for demographic and structural effects are based on Model One in each of the tables at the end of the chapter. Model One did not include parental involvement. This model was selected as a focus of analysis in order to better understand the influence of these variables before parental involvement was taken into account.

With regard to race, I expected black adolescents to consume more television than their white peers, according to Hypothesis 1A and based on the previous findings of Lowry, Wechsler, Galuska, Fulton and Kann and Pardun and Scott (Lowry et al. 2002, Pardun and Scott 2004). The results supported this hypothesis. In fact, all adolescents of other races and ethnicities consumed significantly more television than their white peers. Examining the results in Table 5.1, Model One, black adolescents watched the most television compared to whites. Black adolescents viewed almost 5.41 more hours of television per week compared to their white peers. Hispanics watched only 1.98 hours than their white peers and Asians only .326 hours (approximately 20 minutes) more than whites.

When it came to video games, there was little prior research to guide formal hypotheses. My thought was that these consumption results might be closer for the different races, as video games are more elite cost wise than television, but widely viewed as less culturally elite than internet due to the subject matter of many video games (e.g., war, fighting, violence). I found that black adolescents again consumed significantly more of this media than whites, as seen in Table 5.2, Model One. Blacks played video games 1.6 more hours per week in comparison to whites. Hispanics played only .165 more hours (approximately 10 minutes) more than whites and Asians actually played .356 (or just over 20 minutes) less than whites per week.

Results for internet usage were also generally supportive of Hypothesis 1A and the previous work of Cleary, Pierce, and Trauth, Calvert, Rideout, Woolard, Barr, and Strouse and Pardun and Scott (Cleary et al. 2006, Calvert et al. 2005, Pardun and Scott 2004). As a reminder, the base for this analysis included students in households that owned a home computer with internet access (i.e., the analysis was limited to look at these homes and adolescents only). Examining Table 5.3, Model One, whites did use the computer significantly more often for fun in homes where there is internet access compared to their peers of other races, except for their Asian peers. Whites scored .359 units higher than blacks and .244 units higher than Hispanics on the 1-5 usage scale. Asians were the only racial group to use the computer slightly more often than whites for this purpose (.034 units more on the scale).

Previous research in this area concentrated on whites usage primarily compared to their Black and Hispanic peers. Therefore these findings give new insight to how Asian teenagers may use the internet compared to their white peers. Though not a strong increase on the five point measurement scale (B= .034), Asians did display a statistically significant difference from whites that was higher at the 99.9% confidence interval.

The above results occurred even though I controlled for other structural and exogenous variables including socioeconomic class and family composition. There may be cultural consumption of media occurring here among the different races. Previous research has found that black adolescents rate the importance of both watching television and playing video games higher than their white peers, while whites rate being online as significantly more important than blacks (Pardun and Scott 2004). Black adolescents may also be allowed to watch television in an unrestricted way while white adolescents would be encouraged by parents to go online to read about topics that interest them.

Demographic Effects: Gender

With regard to gender, male adolescents were expected to consume more video game media than female adolescents according to Hypothesis 1B, but I did not expect to see differences in television or internet consumption. I expected these results due to previous research in the area and also because the majority of video games are gendered according to stereotypical male interests (e.g., fighting, war, violence). This hypothesis as related to video games was strongly supported in the analysis completed. Examining Table 5.2, Model One, it was found that males play video games 9.231 hours more per week on average compared to their female counterparts.

In relation to gender, I additionally found that males actually used all forms of media significantly more often than their female counterparts (not just video games as supported in previous research findings). Males watched television 1.292 more hours per week compared to females and used the internet .072 units more than females on a 1-5 point usage scale. Though small in comparison to the difference observed for video games, these differences were statistically significant.

One interpretation of these findings is related to the division of labor amongst teenagers according to gender. Although it has long been supported that the division of labor in households is not equal and that females bear the greater burden of routine household chores, research over the past few decades supports that this is also true amongst teenagers. Young women complete more household work than young men and also complete more work that is gendered as stereotypically "women's work" (Blair 1992). Because adolescent males are engaged in lower levels of routine household labor, they concurrently have more time to partake in media consumption for personal enjoyment.

That said, I feel that one limitation of this research is that the data set did not measure consumption of print media in detail. I wonder if I might observe the opposite gender effect by media type when comparing television, video games, and internet to books and magazines. There are many more "women's interest" magazines than male targeted magazines and most books directed at a teenage audience are targeted to young girls. Thus I believe an inverse gender effect may have occurred when examining this media type. The study did ask about reading 3 or more hours per week (not for school). Analysis of this variable in the 2004 data set showed that females were more likely to agree with this statement (36% said they completed this behavior) versus males (31.5% said they completed this behavior). This finding of media "gendering" appears to support the structural effects of media, though it can not be examined in detail due to the inability to determine what media type was consumed (e.g., women's magazines, teenage targeted books, newspapers, online information).

Structural Effects: Family Structure

With regard to family structure, adolescents from non-"traditional" families (e.g., single parent families) were expected to consume more of all types of media than those from two parent families according to Hypothesis 1C. This hypothesis was only partially supported. In Model One in Tables 5.1 and 5.2, teenagers in "traditional" two-parent mother/father homes did consume less television (1.15 hours per week) and play less video games (.422 hours per week) compared to those from other types of families. However, according to Table 5.3, Model One, these teenagers with a "traditional" family structure actually used the computer/internet for fun more often than those with other types of family

compositions. This could mean that the internet is filling more complex needs (e.g., education, communication, researching and applying for colleges) than simple entertainment.

In another aspect of family composition, for each additional sibling in the household, an adolescent watches television .273 hours less (Table 5.1, Model One), plays video games .043 hours less (Table 5.2, Model One), and uses the internet .024 units less (Table 5.3, Model One). This is likely due to shared resources among a greater number of users. Downey's research findings support that resource dilution occurs in homes where there are a greater number of siblings and resources are finite (Downey 2001). Siblings appear to be competitors for not only financial resources, but also current possessions.

When examining the family structure effects of various media types, specifically the effects of parental structure, one interpretation could be that the internet appears to fill slightly different and more complex socialization (and other) needs for teenagers compared to the media of television and video games. This is due to the additional capabilities of the internet outside of entertainment, such as education, research, and communication. The two way interactions available through the internet also provide a more user driven and agentic experience. Thus, those in two-parent homes may very well be using the internet for different purposes than those in single parent homes. One unfortunate limitation of this research is the inability to know exactly what kind of content users are accessing through each media channel.

Structural Effects: Socioeconomic Class

With regard to socioeconomic class, in Hypothesis 1D I expected internet media consumption to increase as SES status rose. This hypothesis was guided by the findings of Cleary, Pierce, and Trauth, and supported by Calvert, Rideout, Woolard, Barr, and Strouse and Pardun and Scott (Cleary et al. 2006, Calvert et al. 2005, Pardun and Scott 2004). This hypothesis was supported. In Table 5.3, Model One, I found that for every one unit increase in SES, frequency of computer use for fun in homes with internet goes up .095 on the 1-5 scale. I found this especially interesting as this was already taking into consideration that these households were high enough in SES to own a home computer with internet access (the analysis was limited to look at these homes and adolescents only).

Socioeconomic effects were also observed when it came to television viewing and video game play. Television viewing, the least expensive media consumption option, actually decreased by 1.705 hours per week for every one standard deviation increase in SES. Video game play, the middle option in terms of cost investment, also decreased by 1.159 hours per week for every one standard deviation increase in SES.

As television is the most widely accessible form of the media examined, it could also be viewed as the least socially elite. On the opposite side of the spectrum, internet could be considered the most socially elite media. This support Veblen's "Conspicuous Consumption" theory where those of higher cultural class would be taught to avoid consuming lower class products and services and is also related to Bourdieu's theory of "cultural capital" (Veblen 1899, Bourdieu 1984). Therefore, aside from the actual cost implications of using each media, this finding may also support a class consumption mentality of media (Veblen 1899, Bourdieu 1984).

Structural Effects: Urbanicity

With regard to urbanicity, urban and suburban adolescents were expected to consume less of all media compared with rural adolescents according to Hypothesis 1E. This hypothesis was guided by previous research showing the digital divide is influenced by geography and that rural adolescents tend to consume internet at higher rates than those who live in central city urban areas (Cleary et al. 2006). This hypothesis was also guided by the need satisfaction perspective which would support rural adolescents use media for socialization needs when peers are not readily available. This hypothesis was generally supported. Urban and suburban adolescents watched less television media compared to rural adolescents, as seen in Table 5.1, Model One. Urban adolescents viewed .396 less hours per week and suburban adolescents .718 less per week compared to rural adolescents.

Urban adolescents also played less video games per week than their rural counterparts (.061 less hours per week) as seen in Table 5.2, Model One. Suburban adolescents did actually play more video games than rural adolescents, at .321 more hours per week (about 20 minutes). However, when it came to internet media, rural adolescents were again the highest frequency users of the media in homes with

internet access according to Table 5.3, Model One. Rural adolescents were .018 units higher than urban adolescents and .014 units higher than suburban adolescents on this scale.

These results were not surprising. Television is the most widely accessible of these three options and internet use was only measured in homes where internet access was available. According to the need satisfaction perspective, geographically isolated adolescents with these media resources on hand would theoretically be more likely to reach out for socialization needs through the media when more traditional outlets (i.e., close friends living nearby) are unavailable (Krosnick et al 2003). For example, an adolescent living in a rural farming community may live miles from his or her friends and not be old enough to drive and visit them. Additionally, he or she would hypothetically have less recreation and entertainment options close by. Therefore, this child would turn instead to television, video games, or the internet for socialization needs if these media channels are readily available. An inner city adolescent likely has friends his or her own age living in the same block, if not in the same building, and can more easily turn to his or her peers for socialization needs. The results found appear to support this perspective.

Structural Effects: Region

Though I had no specified hypotheses related to region, I examined this variable as a potential predictor of media consumption to expand the body of knowledge on this topic. I believed that these variables would be important controls as different norms could exist related to media according to different cultural attitudes by geography. I found that adolescents in the West and Northeast watch less television that those in the South (.265 and .862 hours per week respectively), while adolescents in the Midwest watched .376 more hours of television per week compared to those in the South. Additionally, those in the South play more video games than those in the Northeast and Midwest (.356 and .439 hours respectively), but less video games than those in the West (.386 hours less). Finally those in the South used the internet less than those in the Northeast and Midwest (.125 and .022 lower on the 5 point measurement scale), but more than those in the West (.104 higher on the 5 point scale).

In summary, those in the Midwest watched the most television, those in the West played the most video games, and those in the Northeast used the internet the most. I believe these effects may have been

caused by cultural aspects within each region. As mentioned before, I believe that a theme of cultural capital appears to exist by media type, with television as the least culturally elite and internet as the most culturally elite media. Therefore, those in the Northeast would be seen as displaying the highest cultural capital with the least amount of television consumption and highest amount of internet consumption.

Significant Other Effects: Parental Involvement

According to Hypothesis 2A, which was guided by the need satisfaction perspective, parental involvement was expected to significantly explain some of the variance in adolescents' levels of media consumption across all media types (thus increasing the R-squared value when added to each Model). It was also expected that higher parental involvement would decrease adolescents' media consumption overall, no matter the type of media. This hypothesis was partially supported.

Parental involvement did significantly explain some of the variance in adolescents' levels of media consumption and the R-squared values for all models increased significantly (according to an applied F-test) upon inclusion of this variable. The predictive power of Table 5.1, Model Two regarding television consumption increased 3.92% compared to Model One in the same table, (an associated F change of 4860.458) which was a significant increase at the 99.9% confidence interval. The predictive power of Table 5.2, Model Two increased 2.22% compared to Model One in the same table, (an associated F change of 9840.429) which was also a significant increase at the 99.9% confidence interval. Finally, the predictive power of Table 5.3, Model Two increased 8.7% compared to Model One in the same table, (an associated F change of 7151.973) which was again a significant increase at the 99.9% confidence interval.[1]

For the television and video game media types, according to Tables 5.1 and 5.2, Model Two, increased parental involvement did decrease adolescents' media consumption by .110 hours of television and .133 hours of video game play per week for each one unit increase in parental involvement. As

[1] Throughout this chapter and in later chapters, the F-test generally shows significant increases between models even though the actual R-squared change appears to be small. This is because each model adds fewer and fewer variables and the F change is measured in relation to the number of variables which were added. If only one variable is added, the change in F can be quite small, but still statistically significant.

parental involvement runs on scale from approximately -13 to 10, this can lead to substantial increases or decreases in media consumption. This supports prior research on this topic which found that when parents are significant others they can mediate the effects of mass media (as the generalized other) and other significant others (Krosnick et al 2003, Warren et al 2002, Warr 1993). However, this direction of influence did not hold true when it came to internet. In this scenario, parental involvement had an additive effect, not a mediating effect. Regarding internet media usage, according to Table 5.3, Model Two, a one unit increase in parental involvement actually increased frequency of computer use for fun in homes with internet access by .012 units. Although not a substantial amount, this was statistically significant.

In Hypothesis 2B, it was hypothesized that including parental involvement would reduce the initial effects of family structure on all media usage types to non-significance. Hypothesis 2B was only partially supported. Parental involvement did slightly reduce the effect of family structure according to Tables 5.1, 5.2 and 5.3, Model 2 for television (decreased effect of family structure by 4.78%), video games (decreased effect of family structure the most, by 17.06%) and internet (decreased effect of family structure by 5.66%). However, it did not reduce it to non-significance in any of these models.

Controlling for parental involvement also increased the effect of other structural and exogenous variables in some cases where I had expected it to control for some of these effects. For example, introducing parental involvement in Table 5.1, Model Two increased the effects on hours of television consumption for number of siblings by 6.6% (for each additional sibling) and for Northeast and West regionality by 6.5% and 7.9%, respectively. In Table 5.2, Model Two, parental involvement increased the effect of being Black by 5.5%, being Asian by 23.9%, number of siblings by 55.8% (for each additional sibling) and living in the Northeast and Midwest by 19.4% and 18.5% respectively. In Table 5.3, Model Two, it increased the effect of being Asian by 32.4%, being female by 23.6%, living in an urban area by 22.2% and living in the Northeast and Midwest by 5.6% and 40.9% respectively.

Many of these variables still did not have an extremely substantial effect on media consumption when standing alone after their increase, though all resulting effects were statistically significant. For all

other variables, the addition of parental involvement did either control for some of their influence as expected or did not effect any change in their strength of influence. For most variables there was some kind of change though (either controlling or amplifying), thus resulting in the observed increase in R-squared for all models which was statistically significant at a 99.9% confidence interval. These results confirmed that parental involvement is a necessary addition in the model, but that it does not work in a unidirectional way for all structural and exogenous variables as I had expected. Therefore Hypothesis 2A was supported, but Hypothesis 2B had minimal support.

Discussion

My original hypothesis regarding structural effects on media consumption (Hypothesis 1) was generally supported. Exogenous and structural variables including race, socioeconomic class, gender, urbanicity, region, and family structure did significantly explain some of the variance in adolescents' levels of media consumption. For example, black males who are only children from rural Midwest areas with low socioeconomic status (2 standard deviations lower than average) and a single parent with low parental involvement (two standard deviations or 11.26 units lower than average) would be expected to watch the most television at just under 35 hours per week. Caucasian females with three siblings from suburban areas in the Northeast with high socioeconomic status (two standard deviations higher than average) and a traditional mother/father family with high parental involvement (one standard deviation or 5.63 units higher than average) would be expected to watch television less than half that amount of time each week, approximately16 hours per week.

It appeared that there was also an undercurrent of cultural capital and associated consumption that ran through the media types and differentiated use of each. Usage of each media type appears to possess inherent status for users. As already discussed, television consumption was highly affected by socioeconomic status and other factors, with the highest amounts consumed by users with the lowest cultural capital. Internet use, however, was exactly the opposite. For example, Black females, with low socioeconomic status (two standard deviations below the average), in urban areas in the West, a single parent and three siblings, and with low parental involvement (two standard deviations below the average)

would rate 3.5 on the 1-5 scale regarding internet consumption. However, Caucasian males with high socioeconomic status (two standard deviations above the average), living in suburban areas in the Northeast, with no siblings, a traditional mother/father family structure and high parental involvement (one standard deviation above the average) will score a 4.9 on the internet consumption scale.

