

**QUESTION-ORDER EFFECTS AND THE THIRD-PERSON EFFECT:
DISTINGUISHING IMPACT OF QUESTION-ORDER ON
THE THIRD-PERSON EFFECT IN THE
CONTEXT OF VIOLENT VIDEO GAMES**

by

Jennifer B. Gilkins

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the requirements for the degree of Master of Arts in Communication

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Jennifer B. Gilkins

Approved: _____
Elizabeth Perse, Ph.D.
Professor in charge of thesis on behalf of the Advisory Committee

Approved: _____
Elizabeth Perse, Ph.D.
Chair of the Department of Communication

Approved: _____
Tom Apple, Ph.D.
Dean of the College of Arts and Sciences

Approved: _____
Carolyn A. Thoroughgood, Ph.D.
Vice Provost for Research and Graduate Studies

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ABSTRACT

The idea of negative media content having more of an influence on others than on self, or in other words the third-person effect, has been supported since its inception in 1983 by sociologist W. Phillips Davison. This study sought to expand knowledge about the third-person effect in order to enable researchers to begin examining the role of perceptions play in support for restrictions on violent media content (i.e., the behavioral hypothesis). First, the study considered the effect in a new domain: violent video games. Second, the study tested three different explanations for the effect. The first explanation this study examined was the role stereotypes play in perceptions of media effects, specifically those stereotypes associated with socioeconomic status and sex. Secondly, exposure to and liking violent media content were examined as possible moderators of the third-person effect as previous research has demonstrated this is a possibility. Lastly, this study examined how question-order might affect measurement of the third-person effect in order to provide a possible explanation for the lack of empirical support for the behavioral hypothesis.

The primary experimental manipulation was a 5-week time lapse in order to extract a question-order effect. Four hundred and eighteen participants ($n = 418$) were randomly assigned to two different experimental conditions. The first condition ($n = 191$) did not have a five week time lapse between administration of questions on perceived effects on self and others, whereas the second condition ($n = 227$) did. Respondents also completed measures of perceived effects of violent media, including video games, on males and females, low and high SES, and on themselves. They also reported their exposure to and liking of violent media content, including video games. The study's findings were consistent with those of previous TPE research that individuals perceive others to be more affected by violent media content than themselves. The study also identified a significant TPE for violent video games ($r = .39$) that was larger in

comparison to the effect size of violent media in general ($r = .31$). Additionally, this study hypothesized that males and those of low SES would be perceived as more affected than females and those of high SES which was supported. This study found no support that exposure to and/or liking of violent media content moderated the third-person effect of violent media content. The most intriguing finding of the study was a near significant question-order effect ($p = .06$) despite moderate power. Controlling for sex increased the effect to significance. Future research needs to examine why sex plays a role in question-order effects.

Chapter 1

Introduction

Intended and unintended media effects have been a primary focus of mass communication research since the mid 20th century. Recently, mass communication research has seen a shift to the perceived effects of media messages on self and others. A leading perspective on perceived effects is the third-person effect (TPE). This perspective operates from the basic assumption that individuals have the tendency to assume that media have different—invariably stronger—influences on others than on themselves (Perloff, 2002), particularly in regards to negative media content (i.e., violence, pornography). What compels this discrepancy amongst individuals? The theoretical explanations that most researchers have relied on are attribution theory and biased optimism (Perloff, 2002).

Attribution Theory

Attribution theory examines the processes enacted by individuals to infer causes of behavior (Heider, 1958). The theory consists of four major assumptions:

1. People perceive behavior as being caused and intentional.
2. People possess dispositional properties (e.g., traits, abilities, intentions).
3. People assess behavior as being caused by a combination of internal or dispositional (e.g., motivations, knowledge, attitudes, moods, needs, opinions of others) and external or situational (e.g., task difficulty, luck) factors.
4. People perceive that others have similar characteristics as themselves.

Note that assumption four contradicts the basic TPE hypothesis that people perceive others to be different, not similar, to themselves and more vulnerable to media influences (Paul, Salwen, & Dupagne, 2000). Heider (1958), however, acknowledged

that there are situational factors that contribute to the differentiation from self and others; this concept is referred to as the fundamental attribution error.

Fundamental attribution error assumes individuals have the tendency to underestimate the impact of situational factors and to overestimate the role of dispositional factors in controlling behavior (Ross, 1977). In other words, individuals assume the actions of other individuals are due to personality dispositions whereas their own actions can be attributed to situational factors. Researchers have effectively demonstrated empirical evidence of fundamental attribution error (Jones, 1990; Miller, Jones, & Hinkle, 1981; Ross, 1977).