Of the three media types examined, television appeared to garner the lowest cultural capital and the internet seemed to be associated with the highest cultural capital of the three. This is supported by multiple research efforts that show a "digital divide" among racial and socioeconomic groups which causes the internet to remain an "elite" media (Roberts and Foehr 2008, Eamon 2004). Much of this effect is associated to the cost of consuming each type of media. However, there is also a difference in the qualitative subject matter displayed in each media type which supports the cultural differences in media consumption even when internet is accessible to those of lower socioeconomic status. Television and video games are primarily used for entertainment, while the internet may be used for entertainment, communication and education among other reasons. It will be interesting to look at the differences in these media types on values and behaviors now that this context is apparent.

My initial hypotheses regarding significant other effects on media consumption (Hypothesis 2A and B) were partially supported, with Hypothesis 2A acquiring more support than Hypothesis 2B. Higher levels of parental involvement did appear to decrease television and video game media consumption. Again though, internet use appeared to be different than the other media types, with increased parental involvement actually increasing internet usage. When it comes to content delivery in each media, the internet certainly is differentiated through its more social applications (e.g., email, social networking sites, etc). Additionally, as mentioned before, the internet has more of a mixed focus on education and entertainment versus television and video games which are primarily centered on entertainment.

Because of these factors, one interpretation of the data would be that a general perception exists (among both adolescents and their parents) that the internet is less harmful and perhaps even beneficial to adolescents' value formation in comparison to television and video games. This is supported by studies that show parents actively co-use the internet with their children to mediate risk of unwanted exposure

(e.g., to violent or sexual acts) when children are younger, but conversely they simply restrict viewing time for television. With the internet, mediation also decreases as the child increases in age and parents increasingly trust their child's navigation abilities to locate and use trusted content (e.g., educational content) (Livingstone and Helsper 2008).

It should be noted that the R-squared values of all final models were, at the highest, .184 (in Table 5.2, Model 2). This means that the model effectively explained 18.4% of the variation from the mean in an adolescent's frequency of playing video games. Therefore, over 80% of the variance in this behavior is not explained by these variables. The models predicting television and internet consumption were far lower in R-squared value, predicting only around 5% of variance from the mean. It appears that there are many influences on media use which are not controlled for in this analysis. Some of these variables could include available "free time," peer influences and familial norms (i.e., if the family typically uses media either together or independently or does other activities instead), which were unfortunately not measured in the Educational Longitudinal Study. Even with these limitations, this analysis does help to explain some of the factors which differentiate media use among adolescents.

Table 5.1: Unstandardized and Standardized Coefficients from the Ordinary Least Squares Linear Regression of Hours Watching TV/Videos/DVD in 2002 on Gender, Race, Family Structure, Socioeconomic Status, Urbanicity, Region and Parental Involvement. Educational Longitudinal Study (2002) (N=14,002).
Key: B*** (S.E)
(Beta)

	Hours per Week Watching TV/Videos/DVD in 2002	
	Model 1	***Model 2***
Race *(omitted category=White)*		
Black	5.410*** (.026)	5.474*** (.026)
Hispanic	1.980*** (.025)	1.974*** (.025)
Asian	.326*** (.043)	.258*** (.043)
Gender *(omitted category=Male)*		
Female	-1.292*** (.016)	-1.142*** (.016)
Family Structure		
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*	-1.150*** (.017)	-1.095*** (.017)
Number of Siblings	-.273*** (.005) (-.034)	-.291*** (.005) (-.036)
Socioeconomic Status		
SES2	-1.705*** (.012) (-.103)	-1.542*** (.012) (-.093)
Urbanicity *(Omitted category= Rural)*		
Urban	-.396*** (.024)	-.365*** (.024)
Suburban	-.718*** (.021)	-.728*** (.021)
Region *(Omitted category= South)*		
Northeast	-.862*** (.023)	-.918*** (.023)
Midwest	.376*** (.021)	.310*** (.021)
West	-.265*** (.023)	-.286*** (.023)
Parental Involvement		
Parental Involvement Composite Variable (2002)		-.110*** (.002) (-.047)
Intercept (Constant)	24.502*** (.027)	24.455*** (.027)
R2	.051	.053

* p < .05 ** p < .01 *** p < .001

Table 5.2: Unstandardized and Standardized Coefficients from the Ordinary Least Squares Linear Regression of Hours Playing Video Games in 2002 on Gender, Race, Family Structure, Socioeconomic Status, Urbanicity, Region and Parental Involvement. Educational Longitudinal Study (2002) (N=13,979).
Key: B*** (S.E)
(Beta)

	Hours per Week Playing Video Games in 2002	
	Model 1	***Model 2***
Race *(omitted category=White)*		
Black	1.600*** (.023)	1.688*** (.023)
Hispanic	.165*** (.021)	.160*** (.021)
Asian	-.356*** (.037)	-.441*** (.037)
Gender *(omitted category=Male)*		
Female	-9.231*** (.013)	-9.050*** (.014)
Family Structure		
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*	-.422*** (.015)	-.350*** (.015)
Number of Siblings	-.043*** (.005) (-.006)	-.067*** (.005) (-.009)
Socioeconomic Status		
SES2	-1.159 *** (.010) (-.076)	-.959*** (.010) (-.063)
Urbanicity *(Omitted category= Rural)*		
Urban	-.061** (.020)	-.024 (.020)
Surburban	.321*** (.018)	.311*** (.018)
Region *(Omitted category= South)*		
Northeast	-.356*** (.020)	-.425*** (.020)
Midwest	-.439*** (.018)	-.520*** (.018)
West	.386*** (.019)	.366*** (.019)
Parental Involvement		
Parental Involvement Composite Variable (2002)		-.133*** (.001) (-.062)
Intercept (Constant)	13.795*** (.023)	13.734*** (.023)
R2	.180	.184

* p < .05 ** p < .01 *** p < .001

Table 5.3: Unstandardized and Standardized Coefficients from the Ordinary Least Squares Linear Regression of Frequency of Using Computer for Fun in homes where Teenager has Internet Access in 2002 on Gender, Race, Family Structure, Socioeconomic Status, Urbanicity, Region and Parental Involvement.

Educational Longitudinal Study (2002) (N=10,340).

Key: B*** (S.E)
(Beta)

	Frequency of using Computer for Fun in 2002 in Homes where Teenager has Internet Access	
	Model 1	***Model 2***
Race *(omitted category=White)*		
Black	-.359 *** (.003)	-.368*** (.003)
Hispanic	-.244*** (.002)	-.242*** (.002)
Asian	.034*** (.004)	.045*** (.004)
Gender *(omitted category=Male)*		
Female	-.072*** (.001)	-.089*** (.001)
Family Structure		
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*	.106*** (.002)	.100*** (.002)
Number of Siblings	-.024*** (.001) (-.034)	-.022*** (.001) (-.031)
Socioeconomic Status		
SES2	.095*** (.001) (.068)	.076*** (.001) (.054)
Urbanicity *(Omitted category= Rural)*		
Urban	-.018*** (.002)	-.022*** (.002)
Suburban	-.014*** (.002)	-.012*** (.002)
Region *(Omitted category= South)*		
Northeast	.125*** (.002)	.132*** (.002)
Midwest	.022*** (.002)	.031*** (.002)
West	-.104*** (.002)	-.102*** (.002)
Parental Involvement		
Parental Involvement Composite Variable (2002)		.012*** (.000) (.066)
Intercept (Constant)	4.438*** (.003)	4.443*** (.003)
R2	.046	.050

* p < .05 ** p < .01 *** p < .001

CHAPTER 6.

MEDIA'S EFFECT ON ADOLESCENTS' VALUES

In Chapter Five, analysis supported that media use can vary quite dramatically due to demographic, structural and significant other (i.e., parental involvement) forces. Chapter Six now examines how media use affects the system of values a teenager maintains. This stage of analysis involves the ordinary least squares linear regression of the importance of various values statements (i.e., altruism, egoism, family/friends and work) on media consumption levels, structural, demographic and agentic (i.e., parents as significant others) variables.

This stage of analysis investigates what causes variance in adoption of different values and thus influences a teenagers' system of values. Very little research exists on this topic and this information will greatly enhance the body of knowledge available. This issue is important to understand because although many effects have been attributed to the media related to value creation, there is little empirical evidence supporting these assumptions. The focus on media as a negative force which must be combated may be distracting parents and policy makers from more influential negative influences in a teenager's life.

From a structural perspective, I do expect media to influence the adoption of more egoistic values and detract from more altruistic values when no control variables are in place. However, once control variables are applied (structural and demographic variables and parental involvement), I expect a reduction in the influence of media consumption on value formation and maintenance. By achieving a greater understanding of the factors which really do influence value formation in adolescents, parents, teachers, and policy makers can better focus their efforts on discouraging teenagers' egoistic value formation and maintenance and encouraging altruistic values.

I examined four value statements, which were composite variables created through factor analysis as described previously in Chapter Four. Value statements included Importance of Egoism, Importance of Altruism, Importance of Family/Friends, and Importance of Work. All values variables were measured in second wave of the ELS study, 2004. I regressed all variables on media consumption (i.e., television/videos/DVDs, video games, and internet), structural, demographic and significant other

measures captured in 2002. These structural, demographic and significant other measures included gender, race, family structure, socioeconomic status, urbanicity, region and parental involvement. Results of the analyses completed in this stage may be found at the end of the chapter in Tables 6.1, 6.2, 6.3 and 6.4. Results for each table and associated hypotheses are discussed following the tables.

In this chapter and the next, the findings discussed are longitudinal in nature. Therefore, this analytic design allows for inference about causality that cross sectional data analysis cannot. This is a major advantage of this study compared to previous research in this field.

Analysis and Findings

Media Effects

It was expected that increased levels of media consumption would significantly and negatively affect the adoption and maintenance of altruistic values (Hypothesis 3A). Additionally, increased media consumption was hypothesized to significantly and positively affect the adoption of egoistic values (Hypothesis 3B). These hypotheses were based on previous framing research that suggests media supports unequal power dynamics in society (Grindstaff and Turow 2006, Carragee and Roefs 2004, Gamson et al 1992). Throughout this analysis I will concentrate on the primary effects of media consumption in 2002, not the control variables of change in media from 2002 to 2004. However, it should be noted that the direction of media effects is generally consistent for both media consumption in 2002 and the change of media consumption from 2002 to 2004, which adds to the robustness of these findings.[2]

Hypothesis 3A, regarding media's negative influence on altruism, was found to be supported. According to Table 6.1, Model 1, hours per week of television consumption in 2002 decreases importance of altruism in 2004 by .007 units for every one hour increase in television consumption. Hours per week of video game play decreases importance of altruism in 2004 by .038 units for every one hour increase in playing video games. Finally, increased internet use decreases importance of altruism in 2004 by .025

[2] Two exceptions include video games effect on egoism in Table 6.2, Model 3, and computer use for fun's effect on work valuation in Table 6.4, Model 2.

units for every one unit increase on the 1-5 frequency of internet use scale. Therefore, increased media consumption (of all media types) decreases importance of altruism as a value.

Video game consumption had the strongest negative effect on altruism with a standardized coefficient of -.215 (television was -.044 and internet was -.012). In real world terms (and taking control variables into account), a teenager who is male, white, from a single parent family, with no siblings, average SES, in a rural area in the south, and who used no media in 2002 or 2004 would score 8.633 on the altruism scale in 2004 according to Table 6.1, Model 3. The same child who played 20 hours of video games per week in 2002 and 2004 would score 8.293 on the same scale. Therefore, the child who played video games is approximately 4% less altruistic than the child who played none. Though this change is substantively small, it is significant.

Hypothesis 3B, regarding media's positive influence on egoism, was also supported. According to Table 6.2, Model 1, hours per week of television consumption in 2002 increases importance of egoism in 2004 by .010 units for every one hour increase in television consumption. Hours per week of video game play increases importance of egoism in 2004 by .010 units for every one hour increase in playing video games. Finally, increased internet use increases importance of egoism in 2004 by .064 units for every one unit increase on the 1-5 frequency of internet use scale. Therefore, increased media consumption (of all media types) also increases importance of egoism as a value.

Television consumption had the strongest effect on egoism with a standardized coefficient of .102 (video games was .094 and internet was .050). Taking control variables into account and using the same child described before as an example (male, white, from a single parent family, with no siblings, average SES, in a rural area in the south, and who used no media in 2002 or 2004), he would score 6.286 on the egoism scale according to Table 6.2, Model 3. Now if that same child watched 25 hours of television in 2002 and 2004, he would score 6.486 on the same scale. In other words, he would be just over 3% more egoistic. Again, though a substantively small change, this is statistically significant.

These findings support previous framing theory and research that media consumption reinforces an egoistic society and discourages altruistic values (Grindstaff and Turow 2006, Carragee and Roefs

2004, Gamson et al 1992). Therefore, media tells the viewer it is important to focus on one's own interests and wants and to pay less attention to the larger needs of a society. The hypotheses dealt with media effects when no control variables are in place. However, the direction of media influence did not change after all controls were in place. More will be discussed about how the effect of these variables did change in influence (either reduction or amplification) later in this discussion.

Although I had no specific hypotheses related to the values of family/friends and work, I wished to examine these values in relation to media consumption to add to the body of knowledge on this topic. I felt that media consumption could either positively or negatively affect these values. It could positively affect the value of family and friends by showing many situations where characters interact with and rely upon family and friends and also could support social interaction with family and friends on the internet. It could also negatively affect the value of family and friends if the teenager views many characters making it "on their own" and also chooses to consume media alone instead of interacting with family and friends. It could positively impact the value of work from displaying scenes and information that support a capitalist perspective (Grindstaff and Turow 2006, Carragee and Roefs 2004, Gamson et al 1992). However, it could also negatively impact the value of work by showing that many characters make quite a bit of money without showing the work they do to acquire their fortune and also by taking time away from hours the teenager could be working. Therefore, the changes could either occur due to the medium (i.e., the usage of the media) or the message (i.e., the media content or story) (McLuhan in Durham and Kellner 2006).

According to Table 6.3, Model 1, I found that media consumption displays different effects on the value of family and friends according to type of media consumed. For example, hours per week of television consumption in 2002 increases importance of family/friends in 2004 by .005 units for every one hour increase in television consumption. Increased internet use also increases importance of family/friends in 2004 by .090 units for every one unit increase on the 1-5 frequency of internet use scale. However, hours per week of video game play decreases importance of family/friends in 2004 by .019 units for every one hour increase in playing video games. Direction of these effects is consistent even

once all controls have been applied. Therefore media types appear to have different effects on this value, with television and internet use being more supportive of higher valuation of family and friends. Video games are the only media with a negative effect and also have the strongest effect on valuation of family and friends with a standardized coefficient of -.176 (television has .048 and internet has .073).

When it came to the value of work, I again found that media consumption displays different effects on adoption and maintenance of the value according to type of media consumed. According to Table 6.4, Model 1, hours per week of television consumption in 2002 increases importance of work in 2004 by .007 units for every one hour increase. However, hours per week of video game play decreases importance of work in 2004 by .011 units for every one hour increase. For video games, this finding is true even when all controls are in place (Table 6.4, Model 3). Increased internet use also decreases importance of work in 2004 by .010 units for every one unit increase on the 1-5 frequency of internet use scale. However, this influence is reduced to non-significance once all controls are in place. Video games again have the strongest influence with a standardized coefficient of -.100 (television is .068 and internet is -.008).

Therefore, media types appear to have different effects on the value of work like they did with the value of family and friends. Television appears to be supportive of work value maintenance and video game consumption discourages the value of work. These findings support prior research in relation to television's support for a capitalist society (Grindstaff and Turow 2006, Carragee and Roefs 2004, Gamson et al 1992), but show how video games differ from television and can undermine the importance of this value. Though Gamson et al conclude that "media discourse in the United States… operate(s) in ways that promote apathy, cynicism, and quiescence" it appears that all media are not equal in their effects (Gamson et al 1992, 373). As a result, video game engagement may be seen as a rebellious act to a capitalist view of society, while television supports this view.

Demographic and Structural Effects

It was hypothesized (i.e., Hypothesis 4) that demographics and structural variables would control for much of the effect of media influence on values and thus they were included in the analysis.

However, no specific hypotheses existed related to the original direction of each demographic and structural control that was applied in this analysis, due to the lack of previous findings related to these topics. Therefore, these results add to the body of knowledge of how structural and demographic variables affect adoption and maintenance of various values. The results discussed for all demographic and structural effects are based on Model Two in each of the tables. Model Two did not include parental involvement, as to better understand the influence of these variables when parental involvement was not taken into account. That said, the direction of these demographic and structural variables did not change when parental involvement was included in each of the models.