The appeal of the attribution theory to third-person effects researchers is its focus on cognitive, rather than motivational, mechanisms. The application of the attribution theory to a media message “explains why a person may think he/she understands the underlying persuasive aspects of the message, whereas others’ dispositional flaws (e.g., gullibility, naiveté, lack of intelligence, etc.) make them incapable of perceiving message persuasiveness” (Paul et al., 2000, p. 60).

Attributions can vary based on message content as demonstrated in a study conducted by Standley (1994). Standley conducted a series of in-depth interviews that consisted of asking subjects to determine the effects of television on an audience. Respondents were more likely to cite dispositional reasons than situational ones for the effects of television on others. Hence, when estimating effects on themselves, individuals take into account the role played by external factors like persuasive intent.

On the other hand, when estimating effects on others, individuals assume dispositional shortcomings (e.g., gullibility) rather than situational factors: Individuals render others as incapable of factoring in situational factors like persuasive intent (Perloff, 2002).

Another concept within attribution theory is egotistical differential attributions, which is often referred to as a self-serving bias (Perloff, 2002). This concept asserts that individuals view the prospect of being persuaded by a “negative message” as characteristic of less intelligence and consequently individuals do not admit to or claim to be persuaded by the “negative message.” On the other hand, if the message is regarded as a “positive message,” individuals admit to being persuaded by the “positive message.” As a result of the acceptance of the “positive message,” individuals are ascribing a positive attribute to oneself due to the fact they are “smart enough to recognize its value” (Rojas, Shah, & Faber, 1996, p. 165).

Egotistical differential attribution and biased optimism share a commonality of the self-serving bias. Egotistical differential attribution is often referred to by name as self-serving bias, whereas biased optimism assumes the existence of a self-serving bias. However, it can be argued that egotistical differential attribution and biased optimism are one in the same due to their focus on individual’s tendency to assume that they are better than the average person (Alice, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995).

Biased Optimism

Biased optimism has two underlying assumptions: that people can distinguish between societal-others and personal-self level effects and that media messages influence people's perception of risk or harm (Tyler & Cook, 1984). An individual's optimism has been explained by their endeavor to reinforce their self-esteem. "If the third-person effect is driven by a desire to preserve self-esteem, people should be willing to acknowledge effects for communications that are regarded as socially desirable, healthy, or otherwise good for the self" (Perloff, 2002, p. 496). Research supports these notions. Gunther and Thorson (1992) found that people say that they are more influenced than others by advertisements with positive emotional content, but not by neutral ads. White (1997) found that individuals acknowledged greater personal influence for a persuasive message with strong, but not weak, arguments. According to Gunther and Mundy (1993) "the concept of harmful vs. beneficial outcome is a central one in theoretical research on the 'optimistic bias' phenomenon—the tendency for people to think they are less likely to have a negative or undesirable experiences than others" (p. 60).

The Davison Experiments

Overall, the idea of negative media content having more influence on other individuals, or in other words the third-person effect, has been supported since its development in 1983 by sociologist W. Phillips Davison. Davison conducted four small experiments that involved exposing individuals to types of persuasive

communication that appeared in the mass media and found support in each experiment that individuals assume effects of media on others more than themselves.

Davison's first experiment took place just after the New York State 1978 election. Participants completed a questionnaire that was divided into two sections, one including "questions about New Yorkers in general," and the other including "a few questions about your own experiences." One of the items in the first section read as follows:

As you probably know, Governor Carey repeatedly called on Mr. Duryea (the republican challenger) to make his income tax returns public, and used Mr. Duryea's failure to do so as a major campaign theme. About how much influence do you think this had on the way New Yorkers voted in the gubernatorial election? Please indicate this by making a mark at the appropriate point on the scale below. (p. 5)

The scale ran from 0 (No Influence at All) to 7 (Very Great Influence). The results showed that about half (48%) the participants perceived the effect on others to be greater than on themselves.

Three years later Davison conducted his second experiment with the intent of confirming or disconfirming the third-person effect. Davison explored whether or not exposure to television influenced children to ask their parents to buy things they would not have otherwise wanted. Items on the questionnaire consisted of questions about self and other individuals' children:

[Self]: Did exposure to TV influence you to ask your parents to buy things you otherwise wouldn't have wanted?

[Other]: Does exposure to TV cause kids to ask their parents to buy them things they otherwise wouldn't want? (p. 6)

Again, Davison confirmed the existence of the third-person effect.