Hypothesis 4 was generally found to be supported. In every table, the R-squared value increased significantly when controlling for structural and demographic variables according to an applied F-test. In the case of altruism, the R-squared increased from .031 to .063 after structural and demographic controls were applied. This resulted in an F change of 3196.21. This was significant at the 99.9% confidence interval. In the case of egoism, the R-squared increased from .017 to .037 after structural and demographic controls were applied. This resulted in an F change of 1980.31. This was again significant at the 99.9% confidence interval. In the case of importance of family and friends, the R-squared increased from .019 to .037 after structural and demographic controls were applied. This resulted in an F change of 1736.45. This was also significant at the 99.9% confidence interval. Finally, in the case of importance of work, the R-squared increased from .007 to .023 after structural and demographic controls were applied. This resulted in an F change of 1525.46. This was again significant at the 99.9% confidence interval, making all increases statistically significant at this level.[3]

Although the vast majority of media consumption variables were reduced in influence by application of the control variables as expected, not all reacted this way. In fact, some media consumption effects were amplified. For example in the case of altruism, introducing structural and demographic controls in Table 6.1, Model 2, increased the effect of hours of television on altruism from

[3] As mentioned previously, significance was affected by the number of variables added in each stage of the nested model, with small changes achieving statistical significance because of the few variables being added.

-.007 to -.014, an increase in power by 200%. The effect of television was also amplified in its effect on the value of family and friends, according to Table 6.3, Model 2 (by 60%, from .005 to .008). Additionally, consumption of internet's effect on the value of egoism was also amplified (by 28.13%, from .064 to .082) after controlling for all other structural and demographic variables according to Table 6.2, Model 2. Internet's effect was also amplified in its effect on the value of work after structural and demographic controls were in place. The effect of internet consumption on valuation of work actually changed directions, more than doubled, and became a positive and significant influence, as seen in Table 6.4, Model 2 (from b= -.010 to b= .021).

Therefore while Hypotheses 4 was vastly supported, there are some caveats. Television actually became more negatively influential on altruism and positively influential on valuing family and friends and the internet became more positively influential on egoism and valuing work after structural and demographic control variables were in place. These media effects thus appear to be stronger and somewhat different than originally anticipated.

Demographic Effects: Race/Ethnicity

Adolescents of all other races and ethnicities other than white valued altruism higher, but also valued egoism higher compared to their white peers. I thought this was a very intriguing research discovery, as these values appeared to be somewhat in conflict. Examining the results in Table 6.1, Model 2, black adolescents value altruism the highest compared to whites. Black adolescents rated this value .752 units higher compared to their white peers. Hispanics valued altruism .355 units higher than their white peers and Asians only .270 units higher than whites. Regarding egoism, I found that again Black adolescents value this variable the highest compared to whites, as seen in Table 6.2, Model 2. Blacks valued egoism .458 units higher than whites. Hispanics valued egoism .129 units more than whites and Asians .175 more than whites.

To help understand how these values (altruism and egoism) could be held simultaneously by racial and ethnic groups other than whites, I returned to my original factor analyses to remind myself of the statements used to create these values. Altruism consists of the values: importance of helping others

in community, importance of working to correct inequalities, importance of being an active/informed citizen, and importance of supporting environmental causes. Egoism consists of the values: importance of having lots of money, importance of getting away from this area, and importance of having leisure time. It would be possible to feel both of these values are very important and to feel torn between them[4]. For example a young African-American male growing up in a tough urban environment may feel it is important to give back to his community and try to improve it, but at the same time feel that he must escape the area in order to succeed in life. This value conflict could be very stressful for the groups that appear more susceptible to it (i.e., non-whites).

When it came to importance of family and friends, I was a bit surprised to find that all racial and ethnic groups other than white rated this value this lower than whites. Blacks valued importance of family and friends .300 units lower than whites, Hispanics .194 units lower, and Asians .213 units lower. I had previously believed that other cultural groups generally prioritized the family unit higher than whites. Perhaps this has decreased somewhat over time with many second and third generation Hispanics and Asians not viewing the importance of family and friends as highly as their parents and grandparents did.

Interestingly, the opposite situation was true for the value of work, with all other race and ethnic groups valuing work more than whites. Blacks valued work .364 units higher than whites, Hispanics .251 units higher, and Asians .120 units higher. It seems that the move away from valuing family and friend relationships and the importance of valuing work may show a greater adoption of a capitalist mindset in these adolescents, as compared to their parents and grandparents.

Demographic Effects: Gender

With regard to gender, I found that females were more altruistic than males (.459 units higher than males according to Table 6.1, Model 2) and less egoistic than males (.211 units less according to Table 6.2, Model 2). Females also gave higher value to the importance of family and friends (.079 units

[4] The variables of "helping others in community" versus "getting away from this area" appear to be in clear direct conflict. However, some of the other items included in the composite variable may not be as directly contradictory.

higher according to Table 6.3, Model 2) and the importance of work (.126 units higher according to Table 6.4, Model 2.) Therefore, it seems that females are aligning to their more traditional gender role of caregiver (based on higher valuation of altruism, lower valuation of egoism, and the higher importance of family and friends). Yet at the same time, females also value work more than males.

Again, I returned to the variables included in the factor analysis to better understand females' valuation of both family and friends and work highly. The importance of family and friends included the variables: importance of marrying the right person/ having happy family, importance of having strong friendships, and importance of having children. The importance of work included the variables: importance of being successful in line of work, importance of being able to find steady work, importance of being an expert in field of work, importance of getting good education, and importance of getting good job.

Holding both of these values as highly important is definitely feasible. However, by holding both of these values as highly important, stress is again created for the individual. It is very challenging for women who feel the need to be both "super-mom" and CEO. In current culture, women have been expected to be able to attain and maintain both of these roles successfully. It appears that these expectations and the stress associated with highly valuing both of them are being transferred to young women as well.

Structural Effects: Family Structure

With regard to family structure, adolescents from "traditional" families (e.g., two-parent male/female married families) were more altruistic than those from non-"traditional" families (.046 higher according to Model 11, Table 2). They were also less egoistic (.085 units lower according to Table 6.2, Model 2). They valued family and friends higher (.195 units higher according to Table 6.3, Model 2) and work less compared to their peers from non- "traditional" families (.051 units lower according to Table 6.4, Model 2).

Another aspect of family composition, number of siblings, had no effect on valuation of altruism according to Table 6.4, Model 2. This did change with the addition of parental involvement as a control

in Model 3 of that same table and each additional sibling increased importance of altruism by .010 units. Number of siblings negatively affected the value of egoism, with each additional sibling decreasing valuation of egoism by .047 units. Number of siblings increased the value of importance of family and friends, with each additional sibling adding .010 units to the importance of this value. Number of siblings also decreased the importance of work, with each additional sibling decreasing importance of work by .022 units.

Therefore, it appears that those with two parents and with siblings are more altruistic, less egoistic, value family and friends more, and value work less than their peers. As a whole, they seem more focused on the importance of personal relationships compared to their peers from other kinds of family structures. They may also have had more success maintaining personal relationships due to the presence of both parents in the household and with their siblings who are also in the household. In a society which supports a traditional family structure much more than it supports alternatives, it is likely also easier for them to be successful in this value. As Rosenberg's work previously found, values find a place in the individual's hierarchy according to the individual's performance displaying those values, while concurrently the individual will also seek to excel in values that have higher priority (Rosenberg 1979).

Structural Effects: Socioeconomic Class

Higher socioeconomic status (SES) increased altruism (.147 units for every one standard deviation increase in SES according to Table 6.1, Model 2.) Higher status also decreased egoism by .010 units for every one unit in SES (according to Table 6.2, Model 2). It increased the importance of family and friends (by .057 units according to Table 6.3, Model 2) and decreased the importance of work (by .058 units according to Table 6.4, Model 2). Thus higher SES appears to lead to propensity for increased altruistic beliefs, decreased egoism, higher valuation of family and friends and deceased valuation of work.

It is somewhat logical that those with higher SES value work less than their peers with lower SES. Those with higher SES generally would not have to work as much or as hard to achieve sustenance.

It is a hopeful finding for future generations that adolescents with higher SES value altruism more highly and egoism less, as they have the means to best deliver behaviors based on these values.

Structural Effects: Urbanicity

With regard to urbanicity, urban and suburban adolescents were more altruistic, less egoistic, valued family and friends more, and valued work less compared to their rural peers. Those living in urban areas were .273 units more altruistic than those in rural areas and those in suburban areas were .089 units more altruistic than those in rural areas according to Table 6.1, Model 2. Those living in urban areas were .023 units less egoistic than those in rural areas and those in suburban areas were .033 units less egoistic than those in rural areas according to Table 6.2, Model 2. Those living in urban areas valued family and friends .017 units higher than those in rural areas and those in suburban areas .030 units higher than those in rural areas according to Table 6.3, Model 2. Finally, those living in urban areas valued work .013 units less than their rural peers and those in suburban areas .035 units less those in rural areas according to Table 6.4, Model 2. Those from rural areas may be from a more agricultural lifestyle, where work is all consuming in one's life. Therefore the high valuation of work would be supported by this factor.

Structural Effects: Region

Those in the Northeast and Midwest were found to be less altruistic than those in the South (.142 units and .146 units, respectively, according to Table 6.1, Model 2), while those in the West were more altruistic (.034 units higher). Those in the Northeast were also more egoistic than those in the South (.051 units higher according to Table 6.2, Model 2), while those in the West were less so (.043 units lower). Those in the Northeast and West both valued family and friends lower than those in the South (.015 and .044 units lower, respectively, according to Table 6.3, Model 1). Finally, all regions valued work lower than those in the South (Northeast .068 units lower, Midwest .088 units lower, and West .129 units lower) according to Table 6.4, Model 2.

Therefore those living in the West seem to be more altruistic, those in the Northeast more egoistic, and those in the South most concentrated on the importance of family and friends and work.

There appears to be a cultural component to values occurring here. Consider a popular expression of cultural attitudes, music. Country music is very popular in the South and many songs concentrate on the importance of working hard and having a close relationship with family and friends. It seems that these types of songs do indeed represent the values of Southern adolescents.

Significant Other Effects: Parental Involvement

According to Hypothesis 5, which was guided by Mediated Valueflection theory, increased parental involvement was expected to negate media's influence on development of values. This hypothesis was partially supported. Parental involvement did significantly explain some of the variance in adolescents' levels of media consumption and the R-squared values for all models increased significantly (according to an applied F-test) upon inclusion of this variable, except for valuing of egoism (Table 6.2, Model 3). In the cases of altruism, value of family and friends, and value of work, model R-squared increases were found to be significant according to an applied F-test. Parental involvement had no significant impact regarding media's influence on the value of egoism.

In the case of altruism, the R-squared value increased from .063 to .109 after the parental involvement control was applied. This resulted in an F change of 57,964.41. This was significant at the 99.9% confidence interval. In the case of importance of family and friends, the R-squared value increased from .037 to .051 after the parental involvement control was applied. This resulted in an F change of 17,291.92. This was also significant at the 99.9% confidence interval. Finally, in the case of importance of work, the R-squared value increased from .023 to .042 after the parental involvement control was applied. This resulted in an F change of 22,279.94. This was again significant at the 99.9% confidence interval, making all increases statistically significant at this level.

I wished to see how including parental involvement affected value formation and also how it would affect the influence of my media variables after controlling for all structural and demographic attributes. I found that increased parental involvement has a positive affect on altruism. For every one unit increase in parental involvement there is a .080 increase in valuing altruism (Table 6.1, Model 3). Parental involvement has a small, but statistically significant negative effect on egoism (Table 6.2, Model

3). For every one unit increase in parental involvement there is a decrease in valuing egoism of .003 units. Parental involvement has a positive effect on the value of family/friends (Table 6.3, Model 3). For every one unit increase in parental involvement there is an increase in the valuing of family and friends by .027 units. Finally, parental involvement has a positive effect on the value of work (Table 6.4, Model 3). For every one unit increase in parental involvement there is an increase in valuing work of .032 units.

Thus parental involvement helps develop altruistic beliefs, somewhat discourages egoistic beliefs, improves the importance of valuing family and friends and improves the valuation of work. This was good information to help add to the knowledge on this topic, but still did not address my main hypothesis regarding how parental involvement affected the impact of media consumption. To do that, I still needed to examine the change of the primary media variables in 2002 between Models Two and Three for all tables.

Regarding the value of altruism, parental involvement did decrease the effect of media consumption somewhat when it came to television and video games (by 14.3% and 26.1% respectively). However, including parental involvement had an additive effect on internet and increased the impact of internet from non-significance back to significance at b= -.038 (Table 6.1, Model 3). Therefore when internet use is high, but parental involvement is low or non-existent, the value of altruism is diminished.

Including parental involvement had no real change on any of media's effects on egoism. Regarding family and friends, including parental involvement had very little effect on media except for internet, where it decreased the effect of internet by 24.5% (Table 6.3, Model 3). The same was true in the value of work. Parental involvement controlled for very little of the effect of media on the value of work other than the effect of internet, where it decreased the effect of internet on work 81.0% to non-significance (Table 6.4, Model 3).

Consequently, parental involvement did little to control for television and video games' effects on values, but did appear to control for internet effects in some cases (i.e., values of family/friends and work) and negatively amplified the effect of internet use on the value of altruism. These findings also suggested

the possibility of interaction effects between parental involvement and media consumption, which will be discussed later in this chapter.

Though these results did not fully support Hypothesis 5, I think that parental involvement is still a valuable addition to all models other than Table 6.2, Model 3 predicting egoism. In support, it should be noted that the standardized coefficient of parental involvement compared to the standard coefficients of the various media variables is, in most cases, quite a bit higher. For example, in Table 6.1, Model 3, regarding altruism, the standardized coefficient for parental involvement is .224 while TV is only -.071, Video games -.098, and Internet -.018.

Therefore parental involvement is a much stronger positive influence on adoption of the value of altruism compared to the influence of the media. Although the same can not be said for egoism, this is also true for the value of family and friends (in most cases) and the value of work. In the case of valuing family and friends the standardized coefficient for parental involvement is .125, while the standardized coefficient for TV is .092 and for internet is .032. Finally, in the case of valuing work, the standardized coefficient for parental involvement is .144, while TV is only .027, video games only -.047, and internet is not significant.

Interaction Effects: Media and Parental Involvement

Previous research findings have found that there are various ways parents may mediate children's media usage. With regard to television, these may include "coviewing, restrictive mediation, and instructive mediation." (Warren et al 2002). This previous research supported that when parents are significant others, this affects the likelihood of employing these mediation strategies. In this study, it also appeared that parental involvement might be interacting with media consumption to create different effects on teenagers' values. Therefore, those who consumed high amounts of media, but also had high parental involvement would experience different effects from the media versus those who had low parental involvement.

To determine if an interaction between parental involvement and media consumption was having an effect on values, I created three variables representing interactions between the three different types of

media and parental involvement. I then tested the effects of these three variables in my last model (Model 4) for both altruism and egoism. I concentrated on these two variables, as they are both my primary research interest and also where I believed interaction effects would theoretically display themselves[5]. I examined interactions with the primary measures for media consumption in 2002 only as the variables which examined change in media consumption from 2002 to 2004 had generally proven to align with these primary measures and I wished to simplify this stage of the analysis as much as possible.

I found that although interaction effects were statistically significant for all media types, the media type that showed the strongest substantive interaction effects with parental involvement was internet use.[6] This occurred both in table Table 6.1, Model 4 (Altruism) and Table 6.2 Model 4 (Egoism). In Table 6.1, Model 4, children with higher parental involvement had a more negative influence of internet use on altruism. Conversely, in Table 6.2, Model 4, children with higher parental involvement also had a more positive influence of internet use on adoption of egoism. In other words, it appears parents who are highly involved, but also display attitudes that encourage or freely allow high levels of online media consumption are getting a slightly more negative return on their investment of involvement. Though this was the only substantive effect of the three media types, it was still a very small effect in both tables (i.e., -.001 for altruism and .005 for egoism).

These findings support that co-usage and instructive mediation of the internet alone (without restrictions) may not be quite as effective a strategy as also using restrictive mediation. However, influences on altruism and egoism are small in a real world application unless extremely high parental

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[5] Though not discussed here (as it is not a focus in my dissertation), I did complete additional analysis to determine interaction effects as related to work and family/friend values. For the dependent value of work, unstandardized coefficients for parental involvement interaction effects were -.007 for computer use, .001 for television use, and .000 for video game use, all significant at $p<.001$. For the dependent value of family/friends, unstandardized coefficients for parental involvement interaction effects were -.002 for computer use, .000 for television use, and .000 for video game use. Again, all results were significant at $p<.001$.

[6] I multiplied media use of both television and video games by ten, twenty, forty and one hundred hours. I then multiplied this new media consumption quantity by parental involvement as a new independent variable and reran regressions on altruism and egoism. Each time the unstandardized coefficient for the interaction effect still equaled zero. Because a number would not present itself, but the interaction effect was statistically significant, my thought is that this effect must only be substantive in really extreme cases. For example, when some teenagers play video games or watch tv far more than an adult would work at a full time job. As no number would present itself, this effect was not able to be graphed.

involvement and internet use is concurrently taking place. If parental involvement is at its highest level (i.e., approximately 10) and internet use is at its highest level (i.e., 5) the unstandardized coefficient showing the effect on egoism (which is stronger than the one for altruism) would be multiplied and equal .25. This quite powerful effect at extreme usage levels is also seen through the large standardized coefficient for this interaction effect (.099 for egoism).

Discussion

Hypotheses 3A and 3B were found to be supported in this analysis. Consumption of all media types did significantly and negatively predict adoption and maintenance of altruistic values (Hypothesis 3A). Consumption of all media types also significantly and positively influenced adoption and maintenance of egoistic values (Hypothesis 3B). This is supportive of previous framing research that states mass media supports forms of inequality to support the needs of a capitalist society (Grindstaff and Turow 2006, Carragee and Roefs 2004, Gamson et al 1992).

Hypothesis 4 was partially supported. It was expected that all significant effects of media would be reduced upon inclusion of structural and demographic control variables. This generally occurred with some caveats. The effect of television was not diminished, but amplified, when it came to both altruism and valuing family and friends. Additionally, the effect of the internet was also amplified when it came to egoism and valuing work. These media effects thus appear to be stronger and work in a slightly different way than originally anticipated.

Hypothesis 5 was generally not supported. It was expected all initially significant effects of media on values would be reduced to non-significance after including the final control, parental involvement. This did not occur. In some places, parental involvement further reduced the effect of media, but it generally did not reduce it to non-significance. In the vast majority of cases though, parental involvement did not significantly affect media's influence one way or another.

Parental involvement thus does not appear to protect adolescents from the influence of media, but can help to counterbalance media effects. Parental involvement was found to help develop altruistic beliefs, discourage egoistic beliefs, increase family and friend value importance and improve adolescents'

perceptions of the value of work after all other controls had been applied. This would appear to support the idea that although parents can not change adolescents' perceptions of the values of the generalized other (the values which are supported in mass media), they can reinforce values that contradict the generalized other when they are significant others in the child's life.

Additionally, it appears parents should place some limitations around frequency of media use, based on the interaction effects displayed for internet and parental involvement. This is an important lesson for parents. Parents can both somewhat monitor and restrict the media intake of their children, while also interacting with them more often in meaningful ways. These actions should help counterbalance media's effects.

Finally, the most important finding in this chapter was not related to a specific hypothesis, but to the overall assumption of media's influence on adolescent values as a whole. More will be discussed on this topic in Chapter Eight, but I will touch on this topic here briefly. The R-squared values of all final models were, at the highest, .109 (in Table 6.1, Model 3). This means that the model effectively explained 10.9% of the variation from the mean in an adolescent's adoption and maintenance of altruism. Thus, almost 90% of the variance in adoption and maintenance of altruism (and an even greater percentage for the other values) is not explained by these variables.

Consequently, it appears that both parents and policy makers have attributed incredible power to the mass media that is neither inherent nor inevitable. It also appears that there are many influences on the development of values which are not controlled for in this analysis. These likely include effects of peers, the effect of media content (outside of the current measurement of quantity), religious beliefs, political leanings, and potentially many other influences. Although this is a limitation of the data available, it is still a very important finding to learn that media is not as powerful as it has been perceived in the past and that parents have more power than they may have thought.

Table 6.1: Unstandardized and Standardized Coefficients from the Ordinary Least Squares Linear Regression of Importance of Altruism (2004) on Hours/Day of TV/ DVD* Viewing (2002), Hours/Day of Video/Computer Playing (2002), Internet Use* (2002), and other Selected Independent Variables.

Educational Longitudinal Study (2002-2004) (N=5,270).

Key: B*** (S.E)
(Beta)

	Composite Value: Importance of Altruism 2004			
	Model 1	***Model 2***	***Model 3***	***Model 4***
Hours per week watching TV/DVD 2002	-.007*** (.000) (-.044)	-.014*** (.000) (-.087)	-.012*** (.000) (-.071)	-.012*** (.000) (-.072)
Change in hours per week watching TV/DVD 2002-2004	-.002*** (.000) (-.013)	-.008*** (000) (-.046)	-.006*** (000) (-.034)	-.006*** (000) (-.034)
Hours per week playing Video Games 2002	-.038*** (.000) (-.215)	-.023*** (.000) (-.128)	-.017*** (.000) (-.098)	-.017*** (.000) (-.098)
Change in Hours per week playing Video Games 2002-2004	-.032*** (.000) (-.157)	-.021*** (.000) (-.104)	-.018*** (.000) (-.090)	-.018*** (.000) (-.091)
Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002	-.025*** (.002) (-.012)	.003 (.002) (.001)	-.038*** (.002) (-.018)	-.038*** (.002) (-.018)
Change in Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002-2004	-.005* (.002) (-.003)	-.009*** (.002) (-.005)	-.027*** (002) (-.016)	-.027*** (002) (-.016)
Female *(omitted category=Male)*		.459*** (.004)	.390*** (.004)	.389*** (.004)
Black *(omitted category=White)*		.752*** (.007)	.647*** (.007)	.646*** (.007)
Hispanic *(omitted category=White)*		.355*** (.006)	.383*** (.006)	.385*** (.006)
Asian *(omitted category=White)*		.270*** (.009)	.351*** (.009)	.351*** (.009)
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*		.046*** (.004)	.043*** (.004)	.043*** (.004)
Number of Siblings		.001 (.001) (.000)	.010*** (.001) (.007)	.010*** (.001) (.007)
SES2		.147*** (.003) (.053)	.037*** (.003) (.013)	.038*** (.003) (.013)
Urban *(Omitted category= Rural)*		.273*** (.005)	.247*** (.005)	.247*** (.005)
Suburban *(Omitted category= Rural)*		.089*** (.005)	.084*** (.004)	.084*** (.004)
Northeast *(Omitted category= South)*		-.142*** (.005)	-.091*** (.005)	-.091*** (.005)
Midwest *(Omitted category= South)*		-.146*** (.005)	-.076*** (.005)	-.076*** (.005)
West *(Omitted category= South)*		.034*** (.005)	.034*** (.005)	.033*** (.005)
Parental Involvement Composite Variable (2002)			.080*** (000) (.224)	.083*** (002) (.232)
Parental Involvement x Hours per week watching TV/DVD 2002				.000*** (000) (.011)
Parental Involvement x Hours per week playing Video Games 2002				.000*** (000) (-.004)
Parental Involvement x Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002				-.001*** (000) (-.016)
Intercept (Constant)	9.251*** (.011)	8.635*** (.013)	8.633*** (.012)	8.638*** (.012)
R2	.031	.063	.109	.110

* p < .05 ** p < .01 *** p < .001

Table 6.2: Unstandardized and Standardized Coefficients from the Ordinary Least Squares Linear Regression of Importance of Egoism (2004) on Hours/Day of TV/ DVD* Viewing (2002), Hours/Day of Video/Computer Playing (2002), Internet Use* (2002), and other Selected Independent Variables.
Educational Longitudinal Study (2002-2004) (N=5,270).
Key: B*** (S.E)
(Beta)

	Composite Value: Importance of Egoism 2004			
	Model 1	***Model 2***	***Model 3***	***Model 4***
Hours per week watching TV/DVD 2002	.010*** (.000) (.102)	.008*** (.000) (.078)	.008*** (.000) (.077)	.008*** (.000) (.077)
Change in hours per week watching TV/DVD 2002-2004	.008*** (000) (.079)	.006*** (000) (.060)	.006*** (000) (.059)	.006*** (000) (.058)
Hours per week playing Video Games 2002	.010*** (.000) (.094)	.003*** (.000) (.031)	.003*** (.000) (.029)	.003*** (.000) (.030)
Change in Hours per week playing Video Games 2002-2004	.003*** (.000) (.022)	-.001*** (.000) (-.009)	-.001*** (.000) (-.010)	-.001*** (.000) (-.009)
Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002	.064*** (.001) (.050)	.082*** (.001) (.065)	.084*** (.001) (.066)	.083*** (.001) (.065)
Change in Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002-2004	.017*** (001) (.016)	.019*** (001) (.018)	.019*** (001) (.018)	.018*** (001) (.017)
Female *(omitted category=Male)*		-.211*** (.003)	-.209*** (.003)	-.206*** (.003)
Black *(omitted category=White)*		.458*** (.004)	.461*** (.004)	.462*** (.004)
Hispanic *(omitted category=White)*		.129*** (.004)	.128*** (.004)	.122*** (.004)
Asian *(omitted category=White)*		.175*** (.006)	.172*** (.006)	.173*** (.006)
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*		-.085*** (.002)	-.085*** (.002)	-.084*** (.002)
Number of Siblings		-.047*** (.001) (-.054)	-.047*** (.001) (-.054)	-.047*** (.001) (-.054)
SES2		-.010*** (.002) (-.006)	-.006** (.002) (-.003)	-.007** (.002) (-.004)
Urban *(Omitted category= Rural)*		-.023*** (.003)	-.022*** (.003)	-.021*** (.003)
Suburban *(Omitted category= Rural)*		-.033*** (.003)	-.033*** (.003)	-.033*** (.003)
Northeast *(Omitted category= South)*		.051*** (.003)	.049*** (.003)	.049*** (.003)
Midwest *(Omitted category= South)*		-.002 (.003)	-.004 (.003)	-.003 (.003)
West *(Omitted category= South)*		-.043*** (.003)	-.043*** (.003)	-.042*** (.003)
Parental Involvement Composite Variable (2002)			-.003*** (.000) (-.012)	-.020*** (.001) (-.093)
Parental Involvement x Hours per week watching TV/DVD 2002				.000*** (.000) (-.029)
Parental Involvement x Hours per week playing Video Games 2002				.000*** (.000) (.016)
Parental Involvement x Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002				.005*** (.000) (.099)
Intercept (Constant)	5.988*** (.007)	6.286*** (.008)	6.286*** (.008)	6.280*** (.008)
R2	.017	.037	.037	.038

* p < .05 ** p < .01 *** p < .001

Table 6.3: Unstandardized and Standardized Coefficients from the Ordinary Least Squares Linear Regression of Importance of Family/Friends (2004) on Hours/Day of TV/ DVD* Viewing (2002), Hours/Day of Video/Computer Playing (2002), Internet Use* (2002), and other Selected Independent Variables.
Educational Longitudinal Study (2002-2004) (N=5,270).
Key: B*** (S.E)
(Beta)

	Composite Value: Importance of Family/Friends 2004		
	Model 1	***Model 2***	***Model 3***
Hours per week watching TV/DVD 2002	.005*** (.000) (.048)	.008*** (.000) (.083)	.009*** (.000) (.092)
Change in hours per week watching TV/DVD 2002-2004	.005*** (.000) (.048)	.007*** (000) (.069)	.008*** (000) (.075)
Hours per week playing Video Games 2002	-.019*** (.000) (-.176)	-.015*** (.000) (-.144)	-.014*** (.000) (-.128)
Change in Hours per week playing Video Games 2002-2004	-.013*** (.000) (-.104)	-.011*** (.000) (-.090)	-.010*** (.000) (-.082)
Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002	.090*** (.001) (.073)	.053*** (.001) (.043)	.040*** (.001) (.032)
Change in Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002-2004	.023*** (.001) (.022)	.008*** (001) (.007)	.002 (001) (.002)
Female *(omitted category=Male)*		.079*** (.003)	.056*** (.002)
Black *(omitted category=White)*		-.300*** (.004)	-.335*** (.004)
Hispanic *(omitted category=White)*		-.194*** (.004)	-.185*** (.004)
Asian *(omitted category=White)*		-.213*** (.006)	-.185*** (.006)
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*		.195*** (.002)	.193*** (.002)
Number of Siblings		.010*** (.001) (.012)	.013*** (.001) (.015)
SES2		.057*** (.002) (.034)	.020*** (.002) (.012)
Urban *(Omitted category= Rural)*		.017*** (.003)	.007* (.003)
Suburban *(Omitted category= Rural)*		.030*** (.003)	.029*** (.003)
Northeast *(Omitted category= South)*		-.015*** (.003)	.002 (.003)
Midwest *(Omitted category= South)*		.003 (.003)	.026*** (.003)
West *(Omitted category= South)*		-.044*** (.003)	-.044*** (.003)
Parental Involvement Composite Variable (2002)			.027*** (000) (.125)
Intercept (Constant)	7.796*** (.007)	7.651*** (.008)	7.651*** (.008)
R2	.019	.037	.051

* p < .05 ** p < .01 *** p < .001

Table 6.4: Unstandardized and Standardized Coefficients from the Ordinary Least Squares Linear Regression of Importance of Work (2004) on Hours/Day of TV/ DVD* Viewing (2002), Hours/Day of Video/Computer Playing (2002), Internet Use* (2002), and other Selected Independent Variables.
Educational Longitudinal Study (2002-2004) (N=5,270).
Key: B*** (S.E)
(Beta)

	Composite Value: Importance of Work 2004		
	Model 1	***Model 2***	***Model 3***
Hours per week watching TV/DVD 2002	.007*** (.000) (.068)	.002*** (.000) (.017)	.003*** (.000) (.027)
Change in hours per week watching TV/DVD 2002-2004	.005*** (.000) (.047)	.001*** (000) (.010)	.002*** (000) (.017)
Hours per week playing Video Games 2002	-.011*** (.000) (-.100)	-.007*** (.000) (-.065)	-.005*** (.000) (-.047)
Change in Hours per week playing Video Games 2002-2004	-.008*** (.000) (-.063)	-.005*** (.000) (-.038)	-.004*** (.000) (-.030)
Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002	-.010 (.001) (-.008)	.021*** (.002) (.016)	.004 (.002) (.003)
Change in Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002-2004	-.033*** (.001) (-.030)	-.019*** (.001) (-.017)	-.026*** (.001) (-.024)
Female *(omitted category=Male)*		.126*** (.003)	.098*** (.003)
Black *(omitted category=White)*		.364*** (.005)	.322*** (.005)
Hispanic *(omitted category=White)*		.251*** (.004)	.262*** (.004)
Asian *(omitted category=White)*		.120*** (.006)	.153*** (.006)
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*		-.051*** (.003)	-.054*** (.003)
Number of Siblings		-.022*** (.001) (-.025)	-.018*** (.001) (-.020)
SES2		-.058*** (.002) (-.033)	-.102*** (.002) (-.058)
Urban *(Omitted category= Rural)*		-.013*** (.003)	-.025*** (.003)
Suburban *(Omitted category= Rural)*		-.035*** (.003)	-.036*** (.003)
Northeast *(Omitted category= South)*		-.068*** (.003)	-.046*** (.003)
Midwest *(Omitted category= South)*		-.088*** (.003)	-.061*** (.003)
West *(Omitted category= South)*		-.129*** (.003)	-.128*** (.003)
Parental Involvement Composite Variable (2002)			.032*** (000) (.144)
Intercept (Constant)	14.259*** (.007)	14.276*** (.008)	14.279*** (.008)
R2	.007	.023	.042

* p < .05 ** p < .01 *** p < .001

CHAPTER 7.

MEDIA'S EFFECT ON ADOLESCENTS' BEHAVIORS

The analyses completed in Chapter Five supported that there are many different factors which affect media consumption, including structural, demographic and significant other effects. Chapter Six analyses went on to show how media use affects adoption and maintenance of values in relation to other influences. Though media use is influential on importance of different values (even after controls are in place), there are stronger influences on systems of values, especially when parents are significant others in their children's lives. Though the findings in Chapter Six support the importance of parental involvement on a teenager's developing values, they did not show how media, values, and parental involvement influence eventual behaviors. This is the focus of Chapter 7.

This final stage of analysis involved the regression (either ordinary least squares or binary logistic) of various behaviors in 2006 (i.e., frequency of volunteerism and attending college) on media consumption levels, structural and demographic attributes, values statements, and parental involvement.[7] This analysis investigated what causes variance in displaying these different types of desirable behaviors. Again, this analysis is longitudinal in nature, thus supporting inferred causality.