Davison's third experiment took place during the primary campaigns prior to the 1980 presidential election. Participants were asked questions in regards to the upcoming election and the role of media in it for self and others:

[Self]: Let's assume that you are planning to vote in the upcoming presidential election. Would you say that your voting intention has been influenced by the results of the New Hampshire primary?

[Other]: How much effect do you think the results of the New Hampshire primary will have on the political fortunes of Ronald Reagan/Jimmy Carter? (p. 7).

Consistent with previous experiments, Davison found support for the third-person effect. Following the same general format, Davison conducted a fourth experiment in which he once more found support for the third-person effect. This time, the experiment evaluated the effect of the charges that Ronald Reagan would pursue a "hawkish" foreign policy on their own votes and the votes of people in general.

Taken as a whole, Davison's experiments each supported the conclusion that a person exposed to a type of persuasive communication in the mass media sees this as having a greater effect on others than on self. Davison referred to this as the "perceptual hypothesis," also referred to as the third-person perception within the literature. Davison further implied that the "third-person effect may help explain various aspects of social behavior It appears to be related to the phenomenon of censorship in general" (p. 1). In other words, he believed that perceptions can

influence behavior, which has been deemed the “behavioral hypothesis” of the third-person effect.

As a whole, the third-person effect has received tremendous scholarly attention:

As uses and gratifications did in the 1970s, the third-person effect hypothesis turns conventional media effects theorizing on its head. Instead of looking at media effects on beliefs, it examines beliefs about media effects. Rather than assuming that media affect perceptions, it assumes that perceptions can shape media. (Perloff, 2002, p. 490)

For this reason, the third-person effect has generated substantial interest (for a review, see Perloff, 2002) as well as strong meta-analytic confirmation (Paul et al., 2000).

Recently, the behavioral hypothesis has received tremendous attention within mass communication research as a result of the robust empirical support that the perceptual hypothesis has received. In fact, Jensen and Hurley (2005) recently stated that “Exploring the behavioral hypothesis is now the central focus of third-person effect research” (p. 243). Unlike the perceptual hypothesis, the behavioral hypothesis has not received robust empirical support. The most plausible and practical explanation for the lack of robust empirical support are weaknesses within third-person effect measurements (Jensen & Hurley, 2005).

The basis of the behavioral hypothesis is that perceptions influence behavior. Perloff (2002) stated that the behavioral hypothesis is “vague and terribly simplistic; it ignores the many processes that mediate the perception-behavior relationship” (p.

499). The bulk of research that has been conducted using the behavioral hypothesis is in the realm of censorship.

The censorship aspect of the behavioral hypothesis is under a great deal of criticism due to the ambiguity about the direction of causal impact as well as the fact that actual censorship behaviors have not been tapped (Perloff, 2002). This is due to the fact that existing literature provides a limited theoretical framework to understand the motivations for censorship (Rojas et al., 1996). “Effects of third-person perceptions on censorship are further complicated by evidence that perceived effects on self, as well as perceived effects on others, forecast support for censorship” (Perloff, 2002, p. 498). Furthermore, researchers have failed to provide an operational definition of what constitutes censorship. Lambe (2002) states that there are a “myriad of ways in which censorship attitudes have conceptually and operationally defined,” (p.187), in turn this has led to enigmatic relationships between variables that predict pro-censorship attitudes.

Significance of the Study

The purpose of this study is to examine and improve upon the measurement of the perceptual hypothesis in order to enable researchers to predict behavior from perceptions more accurately. This study will specifically examine how question-order might affect measurement of the third-person perception of violent video games while also examining stereotypes and exposure to violent media content and their influence on media perceptions.

The importance of examining the third-person effect rests in the implications that the effect can have within society. These implications not only include the suppression of media content (Hoffner et al., 1999) but the positive implication associated with the knowledge of the existence of third-person effect:

Society benefits when people gain insight into their own third-person perceptions. Social life is strengthened when individuals recognize that their perceptions of other people are not always accurate and that their fellow citizens are more capable of separating out the political wheat from the chaff that they typically consume. In a fragmented era, it is particularly important to reduce people's inclination to psychologically separate themselves from others and to encourage individuals to view others and the self through the same sets of lenses. (Perloff, 2002, p. 503)

In other words, knowledge of the third-person effect could reduce the existence and use of stereotypes in regards to perceived media effects on individuals.

Exploration of the perceptual hypothesis can offer insight into cognitive responses to media content. Media effects research is often criticized for focusing primarily on relations between input variables (e.g., media information and its characteristics) and output variables (e.g., attitudes, beliefs, and behavior), with minuscule consideration of the cognitive processes that might mediate these relationships (Shrum, 2002). Understanding cognitive processes can help illuminate theoretical explanations for media effects. The cognitive processes that individuals implement to evaluate media messages could be the result of the measures used by researchers to evaluate the perceived effects on self and others. One goal of this study is to explore if measurement can stimulate individuals to implement particular cognitive processes that affect the third-person effect.

Third Person Effect: The Perceptual Hypothesis

The perceptual hypothesis was initially utilized by Davison (1983) to examine the perceived impact of persuasive political communication on self and others, but has since been studied across a variety of contexts in pro-social to anti-social messages with explicit persuasive content. These include news (Price, Huang, & Tewksbury, 1997), television violence (Rojas et al., 1996), violent rap lyrics (McLeod, Eveland, & Nathanson, 1997), pornography (Gunther, 1995; Rojas et al., 1996), internet websites by groups advocating hatred against minorities (Lambe & McLeod, 2005), pamphlets by groups advocating the overthrow of the U.S. government (Lambe & McLeod, 2005), and advertising (Salwen, 1998; Shah, Faber, & Youn, 1999).

As a whole, the third-person perception has received robust empirical support. For instance, Perloff (1996) reported that 15 of 16 studies that he examined supported the perceptual hypothesis. Also, Paxton (1995) and Tiedge, Silverbatt, Havice, and Rosenfeld (1991) have reported more than 90% of their respondents perceived greater media effects on others than on themselves. Furthermore, Paul and his colleagues' (2000) meta-analysis estimated the overall perceptual effect size to be large ($r = .50$) and stronger among college students. As a result of this robust empirical support for third-person perception, researchers are currently focusing on various explanations for stronger third-person perceptions. These include social distance, stereotyping, and exposure.

Social Distance

Social distance is defined as the degree of similarity between self and others. In other words, individuals socially compare themselves to others in order to determine the degree in which the “other” person is “similar” to themselves. Most third-person effect studies operationally define social distance by moving from specific (similar respondents) to more general (distant) types of people (Salwen & Dupagne, 1999). For example, in their studies using college students, Cohen, Mutz, Price, and Gunteher (1988) and White (1997) both operationalized “others” as people “in this classroom,” people “in this town,” and people “in this state.” Consistent with their expectations both found the third-person perception increased as others become increasingly general. The use of generalized others, however, has become a source of debate within third-person effects research.

Duck and Mullin (1995) found that third-person effects are mediated by the nature of the compared other. That is, the way in which “others” are defined influences individuals’ perceptions of media influence on others. Vaguely and distantly defined others are perceived as more susceptible to negative media influence than closer and more specifically defined others. Hence, recent research has examined comparison groups more specifically in terms of age, gender, race, and education level.

Recently, Lambe and McLeod (2005) examined the role of age-based social distance in formulating perceptions. The researchers obtained a sample with a mean age of 49 (66% were between the ages of 40 and 50 years). Respondents were asked to

“think about the following types of communication and the effects that they would have on you/18-to-24-year-old adults/40-to-50-year-old adults.” Respondents then individuated the degree of the effects on a scale ranging from “0” for *not affected at all* to “9” for *very affected* across nine expressive anti-social contexts. Lambe and McLeod’s results were consistent with previous social distance research in that they found a differential between self and the more distant 18-to 24-year-old comparison group as larger in every case than the differential for the in-group other 40-to-50-year olds.

Elder, Douglas, and Sutton (2006) showed that the social distance effect is moderated by whether the message favors gender in-group or the out-group. The study consisted of male and female participants reading a message arguing that either women were better drivers than men or vice versa. Participants then indicated on a 7 point likert scale (1 = *not at all*, 7 = *very much*) “How much do you think this message would influence your (females, society, males) opinions?” (p. 357). Consistent with previous research, for pro-out-group messages, the out-group was perceived as significantly more influenced than the in-group. The in-group was also perceived as significantly more influenced than the self. For pro-in-group messages, the in-group was perceived as more influenced than the out-group. Elder and her colleagues also found a significant main effect for participants’ gender: across messages and targets, females attributed more influence than males.