Much of the previous research in this field deals with negative behaviors only (e.g., violence) and does not examine positive behaviors (e.g., volunteerism) (Bushman and Anderson 2001; Johnson et al. 2002; Slater et al. 2003; Huessman et al. 2003). This issue is important to understand because media may influence behaviors which are not inherently negative. Additionally, other forces (structural, demographic, parental involvement and values) are expected to influence behaviors to an even greater degree than media.

From a structural perspective, I expect increased media consumption to negatively influence desirable altruistic behaviors (e.g., volunteerism) when no control variables are in place (Grindstaff and Turow 2006, Carragee and Roefs 2004, Gamson et al 1992). However, once control variables are applied

[7] The behaviors of working after high school, getting married, and having children are also addressed as outcomes in Appendix A, but are not addressed here as they do not pertain directly to the theory discussed.

(structural and demographic variables); I expect a reduction in the influence of media consumption on behaviors (Willoughby 2008, Cleary et al. 2006, Calvert et al. 2005, Pardun and Scott 2004, Krosnick et al 2003). I then expect further reduction of media influence once values and parental involvement are applied as mediating variables (Warren et al 2002, Nathanson 2001, Real 1996, Kellner 1995, Warr 1993, Potter 1990). These expectations are based on previous findings from other theorists and researchers who have found that mass media in the United States is supportive of egoistic attitudes and behaviors (Grindstaff and Turow 2006, Carragee and Roefs 2004, Gamson et al 1992), but that other variables should control for many of mass media's expected effects (Willoughby 2008, Cleary et al. 2006, Calvert et al. 2005, Pardun and Scott 2004, Krosnick et al 2003, Warren et al 2002, Nathanson 2001, Real 1996, Kellner 1995, Warr 1993, Potter 1990).

I examined two primary behaviors in 2006 which would be considered desirable behaviors within an altruistic society. These included frequency of volunteerism and attending college.[8] Though not my primary focus, I felt the analysis of media's influence on another positive social behavior outside of volunteerism (i.e., college attendance) could add new insight to the current field of media effects research. I believed college attendance was also supportive of an altruistic society as maintained in a classic research finding by Dole (Dole 1967). Other researchers have additionally found that education increases altruistic feelings and behaviors because it "heightens awareness of problems, increases empathy, and builds self-confidence" (Wilson 2000, Brady et al 1995:285, Rosenthal et al 1998:480).

I regressed all variables on media consumption in 2002 (i.e., television/videos/DVDs, video games, and internet), as well as structural, demographic and parental involvement measures captured in 2002, values of the adolescent in 2004 and if the adolescent lives with his or her parents in 2006. Structural and demographic measures included gender, race, family structure, socioeconomic status, urbanicity and region. Value statements included Importance of Egoism, Importance of Altruism, Importance of Family/Friends, and Importance of Work. Parental involvement was a composite variable

[8] Again, the additional behaviors of working after high school, getting married, and having children are also addressed as outcomes in Appendix A.

from 2002 and as mentioned previously, I also included the variable "Lives with parents" in 2006. Results of the analyses completed in this stage may be found at the end of this chapter in Tables 7.1 and 7.2.

Analysis and Findings

Media Effects

My hypotheses in this chapter focused on how media consumption would affect the altruistic behavior of volunteerism and the desirable social behavior of college attendance in 2006. As in the previous chapter, I will concentrate on the primary effects of media consumption in 2002 in this analysis, not the control variables of change in media from 2002 to 2004. However, again I found that the direction of media effects is generally consistent for both media consumption in 2002 and the change of media consumption from 2002 to 2004, which adds to the robustness of these findings.[9]

According to Table 7.1, Model 1, hours per week of television consumption in 2002 decreases frequency of volunteerism in 2006 by .008 units for every one hour increase in television consumption. Hours per week of video game play also decreases frequency of volunteerism in 2006 by .009 units for every one hour increase in playing video games. However, increased internet use increases frequency of volunteerism in 2006 by .025 units for every one unit increase on the 1-5 frequency of internet use scale. Direction of effects generally did not change in the final model of this analysis (Model 4).[10] Again, throughout this chapter some of these coefficients and exponentiated odds may appear to be substantively small, but are statistically significant. This is driven in part by the immense size of the data set used in the analysis (ELS:2002).

Therefore, increased media consumption of video games and television decreases volunteerism, but increased internet use increases frequency of volunteering. Due to the wide variety of functions available through the internet, teenagers may be using the internet as a tool to find volunteer opportunities. Websites such as volunteermatch.com (www.volunteermatch.com) have supported this

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[9] Except in the case of Frequency of Internet Use Effect on Volunteer Service (Table 7.1, Model 4)

[10] Except in the case of Change in Internet Use 2002-2004 on Volunteer Service (Table 7.1, Model 4) This would appear to suggest the importance of early internet usage in cultivating later volunteerism.

trend with impressive results. This website in particular is the online destination for "millions of visitors a year" and is a major recruiting device for over 72,000 nonprofits (www.volunteermatch.com 2009).

This supports findings in previous chapters that internet use operates somewhat differently than television and video game use. However, findings related to volunteerism seemed somewhat counterintuitive considering internet's negative effect on altruism in chapter six. More will be discussed on how these findings could potentially be reconciled in the discussion at the end of this chapter.

According to Table 7.2, Model 1, hours per week of television consumption in 2002 decreases an adolescent's odds of attending college by 3.1% for every one hour increase in television consumption[11]. Hours per week of video game play also decreases an adolescent's odds of attending college by 4.6% for every one hour increase in playing video games. However, increased internet use increases an adolescent's odds of attending college by 68.5% for every one unit increase on the 1-5 frequency of internet use scale. The direction of influence again did not change in the final Model (4). These seemingly small percentages can add up very quickly, especially with regard to internet use.

One interpretation of these results could be that internet use is a preparatory activity for college roles while video game playing and television viewing are not. As mentioned in previous chapters, the internet may be used in two-way interaction for communication, for educational purposes, and for gathering information on potential colleges while television and video games are used primarily for entertainment. Therefore, this form of media may be coaching students in preparation for the future research they will complete online in college.

Overall, the findings related to media influence on behaviors partially support Hypothesis 6. Television and video game consumption in 2002 did discourage the altruistic behavior of volunteerism in 2006. Consumption of television and video games also decreases an adolescent's odds of going to college in 2006. It is difficult, however, to disentangle the effects of the medium and the message in these results (McLuhan in Durham and Kellner 2006). From a medium standpoint, it could be that cultural

[11] Throughout this chapter I will focus on discussing exponentiated odds (odds) instead of log odds in order to more directly relate the likelihood of a certain behavior back to a real world application.

norms associated with watching a lot of television and playing a lot of video games discourage altruism. If a person is spending all of their time using media they cannot be completing altruistic acts such as volunteerism at the same time. From a messaging standpoint, it could be that the content displayed in video games and on television does not show the characters' need for a college education. Most likely, both the medium and the message are having effects on those who consume this media.

Internet operated differently than television and video games as an influence on behaviors. Internet use in 2002 increased frequency of volunteering in 2006 and odds of attending college. Therefore, media types appear to have different effects on future behaviors. Internet use appears to support both altruistic behaviors (i.e., volunteerism) and self-improvement goals which in turn can help society (i.e., college attendance), while television and video games have the opposite effect. This was particularly surprising with regard to volunteerism since internet use appeared to somewhat diminish the value of altruism in the previous chapter.[12] It could be that the way the internet is used by teenagers may change as an adolescent grows older. If so, it is hypothesized that the internet could be changing from an entertainment source to a tool to help with achievement of goals (including altruistic goals) as adolescents age.

Overall Demographic and Structural Effects

It was hypothesized (i.e., Hypothesis 7) that demographics and structural variables would control for much of the effect of media influence on the altruistic behavior of volunteerism and therefore they were included in the analysis. This hypothesis was found to be partially supported. Controlling for demographic and structural variables in Table 7.1, Model 2, did weaken the effects of video games and of internet on frequency of volunteer service, but did not meaningfully change the effect of television. It should also be noted that all media effects were so small that even the largest changes in impact (because of the controls) were minor when examined in a real world application.

[12] However, effects were not as strong as television and video games when comparing standardized coefficients in Table 6.1, Model 4.

For example, controlling for demographic and structural variables decreased the negative impact of video game use on volunteerism by 56%. However, this is realistically a decrease of only .005 on the frequency of volunteerism scale per hour of video game play. With regard to college attendance, controlling for demographic and structural variables decreased media's effect on attending college, as seen in Model 2 of Table 7.2.[13] Yet again, although this change was statistically significant, this was not a substantive decrease.

No specific hypotheses existed related to the original direction of each demographic and structural control that was applied in this analysis, as this was not the focus on this research. However, these results do add to the body of knowledge of how structural and demographic variables affect behaviors and as such will be discussed briefly here. The results discussed for all demographic and structural effects are based on Model Two in each of the tables. Model Two did not include Values or Parental Involvement as to better understand the influence of these variables when values and parental involvement were not yet taken into account. That said, the direction of these demographic and structural variables did not change when these controls were included in each of the models. The effects were only slightly weakened or strengthened.

Demographic Effects: Race/Ethnicity

Adolescents of all other races and ethnicities other than white volunteered more frequently compared to their white peers. Examining the results in Table 7.1, Model 2, Asian adolescents volunteered most frequently compared to whites. Asian adolescents were .142 units higher on the frequency of volunteerism scale compared to their white peers. Hispanics were .094 units higher than their white peers and Blacks .083 units higher than whites. Regarding odds of attending college, Asians also had the highest odds of college attendance compared to their white peers. Asians were over two times as likely to attend college compared to whites (Table 7.2, Model 2). Blacks were 38.9% more likely to go to college and Hispanics 9.3% more likely.

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[13] Two exceptions included internet use's negative effect on holding a job after high school (Table 7.3, Model 2) and video games use's positive effect on having children (Table 7.5, Model 2) which were both amplified once demographic and structural controls were in place.

Demographic Effects: Gender

With regard to gender, females volunteered significantly more often than males (.135 units higher than males on the volunteerism frequency scale according to Table 7.1, Model 2). This finding is supportive of a gendered female caregiver role. Previous research has also supported that females are generally more likely to be volunteers, especially when comparing males and females of a younger age (Wilson 2000). Females also had higher odds of attending college (48.1% higher than males according to Table 7.2, Model 2).

Structural Effects: Family Structure

With regard to family structure, adolescents from "traditional" families (e.g., two-parent male/female married families) volunteered more frequently than those from non-"traditional" families (.033 units more frequently according to Table 7.1, Model 2). They also had higher odds of attending college (55.6% higher than those from other family structures according to Table 7.2, Model 2). Two parent families may have access to greater resources (outside of socioeconomic resources) that increase the likelihood of children attending college. For example, they may likely have more than one vehicle to use for transportation in the family. Children in two parent families may also have access to a greater familial network for emotional support.

Another aspect of family composition, number of siblings, had a positive effect on volunteerism according to Table 7.1, Model 2 (increase of .012 on the frequency of volunteerism scale for every additional sibling). However, number of siblings negatively affected the odds of attending college with each additional sibling decreasing odds by 8.5%. These findings appear to again support Downey's resource dilution argument (Downey 2001). Since resources are finite, adolescents with more siblings would be less likely to complete activities that require increased resources (i.e., attending college).

Structural Effects: Socioeconomic Class

Higher socioeconomic status (SES) increased frequency of volunteerism by .079 units on the frequency of volunteerism scale for every one standard deviation increase in SES. Higher socioeconomic also almost tripled the odds of attending college (odds=2.862 in Table 7.2, Model 2) for every one

standard deviation increase in SES. The free time required to volunteer and money needed to attend college thus appears to be aligned with higher socioeconomic status. Previous research by Wilson also supports that those with higher socioeconomic status join more organizations and have a higher likelihood of being active in them (e.g., through activities such as volunteering) (Wilson 2000).

Structural Effects: Urbanicity

With regard to urbanicity, urban and suburban adolescents volunteered more frequently compared to their rural peers. Those living in urban areas were .090 units higher and those in suburban areas .022 units higher on the frequency of volunteering scale compared to those in rural areas according to Table 7.1, Model 2. Those living in more densely populated areas may have greater access to volunteer opportunities. Those living in urban and suburban areas had higher odds of attending college (82.5% and 12.3%, respectively) than those in rural areas according to Table 7.2, Model 2. If those in rural areas wish to work in agriculture (a popular choice for their geographic location), an advanced degree is not needed and they may begin work immediately after high school instead of attending college.

Structural Effects: Region

Those in the Northeast and Midwest were found to volunteer more often than those in the South (.099 units and .005 units, respectively, according to, Model 2), while those in the West volunteered less often than those in the South (.059 units lower). Those living in the Northeast and Midwest also had higher odds of attending college (12.1% and 61.7%, respectively), while those living in the West had lower odds of attending college compared to those in the South (2.3% lower) according to Table 7.2, Model 2. There could be a correlation occurring here between frequency of volunteering and college attendance for those in the Northeast and Midwest. Many colleges encourage volunteerism and as mentioned previously, advanced education is used as a frequent predictor of volunteerism likelihood (Wilson 2000).

Values Effects

According to Hypothesis 8, which was guided by Mediated Valueflection theory, values were expected to help control for media's influence on frequency of volunteerism. This hypothesis was

generally not supported. Values had some impact regarding media's influence on frequency of volunteerism in the case of television and video games, reducing the effect of each media form by 22.2% and 50%, respectively (Table 7.1, Model 3). It should be taken into consideration, however, that the original effects were quite small so these reductions were not very substantial. Including values in Table 7.1, Model 3, did amplify the positive impact of internet use on volunteerism by 41.6% (from .012 to .017). Overall though, values did little to substantively control for or add to media effects for all behaviors analyzed (as seen in Tables 7.1 and 7.2, Model 4).

Although these findings did not support Hypothesis 8, adding values to the final model was still an important theoretical and analytical decision. In the case of volunteerism for example, the value of altruism had a very strong influence on this behavior, with a standardized coefficient of .152. This was the second highest standardized coefficient in Table 7.1, Model 5, after parental involvement's interaction effect with internet use. Controlling for values also increased the overall strength of each model in predicting behaviors. This was validated by an increase in R-squared and Nagelkerke's R-squared values in Model 4 for all tables.

Significant Other Effects: Parental Involvement

According to Hypothesis 8, which was again guided by Mediated Valueflection theory, increased parental involvement was expected to negate media's influence on frequency of volunteerism. This hypothesis was not supported. Parental involvement had no significant impact regarding media's influence on frequency of volunteerism except in the case of internet use. In this case, parental involvement partially controlled for the positive effect of internet on volunteerism. Overall though, for all behaviors, parental involvement did little to control for media effects (as seen in Tables 7.1 and 7.2, Model 4).

Though these findings did not support Hypothesis 8, parental involvement is a valuable addition to all models due to its explanatory power on behaviors. For example, for every one unit increase in parental involvement, frequency of volunteerism increases by .022 units. A change in odds due to a one unit increase in parental involvement can also be impactful (depending on behavior). For example, odds

of attending college increase 8.1% for every one unit increase in parental involvement. The decision to include parental involvement was also validated by an increase in R-squared and Nagelkerke's R-squared values in Model 4 for all tables.

Living with parents also influenced behaviors. Living with parents decreases frequency of volunteering by .029 units. It also decreases odds of attending college (36.2% in Table 7.2, Model 4). Regarding college attendance, this could be more of a correlated effect versus a causal effect. These variables (i.e., lives with parents and has ever attended college) were measured in the same year and it would make sense that those who did not go away to college would be more likely to still live at home with their parents. As mentioned previously, college attendance and volunteerism frequency may also be positively correlated.

Interaction Effects: Media and Parental Involvement

Again, due to previous research findings and the findings for parental involvement in this analysis thus far, I believed interactions could be occurring between media and parental involvement (Warren et al 2002). I wished to investigate this interaction as specifically related to volunteerism, which was again my primary behavior of interest. I also felt that interactions could likely be occurring here due to the previous findings in chapter six that interactions were occurring around internet use and the values of altruism and egoism[14].

Again, it appeared that parental involvement was significantly interacting with all types of media consumption to create different effects on teenagers' frequency of volunteerism. Similar to the findings

[14] Though not discussed here (as it is not a focus in my dissertation), I did complete additional analysis to determine interaction effects as related to behaviors of going to college, working after high school, getting married, and having children. For the dependent value of going to college, log odds for parental involvement interaction effects were -.003 for computer use and .001 for video game use, both significant at p<.001. For the dependent behavior of working after high school, log odds for parental involvement interaction effects were .004 for computer use and .001 for video game use. Television and parental involvement interaction effects were not significant for either of these dependent variables. For the dependent behavior of getting married, log odds for parental involvement interaction effects were -.016 for computer use, -.001 for television use, and .002 for video game use. All effects were significant at p<.001. Finally, for the dependent behavior of having children, log odds for parental involvement interaction effects were -.002 for computer use and .001 for television use. These effects were significant at (at least) p<.010. Video game and parental involvement interactions were not significant in predicting this variable.

related to values, the only measure where this was substantive was with regard to internet use.[15] Children with higher parental involvement received a more positive return on internet use's effect on volunteerism. Therefore, those with high parental involvement and high computer usage were more likely to volunteer more frequently.

Though interaction effects seemed substantively small (i.e., unstandardized coefficient of .006), these effects add up quickly when multiplied. For the highest levels of parental involvement and internet use this coefficient would be multiplied approximately 50 times, resulting in an increase of .3 on the volunteerism frequency scale. This substantial effect at extreme levels of consumption is also expected due to the large standardized coefficient of .196.

At first I felt these findings were somewhat contradictory to the findings in chapter six as to how parental involvement interacted with media consumption to effect values of altruism and egoism. Upon examining the initial effects of internet media consumption in all three models though, I realized that high parental involvement merely appeared to amplify the direction of the initial effects of internet use. Since internet effects were initially positive in their effect on volunteerism, parental involvement seemed to amplify this effect further. Therefore those with high parental involvement and high internet use would have incremental increases in volunteerism frequency which were not experienced by high level internet users with low parental involvement.

Discussion

Higher levels of television and video game media consumption in 2002 did have a significantly negative predictive influence on subsequent altruistic behaviors in 2006 (i.e., volunteerism), yet internet consumption in 2002 had the opposite effect. In addition, parental involvement interacts with internet consumption and provides an accretive effect which positively affects frequency of volunteerism.

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[15] I multiplied media use of both television and video games by ten, twenty, forty and one hundred hours. I then multiplied this new media consumption quantity by parental involvement as a new independent variable and reran regression on frequency of volunteerism. Each time the unstandardized coefficient for the interaction effect still equaled zero. Because a number would not present itself, but the interaction effect was statistically significant, my thought is that this effect must only be substantive in really extreme cases, similar to the effects in the cases of altruism and egoism. As no number would present itself, this effect was not able to be graphed.

Therefore, Hypothesis 6 was partially supported. Hypothesis 6 said that higher levels of all three types of media consumption in 2002 would have a significantly negative predictive influence on subsequent altruistic behaviors in 2006 and only television and video games had this effect.

From the previous chapter's results, internet use appeared to diminish the value of altruism in 2004, but appeared to encourage the behavior of volunteerism in 2006. In an attempt to reconcile this information, I investigated how the internet had changed in these years. The internet is increasingly becoming a location to find opportunities for volunteerism and volunteerism has been steadily increasing through online sources since the early 2000s (www.volunteermatch.org 2009, Amichai-Hamburger 2008). This could have some effect on these perceived differences. As mentioned previously, another potential explanation is that teenagers may use the internet differently or internet effects change as they age (i.e., moving from entertainment to goal achievement through using the many features of the internet).

Negative impact of television and video game consumption on volunteerism was slightly reduced upon introduction of demographic and structural variables. However, media impact was generally not reduced through controlling for values and parental involvement. Therefore Hypothesis 7 (i.e., expected reduction of media impact from structural and demographic controls) was partially supported but Hypothesis 8 (i.e., expected reduction of media impact to non-significance from parental involvement controls) was generally not supported.

It should also be noted that the R-squared values of all final models were quite low. The highest value of Nagelkerke's R-squared occurred in Table 7.2, Model 4, with a model strength of .239 in predicting marital status. Nagelkerke's R-squared values in binary logistic regression cannot be analyzed in exactly the same way as R-squared values in OLS regression. However, this does show that much of the variance in behaviors has not been accounted for. Again it appears that the media has been given too much credibility and power as a cause for behaviors. Additionally, I find that the media can be a positive influence in some cases, as seen in internet use's positive influence on volunteerism, especially when supported by high parental involvement.

Table 7.1: Unstandardized and Standardized Coefficients from the Ordinary Least Squares Linear Regression of Frequency of Volunteer Service (2006) on Media Consumption and other Selected Independent Variables.

Educational Longitudinal Study (2002-2006) (N=4,811).

Key: B*** (S.E.)
(Beta)

	Frequency of Volunteer Service (2006)				
	Model 1	***Model 2***	***Model 3***	***Model 4***	***Model 5***
Hours per week watching TV/DVD 2002	-.008*** (.000) (-.130)	-.009*** (.000) (-.138)	-.007*** (.000) (-.117)	-.007*** (.000) (-.107)	-.007*** (.000) (-.107)
Change in hours per week watching TV/DVD 2002-2004	-.005*** (.000) (-.083)	-.006*** (.000) (-.095)	-.005*** (.000) (-.082)	-.005*** (.000) (-.075)	-.005*** (.000) (-.075)
Hours per week playing Video Games 2002	-.009*** (.000) (-.139)	-.004*** (.000) (-.063)	-.002*** (.000) (-.033)	-.001*** (.000) (-.014)	-.001*** (.000) (-.012)
Change in Hours per week playing Video Games 2002-2004	-.006*** (.000) (-.077)	-.003*** (.000) (-.033)	-.001*** (.000) (-.013)	.000*** (.000) (-.005)	.000*** (.000) (-.005)
Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002	.025*** (.001) (.032)	.012*** (.001) (.015)	.017*** (.001) (.022)	.005*** (.001) (.006)	.003*** (.001) (.004)
Change in Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002-2004	.012*** (.001) (.018)	.002* (.001) (.002)	.004*** (.001) (.006)	-.003*** (.001) (-.004)	-.003*** (.001) (-.005)
Female *(omitted category=Male)*		.135*** (.002)	.089*** (.002)	.078*** (.002)	.080*** (.002)
Black *(omitted category=White)*		.083*** (.003)	.062*** (.003)	.041*** (.003)	.042*** (.003)
Hispanic *(omitted category=White)*		.094*** (.003)	.081*** (.002)	.100*** (.002)	.096*** (.002)
Asian *(omitted category=White)*		.142*** (.004)	.135*** (.004)	.161*** (.004)	.163*** (.004)
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*		.033*** (.002) (.021)	.025*** (.002) (.016)	.026*** (.002) (.017)	.028*** (.002) (.017)
Number of Siblings		.012*** (.001) (.022)	.009*** (.001) (.017)	.012*** (.001) (.022)	.012*** (.001) (.023)
SES2		.079*** (.001) (.074)	.069*** (.001) (.064)	.035*** (.001) (.033)	.035*** (.001) (.033)
Urban (Omitted category= Rural)		.090*** (.002)	.068*** (.002)	.063*** (.002)	.064*** (.002)
Suburban (Omitted category= Rural)		.022*** (.002)	.013*** (.002)	.013*** (.002)	.014*** (.002)
Northeast *(Omitted category= South)*		.099*** (.002)	.112*** (.002)	.124*** (.002)	.124*** (.002)
Midwest *(Omitted category= South)*		.005** (.002)	.015*** (.002)	.032*** (.002)	.034*** (.002)
West *(Omitted category= South)*		-.059*** (.002)	-.062*** (.002)	-.065*** (.002)	-.065*** (.002)
Composite Value 1: Altruism			.070*** (.000) (.182)	.058*** (.000) (.152)	.058*** (.000) (.152)
Composite Value 2: Egoism			-.057*** (.001) (-.091)	-.052 *** (.001) (-.083)	-.053 *** (.001) (-.085)
Composite Value 3: Family/Friends			.011*** (.001) (.018)	.004*** (.001) (.006)	.004*** (.001) (.006)
Composite Value 4: Work			.002*** (.001) (.004)	-.006*** (.001) (-.010)	-.005*** (.001) (-.008)
Parental Involvement Composite Variable (2002)				.022*** (.000) (.164)	.001** (.001) (.011)
Lives with Parents (2006)				-.029*** (.001)	-.030*** (.001)
Parental Involvement x Hours per week watching TV/DVD 2002					.000*** (.000) (-.042)
Parental Involvement x Hours per week playing Video Games 2002					.000*** (.000) (-.005)
Parental Involvement x Frequency of Computer Use for Fun 2002					.006*** (.000) (.196)
Intercept (Constant)	1.696*** (.004)	1.489*** (.005)	1.110*** (.010)	1.371*** (.010)	1.358*** (.010)
R2	.023	.042	.081	.104	.107

* p < .05 ** p < .01 *** p < .001

Table 7.2: Log Odds and Exponentiated Odds from the Binary Logistic Regression of Attended College (2006) on Media Consumption and other Selected Independent Variables.
Educational Longitudinal Study (2002-2006) (N=4,869).
Key: B*** (S.E.)
(Exp (B))

	Attended College (2006)			
	Model 1	***Model 2***	***Model 3***	***Model 4***
Hours per week watching TV/DVD 2002	-.032*** (.000) (.969)	-.026*** (.000) (.974)	-.025*** (.000) (.975)	-.021*** (.000) (.979)
Change in hours per week watching TV/DVD 2002-2004	-.019*** (.000) (.981)	-.016*** (.000) (.985)	-.015*** (.000) (.985)	-.012*** (.000) (.988)
Hours per week playing Video Games 2002	-.047*** (.000) (.954)	-.030*** (.000) (.970)	-.027*** (.000) (.973)	-.022*** (.000) (.978)
Change in Hours per week playing Video Games 2002-2004	-.022*** (.000) (.978)	-.011*** (.000) (.989)	-.009*** (.000) (.991)	-.005*** (.000) (.995)
Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002	.522*** (.004) (1.685)	.395*** (.004) (1.485)	.392*** (.004) (1.480)	.344*** (.004) (1.410)
Change in Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002-2004	.381*** (.003) (1.464)	.291*** (.003) (1.337)	.291*** (.003) (1.338)	.270*** (.003) (1.310)
Female		.392*** (.007) (1.481)	.341*** (.007) (1.406)	.307*** (.008) (1.359)
Black		.329*** (.012) (1.389)	.314*** (.012) (1.369)	.239*** (.012) (1.270)
Hispanic		.089*** (.010) (1.093)	.065*** (.010) (1.068)	.192*** (.010) (1.212)
Asian		.709*** (.022) (2.031)	.705*** (.022) (2.025)	.848*** (.022) (2.334)
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*		.442*** (.006) (1.556)	.431*** (.007) (1.538)	.474*** (.007) (1.607)
Number of Siblings		-.088*** (.002) (.915)	-.089*** (.002) (.915)	-.092*** (.002) (.912)
SES2		1.044*** (.005) (2.840)	1.052*** (.005) (2.862)	.919*** (.006) (2.508)
Urban		.601*** (.010) (1.825)	.585*** (.010) (1.795)	.560*** (.010) (1.751)
Suburban		.116*** (.008) (1.123)	.110*** (.008) (1.116)	.116*** (.008) (1.123)
Northeast		.114*** (.009) (1.121)	.140*** (.009) (1.151)	.215*** (.009) (1.240)
Midwest		.480*** (.009) (1.617)	.505*** (.009) (1.657)	.558*** (.009) (1.748)
West		-.024** (.009) (.977)	-.001 (.009) (.999)	-.053*** (.009) (.948)
Composite Value 1: Altruism			.024*** (.002) (1.025)	-.018*** (.002) (.982)
Composite Value 2: Egoism			-.062*** (.003) (.940)	-.046*** (.003) (.955)
Composite Value 3: Family/Friends			.065*** (.003) (1.067)	.041*** (.003) (1.042)
Composite Value 4: Work			.117*** (.003) (1.124)	.086*** (.003) (1.090)
Parental Involvement Composite Variable (2002)				.078*** (.001) (1.081)
Lives with Parents (2006)				-.449*** (.006) (.638)
Intercept (Constant)	1.492*** (.017)	.858*** (.021)	-1.132*** (.042)	-.033 (.043)
Nagelkerke's R2	.089	.199	.206	.239

* p < .05 ** p < .01 *** p < .001

CHAPTER 8.

CONCLUSIONS, LIMITATIONS, AND IMPLICATIONS

Conclusions

The teenage years are one of the most influential times of self development in a person's life. Mass media has long been considered a major influence on adolescents and has been generally understood as having a strong detrimental effect on their values and behaviors during this time period (Scharrer 2008, Harrison 2006, Sinton and Birch 2006, Tickel et al 2006, Sargent et al 2005, Greenberg et al 2003, Huessman et al. 2003, Slater et al. 2003, Hofschire and Greenberg 2002, Cope-Farrar and Kunkel 2002, Greenberg and Smith 2002, Bushman and Anderson 2001, Johnson et al. 2002, Levine and Smolak 1998, Real 1996). This assumption was not found to be fully supported in my analysis. Many influences were found to affect a teenager's development of self and associated system of values during this time and media was consistently not the strongest influence when examined comparatively.

Because many parents have historically felt there was little they could do to protect their children from the media it has become a scapegoat for many social ills. Parents and policy makers have therefore missed the larger pressures teenagers are exposed to in society and also the effect they can have on these adolescents. This study was valuable and necessary to show parents (and society at large) that media is clearly not the most impactful influence on adolescents' values and behaviors. There are other far more powerful influences which can truly make a difference in the values and behaviors of a child and one of these influences is directly in the parents' control.

Throughout this study, I examined relationships amongst adolescent media users (in tenth grade, twelfth grade, and two years post high school), their values, and their behaviors while testing the proposed theory of Mediated Valueflection. Previous studies related to these topics were limited in scope and not generalizable, primarily used cross-sectional data instead of longitudinal data, failed to use appropriate control variables, and looked mainly at media's influence on deviant behaviors instead of value creation as a whole. This study has improved the body of research available on this topic by

covering all of these previously unaddressed issues while testing the new theory of Mediated Valueflection.

Mediated Valueflection theory hypothesized that media would have a negative effect on adolescents' altruistic values and behaviors, but that structural and demographic factors would control for some of media's influence. Additionally, it was hypothesized that once parental involvement was taken into account, media's influence would be reduced to have no effect on values and behaviors. Based on my findings, this theory was generally supported, but some adaptations are required which will be discussed in detail later in this chapter.

Media Use along Structural and Demographic Lines

To examine the relationships between adolescents and media, I first looked at what affects media consumption. Chapter five found that various demographic and structural variables explain some of the variance in different types of media consumption. For example, blacks consumed much higher levels of television compared to their white peers, over five hours per week more. In contrast, white adolescents and those of higher socioeconomic status consumed higher levels of internet compared to their peers. These findings supported the work of previous researchers which showed that media consumption varies along both demographic and structural lines (Cleary et al. 2006, Calvert et al. 2005, Pardun and Scott 2004, Lowry et al. 2002).

Many researchers have recently focused on the "digital divide" that occurs between those of different races and socioeconomic groups in relation to media use (Roberts and Foehr 2008, Cleary et al. 2006, Eamon 2004). The most recent report on teenage media use from Nielsen supports that overall teenagers are increasing their collective use of online technologies (The Nielsen Company 2009). However, the rate of increase in internet access and use is not equal among all adolescents. For example, whites, males, those from higher socioeconomic backgrounds, those with two parents in the home, and those living in the Northeast appear to be on the high end of internet use. In contrast, blacks, females, those in lower socioeconomic backgrounds, those with one parent living in the household and those in the West are some of the lowest level users.

Additionally, teenagers are not abandoning other types of media for the internet (The Nielsen Company 2009). Increases in internet use by certain segments of the population (e.g., white, high SES) have been counterbalanced by continuous heavy use of television and video game media in other segments (e.g., black, lower SES). These findings support a cultural consumption of media and it seems evident that at least in the near future, "television isn't going anywhere," driven in part due to its continued heavy usage by certain demographic groups (The Nielsen Company 2009).

Media Influence on Values and Behaviors

These structural and demographic differences in media use also have more far reaching outcomes. Media use did have an influence on adolescents' developing values and eventual behaviors. Supporting the proposed theoretical contribution of Mediated Valueflection, consumption of all media types did significantly and negatively predict adoption and maintenance of altruistic values and significantly and positively predict adoption and maintenance of egoistic values in chapter six. In a theory of Mediated Valueflection, media was expected to affect a teenager's system of values in a structural way, reinforcing the egoistic values of a capitalist society (as a representation of the generalized other). This was hypothesized based on the work of previous structural theorists and researchers who found that media operates in a hegemonic way and enforces a reality that supports those in power (Van Gorp B. 2007, Grindstaff and Turow 2006, Carragee and Roefs 2004, Radford 2003; Sontag 2003; Zerubavel 1997, Kosicki 1993, Gamson et al 1992). This hypothesis was found to be supported.

I found that media did have some negative social impact, but as hypothesized it was definitely not all powerful. This issue is important because of the distraction tactics the focus on media has enabled in the past. However, contrary to my hypothesis, media was also not all negative in influence as expected. I found that different media types display different effects in relation to the adolescent. Internet operated differently than television and video games with regard to eventual behaviors in chapter seven. Internet appeared to support positive social (i.e., volunteerism) and personal development (i.e., college attendance) behaviors, while television and video games did not.

This suggests that the theory of Mediated Valueflection should be adapted and developed further in the case of the internet. Internet has a more interactive user experience compared to television and video games. As mentioned before, users can access college information, use research resources, access volunteer opportunities and complete many other activities online. They can complete none of these tasks through television and video games. In this way, internet is a more agentic form of media and it appears it can therefore be used to achieve positive goals for society.

Another interesting finding in this research was not related to a specific hypothesis, but to the overall assumption of media's influence on adolescent values and behaviors as a whole. The R-squared values of all final models in chapters six and seven were, at the highest, .110 (in Table 6.1, Model 4). This means that the model effectively explained 11% of the variation from the mean in an adolescent's adoption and maintenance of altruism. Therefore, almost 90% of the variance in adoption and maintenance of altruism (and an even greater percentage for the other values and behaviors) is not explained by these variables. These findings supported Mediated Valueflection in that the media is not all powerful in its influence. The American public has historically attributed incredible power to the mass media that is not deserved.

It also appears that there are many influences on the development of values and behaviors which are not controlled for in this analysis. These likely include effects of peers, religious beliefs, political leanings and potentially many other influences as mentioned previously. Another reason for the low R-squared values in this study could include random variance in the data. A final, and highly likely, reason the R-squared values are low is that the effect of media content (outside of the current measurement of quantity) was not operationalized for inclusion in this study. Future studies could gain much greater insight by including both quantity and type of content in data collection metrics. More will be discussed on this topic in the Limitations section.

Effects of Parents as Significant Others

Because parents and policy makers have been overly focused on negative media effects, they have overlooked some of the positive ways adolescents can interact with media and also the positive

impact parental involvement can have on adolescents' values and behaviors when parents are significant others in their children's lives. As mentioned in chapter four, choosing and maintaining the parent as a significant other has an element of agency involved on the part of both the adolescents and the parent (or parents). The positive impact of parents was hypothesized based on previous findings and supported in my analysis (Warren et al 2002, Nathanson et al 2001).

Mass media's effect was diminished in some cases and amplified in others when various structural, demographic, and parental involvement control variables were applied. Yet in no case did the control variables, and particularly parental involvement, completely negate the effect of media as expected in the original approach of Mediated Valueflection. Parental involvement thus does not appear to completely protect adolescents from the influence of media as expected. Structural and demographic effects also do not control completely for the impact of the media, and can even amplify it in some cases. However, it did appear that parental involvement can help to counterbalance media effects, as suggested in previous research (Warren et al 2002, Nathanson et al 2001). The mass media channel of internet was also found to have some positive social implications with regard to behaviors in my analysis, particularly when interacting with parental involvement.

Supporting the original theory of Mediated Valueflection, parental involvement was found to help develop altruistic beliefs, discourage egoistic beliefs, increase family and friend value importance and improve adolescents' perceptions of the value of work. The effect of parental involvement was much higher than any single effect of media consumption on altruism. This same finding was also supported with regard to behaviors. Though television and video game media had a negative effect on frequency of volunteerism, parental involvement had a positive and much stronger effect when interacting with internet use.

Limitations and Suggestions for Future Research

I have previously referred to the difficulty of disentangling the effects of the medium versus message in this study. For example, we may know that an adolescent watched 20 hours of television per week. However, we do not know if they were watching soap operas, network dramas, sitcoms, reality

television, music videos, or televised movies. An adolescent could use the internet at least once a day, but we do not know if this is to watch YouTube videos, email friends, apply to colleges, or update a blog. The different types of media as well as the different types of content could have very different effects on the viewer. Because of the data available, the effect of content is not operationalized successfully and this study cannot separate these effects. These different types of content consumed at different times in the adolescent's life could explain for some of the differences in internet use's negative influence on altruism in 2004 and positive influence on volunteerism in 2006. Future work in this field should ideally ask about media content in addition to quantity of media consumption.

Future work should also examine other forms of media and examine internet use in a more direct manner. Internet was measured through proxy measures in this study, but could and should be asked more directly of users in the future. Additionally, though not used in the same frequencies as television, video games, or traditional internet, mobile media is a growing phenomenon and should also be investigated in future research in this field (The Nielsen Company 2009).

It would also be interesting to look at longer reaching outcomes of adolescent behavior in future work. This study was limited to look at adolescents behaviors two years post high school. Fortunately, the Educational Longitudinal Study is currently planned to be completed again with this cohort either in 2010 or 2012 (National Center for Education Statistics 2009.) Therefore, later outcomes (e.g., attainment of higher education, work behaviors, family creation) can be further examined in light of earlier media consumption.

As a final limitation, the ELS 2002 data set does not provide ''why'' explanations, resulting in reliance on previous research and theory to guide interpretation. Qualitative research could shed more light on the reasons behind different types of media use, why various values are of higher or lower importance, and why certain behaviors are completed. As this data is not available, interpretations have been made based on the best available information at hand. Qualitative research which would supplement the findings outlined here is suggested for future research efforts.

Reevaluating Mediated Valueflection Theory

As mentioned previously, several adaptations to the theory of Mediated Valueflection are necessary based on these findings. First though, in support of the original theory, media was found to be consumed in different ways by different demographic groups and according to different structural forces. Media use supported egoistic values and discouraged altruistic values as expected. Television and video games were also found to discourage altruistic behaviors (i.e., volunteerism). Parental involvement did work to counterbalance these effects.

Some changes in the theoretical approach are necessary though. In a revised version of Mediated Valueflection theory, internet should be regarded differently than television and video games, as it can have positive effects on adolescents. Also, though parental involvement can counterbalance media effects, it does not fully control for media effects. More research is recommended in the future to determine other factors which may affect values and behaviors, such as peers, religious institutions, political leanings, and significant life events (e.g., abuse, loss of a close friend or family member, etc). Having a parent involved as a significant other appears to be only one of many potential effects on these values and behaviors.

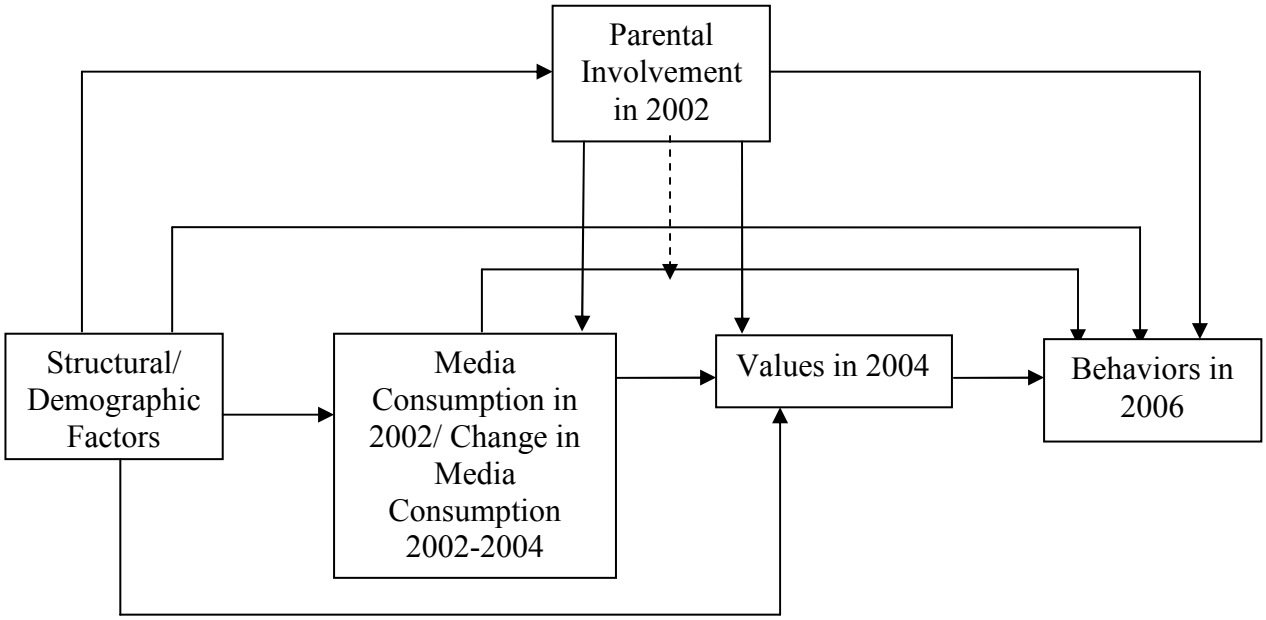

Figure 8.1: Revised Heuristic Model of Concept Relationships

Revisiting the heuristic model outlined previously in Chapter 4, it appears that most effects are as hypothesized. However, in summary, required changes to the original theory are as follows. Parental involvement does not completely control for media effects as originally hypothesized, but can offset these effects. Additionally, parental involvement is far more important than media. As another change, the internet appears to differ from the other media types of television and video games with regard to behaviors. The internet can have positive effects on both altruistic behaviors (i.e., volunteerism) and self-improvement behaviors (i.e., college attendance). Parental involvement also appears to have a strong positive interaction effect with internet as an effect on volunteerism.[16]

These findings give guidance to parents with regard to media. Parents should be supportive of adolescents' goal oriented internet use (e.g., accessing the internet to research colleges, investigate volunteer opportunities), but monitor and restrict their children's television and video game use early in adolescence. This must also occur while interacting with adolescents more often (in meaningful ways) to help counterbalance media's effects (Warren et al 2002).

[16] Another minor change was that media use in 2002 and media use change in 2002-2004 generally had similar effects and thus were combined into one concept.

Implications

These findings are helpful for parents who feel they have no control over what their children internalize from the media. Parents actually have far more influence than they might expect. Parental involvement was shown to be a positive force on valuation of altruism, valuation of family and friends, valuation of work, frequency of volunteer service (particularly when interacting with internet use) and odds of college attendance. Parental involvement was also shown to negatively influence valuation of egoism.

The influence of parents also generally outweighed influence of the media, as mentioned previously. Again, though parents cannot negate media's effects, they can work to counteract them. Parents can take several strategies to accomplish this goal. Warren, Gerke, and Kelly suggest co-viewing, instructive mediation, and restrictive mediation as three popular strategies parents may use (Warren et al 2002). Co-viewing means that the parent watches or uses the media with the child. Instructive mediation involves the parent and child using media together, but also discussing the content viewed. Restrictive mediation involves rules around viewing, including time and content restrictions.

Yet parental involvement in relation to media alone is not enough. My research shows that parental involvement must include significant communication on a broader scale. When parents work to have a meaningful dialogue with their children on important subjects, this creates a far reaching positive impact beyond the subjects being directly discussed. Parents should talk to their teenagers about both life events on a micro level (e.g., school activities, classes, homework, grades, college, things that may be troubling them) and on a macro level (e.g., local and world news and events). It appears that the more involved parents are in their children's lives in adolescence, the better the outcomes will be for those children in later life.

This research enhances the general understanding of how media operates in relation to adolescents' values and behavior through the theoretical contribution of Mediated Valueflection. In addition, this work has important implications on the field of general sociology. This work continues to bridge the divide between the camps of structural force versus individual agency. My work shows that

adolescence is a time period where both structural forces and individual agency are interacting in complex ways to define an individual's life course. No "either/or" strategy can truly capture the relationship of these audiences and the media they consume. Therefore, a synthesis of the two major theoretical approaches to date (i.e., media as structural force and audience as active agent) has been proposed in the theory of Mediated Valueflection.

This approach is theoretically supported in social psychology's focus on "significant others," "reflected appraisals," and the "generalized other," in the theory of symbolic interactionism, the practice of audience reception analysis, and also in Kellner's work in the field of cultural studies. In this research, I find supporting evidence that even though media operates as a representation of the generalized other and structural forces are at work influencing values and behaviors, agentic choice may also be applied to improve life outcomes. As mentioned previously, choosing and maintaining the parent as a significant other involves active choices for both the children and the parents. My work finds that when parents are significant others in their children's lives and reinforce positive values and behaviors, children's lives may be improved despite overwhelming structural forces.

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APPENDIX A: Media and Other Influences on Working, Marriage and Having Children

This analysis involved the regression (either ordinary least squares or binary logistic) of various behaviors in 2006 (i.e., working after high school, getting married, and having children) on media consumption levels, structural and demographic attributes, values statements, and parental involvement. This analysis investigated what causes variance in displaying different types of behaviors. Again, this analysis is longitudinal in nature, thus supporting inferred causality.

Media Influence on Behaviors

According to Table 9.3, Model 1, television and video game consumption in 2002 decreases an adolescent's odds of holding a job after high school by 1.2% for every one hour increase in television consumption. Hours per week of video game play decreases an adolescent's odds of working after high school by 2.4% for every one hour increase in playing video games. These percentages seem small, but again can add up very rapidly when adolescents spend many hours consuming media. For example, consider a teenager who plays video games 20 hours a week. This teen would be 48% less likely to work after high school compared to a peer of the same demographic background.

The findings here could be influenced by a time limitation factor. Those who consumed more media in 2002 were likely to also consume more media in 2006. If a person is spending time consuming media, he or she cannot be working at that same time. Direction of television and video game effects do not change in the final model. However primary internet effects are non-significant once all control variables have been applied (Table 9.1, Model 4).

According to Table 9.2, Model 1, television use in 2002 increases odds of marriage and internet use in 2002 decreases odds of marriage by 2006. Hours per week of television consumption in 2002 increases an adolescent's odds of being married by 2006 by 3.8% for every one hour increase in television consumption. However, increased internet use decreases an adolescent's odds of being married by 2006 by 33% for every one unit increase on the 1-5 frequency of internet use scale. Hours per week of video game play initially decreases an adolescent's odds of being married by 2006 by 2.1% for every hour playing video games. However, the direction of this effect changes once all controls are in place in Table

9.2, Model 4. As a result, hours per week of video game play increases an adolescent's odds of being married by 2006 by 2.0% for every hour playing video games.

According to Table 9.3, Model 1, television and video game use in 2002 also increases odds of having biological children by 2006. Hours per week of television consumption in 2002 increases an adolescent's odds of having children by 2006 by 4.9% for every one hour increase in television consumption. Hours per week of video game play initially appears to decrease an adolescent's odds of having children by 2006 by 0.8% for every hour playing video games. However, the direction of this effect changes once all controls are in place in Table 9.3, Model 4. As a result, hours per week of video game play increases an adolescent's odds of having children by 2006 by 2.4% for every hour playing video games.

Again internet use operates differently than television and video games. Increased internet use decreases an adolescent's odds of having children by 2006 by 49.2% for every one unit increase on the 1-5 frequency of internet use scale. Therefore it appears television and video game usage support traditionally accepted forms of family creation (i.e., getting married and having kids), while internet use appears to discourage these behaviors.

This would seem to support structural theorists who have suggested that media normalizes and therefore encourages early sexual relationships amongst teenagers (Cope-Farrar and Kunkel 2002, Greenberg and Smith 2002). However the internet does not appear to share this same direction of influence. Internet could again be interpreted as a more agentic media due to the two-way interactions it supports. Because of the agency involved in both active viewing and in generating new content (i.e., the internet itself is user-created), there appear to be forms of stereotype subversion occurring through use of this medium.

It should be noted, however, that the R-squared values of all final models were quite low. The highest value of Nagelkerke's R-squared occurred in Table 9.2, Model 4, with a model strength of .246 in predicting marital status. Nagelkerke's R-squared values in binary logistic regression cannot be analyzed in exactly the same way as R-squared values in OLS regression. However, this does show that

much of the variance in behaviors has not been accounted for. Again it appears that the media has been given too much credibility and power as a cause for behaviors.

Overall Demographic and Structural Effects

It was hypothesized (i.e., Hypothesis 7) that demographics and structural variables would control for much of the effect of media influence and therefore they were included in the analysis. This hypothesis was found to be partially supported. Controlling for demographic and structural variables generally decreased media's effect on holding a job after high school, getting married, and having children, as seen in Model 2 of all tables.[17] Yet again, though statistically significant, there were no substantive decreases.

No specific hypotheses existed related to the original direction of each demographic and structural control that was applied in this analysis, as this was not the focus in this research. However, these results do add to the body of knowledge of how structural and demographic variables affect behaviors and as such will be discussed briefly here. The results discussed for all demographic and structural effects are based on Model Two in each of the tables. Model Two did not include Values or Parental Involvement as to better understand the influence of these variables when values and parental involvement were not taken into account. That said, the direction of these demographic and structural variables did not change when these controls were included in each of the models. The effects were only slightly weakened or strengthened.

Demographic Effects: Race/Ethnicity

Whites had higher odds of getting married by 2006. Whites' odds of being married by 2006 were 95.2% higher than Blacks, 48.7% higher than Hispanics, and 53.3% higher than Asians. However, Whites had much lower odds of having children by 2006 compared to their Black and Hispanic peers. Whites' odds of having children by 2006 were 49% lower than Blacks and 32.3% lower than Hispanics. Whites' odds of having children was however 82.4% higher than Asians.

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[17] Two exceptions included internet use's negative effect on holding a job after high school (Table 7.3, Model 2) and video games use's positive effect on having children (Table 7.5, Model 2) which were both amplified once demographic and structural controls were in place.

Demographic Effects: Gender

Females had higher odds of working after high school (24.2% higher according to Table 9.1, Model 2), getting married (over three times higher according to Table 9.2, Model 2), and having children (3.43 times higher according to Table 9.3, Model 2) compared to males. Past research has found that although the average age at first marriage is increasing, and the gender gap is narrowing, females still typically enter into marriage and parenthood at a younger age than males (Saardchom and Lemaire 2005). These previous findings were supported in these results.

Structural Effects: Family Structure

Those from "traditional" two-parent families also had lower odds of working after high school (10.9% lower according to Table 9.1, Model 2), getting married (3% lower according to Table 9.2, Model 2) and having children (43% lower according to Table 9.3, Model 2) in the two years after high school. Another aspect of family composition, number of siblings, increased the odds of working after high school, with each additional sibling increasing odds by 6.5%. Number of siblings also increased odds of getting married and having children, with each additional sibling increasing odds by 13.5% and 13.8%, respectively. Many of these findings appear to again support Downey's resource dilution argument (Downey 2001). Since resources are finite, adolescents who wish to gain greater access to resources would engage in actions such as work and marriage.

Structural Effects: Socioeconomic Class

Higher socioeconomic status (SES) decreased likelihood of working after high school (odds decreased 14.4% for every one standard deviation increase in SES according to Table 9.1, Model 2). This is likely because those of higher SES do not need to work to support themselves. Higher SES also vastly decreased the odds of getting married and having kids. Odds decreased by 66.2% and 51.4%, respectively, for every one standard deviation increase in SES. Those with lower SES may wish to get married younger in order to access a greater breadth of resources, both financial and physical. Past research also supports that having children is very important to females in low SES conditions, as it is an achievable measure of success in a world of limited options (Edin and Kefalas 2005).

Structural Effects: Urbanicity

With regard to urbanicity, those living in urban and suburban areas had lower odds of working after high school than those in rural areas (34.7% and 36.8%, respectively) according to Table 9.1, Model 2. Those living in urban areas and suburban areas also were less likely to get married (42.9% and 21.8%, respectively) and have children (41% and 16.5%, respectively) compared to those in rural areas according to Tables 9.2 and 9.3, Model 2. There may be a labor influence occurring in tandem here. If those in rural areas wish to work in agriculture (a popular choice for their geographic location), an advanced degree is not needed and they may begin work immediately after high school.

Structural Effects: Region

Those living in the Northeast, Midwest and West had higher odds of working in the years following high school compared to those in the South (48.3%, 201.4%, and 44.5%, respectively) according to Table 9.1, Model 2. Those living in all other regions were also less likely to get married (Northeast=73.9%, Midwest= 64.4% and West= 8.2% lower) and have children (Northeast=19%, Midwest= 38% and West= 11.5% lower) compared to those in the South according to Tables 9.2 and 9.3, Model 2. It would be interesting to include religious and political beliefs as control variables in future waves of ELS data collection and analysis. Both of these belief systems are likely highly correlated with the cultural elements of region and thus I would expect them to explain some of the effects of geography when it comes to getting married and having children.

Significant Other Effects: Parental Involvement

For all behaviors, parental involvement did little to control for media effects (as seen in Tables 9.1, 9.2 and 9.3, Model 4). Yet, parental involvement is a valuable addition to all models due to its explanatory power on behaviors. A change in odds due to a one unit increase in parental involvement can also be substantively impactful (depending on behavior). For example, odds of having children decrease by 4.3% for every one unit increase in parental involvement. The decision to include parental involvement was also validated by an increase in R-squared and Nagelkerke's R-squared values in Model 4 for all tables.

Living with parents also influenced behaviors. Living with parents increases odds of working (36.4% in Table 9.1, Model 4) and decreases odds of being married (85.2% in Table 9.2, Model 4) and having children (26.3% in Table 9.3, Model 4).

Interaction Effects: Media and Parental Involvement

I completed additional analysis to determine interaction effects as related to behaviors of working after high school, getting married, and having children. For the dependent behavior of working after high school, log odds for parental involvement interaction effects were .004 for computer use and .001 for video game use. Television and parental involvement interaction effects were not significant for either of these dependent variables. For the dependent behavior of getting married, log odds for parental involvement interaction effects were -.016 for computer use, -.001 for television use, and .002 for video game use. All effects were significant at $p<.001$. Finally, for the dependent behavior of having children, log odds for parental involvement interaction effects were -.002 for computer use and .001 for television use. These effects were significant at (at least) $p<.010$. Video game and parental involvement interactions were not significant in predicting this variable.

Table 9.1: Log Odds and Exponentiated Odds from the Binary Logistic Regression of Held Job After High School (2006) on Media Consumption and other Selected Independent Variables.
Educational Longitudinal Study (2002-2006) (N=4,869).
Key: B*** (S.E.)
(Exp (B))

	Held Job After High School (2006)			
	Model 1	***Model 2***	***Model 3***	***Model 4***
Hours per week watching TV/DVD 2002	-.012*** (.001) (.988)	-.010*** (.001) (.990)	-.010*** (.001) (.990)	-.012*** (.001) (.988)
Change in hours per week watching TV/DVD 2002-2004	-.011*** (.001) (.989)	-.009*** (.001) (.992)	-.008*** (.001) (.992)	-.009*** (.001) (.991)
Hours per week playing Video Games 2002	-.024*** (.000) (.976)	-.019*** (.001) (.981)	-.019*** (.001) (.981)	-.022*** (.001) (.979)
Change in Hours per week playing Video Games 2002-2004	-.009*** (.001) (.991)	-.007*** (.001) (.993)	-.007*** (.001) (.993)	-.009*** (.001) (.991)
Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002	-.011 (.006) (.989)	-.021 *** (.006) (.979)	-.015* (.006) (.985)	.004 (.006) (1.004)
Change in Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002-2004	-.135*** (.005) (.874)	-.104 *** (.005) (.901)	-.105*** (.005) (.901)	-.096*** (.005) (.909)
Female		.216*** (.010) (1.242)	.225*** (.010) (1.252)	.229*** (.010) (1.257)
Black		-.620*** (.015) (.538)	-.555*** (.015) (.574)	-.558*** (.015) (.573)
Hispanic		-.896*** (.013) (.408)	-.889*** (.013) (.411)	-.943*** (.013) (.389)
Asian		-1.659*** (.014) (.190)	-1.633*** (.014) (.195)	-1.663*** (.015) (.189)
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*		-.115*** (.010) (.891)	-.119 *** (.010) (.888)	-.125*** (.010) (.883)
Number of Siblings		.063*** (.003) (1.065)	.061*** (.003) (1.062)	.060*** (.003) (1.062)
SES2		-.155*** (.007) (.856)	-.144*** (.007) (.866)	-.088*** (.007) (.916)
Urban		-.426*** (.014) (.653)	-.408*** (.014) (.665)	-.401*** (.014) (.670)
Suburban		-.459*** (.013) (.632)	-.447*** (.013) (.640)	-.452*** (.013) (.636)
Northeast		.394*** (.012) (1.483)	.391*** (.012) (1.479)	.366*** (.012) (1.442)
Midwest		.700*** (.013) (2.014)	.705*** (.013) (2.025)	.697*** (.013) (2.008)
West		.368** (.012) (1.445)	.367*** (.012) (1.443)	.379*** (.012) (1.461)
Composite Value 1: Altruism			-.071*** (.002) (.932)	-.065*** (.003) (.937)
Composite Value 2: Egoism			-.112*** (.004) (.894)	-.114*** (.004) (.892)
Composite Value 3: Family/Friends			.005 (.004) (1.005)	.013** (.004) (1.014)
Composite Value 4: Work			.081*** (.004) (1.084)	.091*** (.004) (1.095)
Parental Involvement Composite Variable (2002)				-.011*** (.001) (.989)
Lives with Parents (2006)				.311*** (.010) (1.364)
Intercept (Constant)	3.357*** (.027)	3.570*** (.032)	3.698*** (.062)	3.345*** (.063)
Nagelkerke's R2	.014	.072	.077	.081

* p < .05 ** p < .01 *** p < .001

Table 9.2: Log Odds and Exponentiated Odds from the Binary Logistic Regression of Marital Status (2006) on Media Consumption and other Selected Independent Variables.
Educational Longitudinal Study (2002-2006) (N=4,861).
Key: B*** (S.E.)
(Exp (B))

	Marital Status (2006)			
	Model 1	***Model 2***	***Model 3***	***Model 4***
Hours per week watching TV/DVD 2002	.037*** (.001) (1.038)	.031*** (.001) (1.031)	.029*** (.001) (1.029)	.030*** (.001) (1.030)
Change in hours per week watching TV/DVD 2002-2004	.027*** (.001) (1.028)	.026*** (.001) (1.026)	.025*** (.001) (1.025)	.022*** (.001) (1.023)
Hours per week playing Video Games 2002	-.022*** (.001) (.979)	.006*** (.001) (1.006)	.011*** (.001) (1.012)	.020*** (.001) (1.020)
Change in Hours per week playing Video Games 2002-2004	-.015*** (.001) (.985)	.003** (.001) (1.003)	.008*** (.001) (1.009)	.017*** (.001) (1.017)
Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002	-.400 *** (.007) (.670)	-.325 *** (.007) (.722)	-.332 *** (.007) (.717)	-.341 *** (.007) (.711)
Change in Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002-2004	-.377*** (.005) (.686)	-.301*** (.006) (.740)	-.315*** (.006) (.730)	-.375*** (.006) (.687)
Female		1.127*** (.017) (3.085)	1.130*** (.017) (3.097)	1.150*** (.017) (3.160)
Black		-3.032*** (.060) (.048)	-2.881*** (.060) (.056)	-2.757*** (.060) (.063)
Hispanic		-.667*** (.020) (.513)	-.515*** (.020) (.598)	-.179*** (.021) (.836)
Asian		-.761*** (.040) (.467)	-.645*** (.040) (.525)	-.649*** (.041) (.522)
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*		-.030* (.013) (.970)	-.086*** (.013) (.917)	.060*** (.013) (1.062)
Number of Siblings		.127*** (.004) (1.135)	.121*** (.004) (1.129)	.108*** (.004) (1.114)
SES2		-1.041*** (.010) (.353)	-1.086*** (.011) (.338)	-1.191*** (.011) (.304)
Urban		-.560*** (.018) (.571)	-.527*** (.018) (.590)	-.525*** (.019) (.591)
Suburban		-.246*** (.014) (.782)	-.268*** (.014) (.765)	-.214*** (.014) (.807)
Northeast		-1.343*** (.022) (.261)	-1.355*** (.022) (.258)	-1.321*** (.023) (.267)
Midwest		-1.032*** (.017) (.356)	-1.058*** (.017) (.347)	-1.118*** (.017) (.327)
West		-.085** (.015) (.918)	-.139** (.015) (.870)	-.303*** (.016) (.739)
Composite Value 1: Altruism			.005 (.004) (1.005)	.051*** (.004) (1.052)
Composite Value 2: Egoism			-.038*** (.005) (.963)	-.058*** (.005) (.944)
Composite Value 3: Family/Friends			.320*** (.007) (1.377)	.274*** (.007) (1.315)
Composite Value 4: Work			-.186*** (.005) (.831)	-.185*** (.005) (.831)
Parental Involvement Composite Variable (2002)				-.043*** (.001) (.957)
Lives with Parents (2006)				-1.908*** (018) (.148)
Intercept (Constant)	-2.977*** (.033)	-3.457*** (.041)	-.3212*** (.089)	-2.863*** (.092)
Nagelkerke's R2	.036	.168	.183	.246

* p < .05 ** p < .01 *** p < .001

Table 9.3: Log Odds and Exponentiated Odds from the Binary Logistic Regression of Has Biological Children (2006) on Media Consumption and other Selected Independent Variables.
Educational Longitudinal Study (2002-2006) (N=4,874).
Key: B*** (S.E.)
(Exp (B))

	Has Biological Children (2006)			
	Model 1	***Model 2***	***Model 3***	***Model 4***
Hours per week watching TV/DVD 2002	.048*** (.001) (1.049)	.024*** (.001) (1.024)	.023*** (.001) (1.023)	.021*** (.001) (1.021)
Change in hours per week watching TV/DVD 2002-2004	.042*** (.001) (1.043)	.025*** (.001) (1.025)	.024*** (.001) (1.024)	.022*** (.001) (1.023)
Hours per week playing Video Games 2002	-.008*** (.001) (.992)	.026*** (.001) (1.026)	.024*** (.001) (1.024)	.024*** (.001) (1.024)
Change in Hours per week playing Video Games 2002-2004	.003*** (.001) (1.003)	.027*** (.001) (1.028)	.026*** (.001) (1.027)	.026*** (.001) (1.027)
Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002	-.678 *** (.006) (.508)	-.562 *** (.006) (.570)	-.562 *** (.006) (.570)	-.541 *** (.006) (.582)
Change in Frequency of Computer Use for Fun (for Individuals with Home Internet Access) 2002-2004	-.466*** (.005) (.628)	-.390*** (.005) (.677)	-.391*** (.005) (.676)	-.390*** (.005) (.677)
Female		1.232*** (.015) (3.429)	1.277*** (.015) (3.587)	1.293*** (.015) (3.642)
Black		.399*** (.017) (1.490)	.483*** (.017) (1.622)	.557*** (.017) (1.746)
Hispanic		.280*** (.016) (1.323)	.337*** (.017) (1.400)	.382*** (.017) (1.465)
Asian		-1.737*** (.072) (.176)	-1.694*** (.072) (.184)	-1.766*** (.072) (.171)
"Traditional" Parental Structure *(omitted category= all other structures other than 2 parent mother/father)*		-.563*** (.011) (.570)	-.563*** (.011) (.570)	-.543*** (.011) (.581)
Number of Siblings		.129*** (.004) (1.138)	.132*** (.004) (1.141)	.127*** (.004) (1.136)
SES2		-.716*** (.009) (.489)	-.721*** (.009) (.486)	-.702*** (.009) (.496)
Urban		-.527*** (.016) (.590)	-.511*** (.016) (.600)	-.492*** (.016) (.612)
Suburban		-.180*** (.013) (.835)	-.183*** (.013) (.833)	-.164*** (.013) (.848)
Northeast		-.210*** (.016) (.810)	-.249*** (.016) (.780)	-.251*** (.016) (.778)
Midwest		-.478*** (.015) (.620)	-.512*** (.015) (.599)	-.540*** (.015) (.583)
West		-.122*** (.015) (.885)	-.146*** (.015) (.864)	-.172*** (.015) (.842)
Composite Value 1: Altruism			-.069*** (.003) (.934)	-.041*** (.003) (.960)
Composite Value 2: Egoism			-.004 (.005) (.996)	-.016** (.005) (.984)
Composite Value 3: Family/Friends			.019*** (.005) (1.019)	.016** (.005) (1.016)
Composite Value 4: Work			-.066*** (.005) (.936)	-.053*** (.005) (.949)
Parental Involvement Composite Variable (2002)				-.044*** (.001) (.957)
Lives with Parents (2006)				-.305*** (011) (.737)
Intercept (Constant)	-2.188*** (.027)	-2.779*** (.034)	-1.379*** (.076)	-1.645*** (.077)
Nagelkerke's R2	.073	.168	.171	.178

* p < .05 ** p < .01 *** p < .001