The phenomenon of comparing oneself with others is far from an innovative concept. In fact, Festinger (1954) referred to this process as social comparison. Social comparison theory examines how we use others to make sense of ourselves and our social worlds. There is a universal tendency to perceive ourselves in ways that make us look good or at least better than other people, often referred to as a self-serving bias. The typical model of data collection for third-person effects invites social comparison. Researchers pose a series of parallel questions about perceived media effects. In other words, respondents are asked to indicate how much they have been influenced by a stimulus as well as how much they think others have been influenced by the same stimulus, thus inviting comparison. Hence, when socially comparing ourselves to others in regards to socially undesirable content, it is no surprise that researchers have found that the more socially distant an individual is from ourselves, the larger the size of the perceptual media effect.

Stereotypes

In general, the belief that people are “cognitive misers” (Taylor, 1981) holds that individuals apply stereotypes to person perceptions (Macrae, Milne, & Bodenhausen, 1994). That is, unless motivated, individuals put forth as little cognitive effort as possible, which leads them to often rely on stereotypical information that is readily available. Duck, Hogg, and Terry (2000) argue that as a result, “perceptions of persuasive impact on self and others are also dependent on salient group memberships of social identities (e.g., gender identity, political identity, student identity)” (p. 266).

Although past research has failed to examine the role of negative stereotyping of social groups in third-person perception (Duck et al., 2000), more recent research has begun to take the effects of stereotyping into account. Scharrer (2002) examined the role that group-by-group comparisons play in forming the third-person perception. Respondents were asked to identify the characteristics of groups they perceive as more vulnerable to negative media influence than others. Overall, respondents viewed members of specific social groups to be more influenced by negative media than others. Specifically, respondents were more likely to believe that (a) poor and working-class people are more affected than to believe in equal susceptibility by income; (b) racial minorities are more affected than to believe in equal susceptibility by race; (c) urban residents are more affected than to believe in equal susceptibility by place of residence; (d) those with lower education are more affected than to believe in equal susceptibility by education; and (e) men are more affected than to believe in equal susceptibility by gender. A theoretical explanation for these associated stereotypes reverts to egotistical differential attributions, which individuals view the aspect of being persuaded by a “negative message” as an unintelligent characteristic. Prior research has shown a positive relationship between educational attainment and socioeconomic status (SES) (McKay, Doverspike, Bowen-Hilton, & McKay, 2003). Thus, those with higher education or “intelligence” or associated in a higher SES.

Remaining consistent with theoretical expectations and previous research, this study proposes the following hypothesis:

H1: Perceived effects of negative media content on those from lower SES will be larger than those from higher SES.

The application of stereotypes in forming third-person perceptions has been examined independently of social distance. It can be argued, however, that stereotyping and social distance can be linked. Cohen et al. (1988) and White (1997), for example, examined college students' perceptions of third-person effects on individuals within their classroom, town, and state. Each of these categories could reflect effects of various stereotypes. A college student could be from the neighboring town. Hence, they have a preconceived notion of those individuals who live in the town that could have been formed through a high school rivalry and have associated stereotypes. On the other hand, a student could be from a different state. For example, a student who is a resident of a Midwest state attends a college on the East Coast or vice-versa. Different parts of the country are associated with particular stereotypes. For example, an article that appeared in *The Michigan Daily* (2003) reported on student perceptions of East Coast and Midwest stereotypes. Michigan students labeled those from the East Coast, particularly Long Island, as "snotty and rich" while those students for the East Coast labeled the Midwestern student body as "naïve and unsophisticated." Therefore, it can be argued that social comparison and stereotyping are not necessarily distinct concepts.

Exposure

Individuals assume that exposure equals influence. Hence, the greater the perceived exposure, the stronger the perceived effects on others (McLeod, Detenber, & Eveland, 2001). McLeod and his colleagues found that liking for and exposure to television moderated the third-person effect. So, individuals who liked violence were more likely to believe that it affected both themselves and others less. Also, when liking for violence was controlled, individuals who watched less violence tended to see others as relatively more affected than they were. These findings are consistent with Festinger's (1957) cognitive dissonance theory that deals with relationships between cognitive elements, including attitudes, beliefs, and behaviors. When two of these cognitive elements appear contradictory, such as "I hate violence, but I love fights," dissonance occurs. Hence, if individuals like violence but perceive it to affect other people more, then dissonance occurs. Thus, in order to avoid dissonance, individuals who are exposed to massive amounts of violence will perceive violence as having no effect or less of an effect on others than those who are not exposed to massive amounts of violence.

Question-Order Effects

A common methodological concern that has received mixed research results within third-person effect research is question-order effects. Question-order effects are elicited when an individual's response is consciously or unconsciously influenced by a

question's placement within a survey (Sigelman, 1981). In other words, question sequence can predispose individuals to a particular response.

Researchers have debated the existence of question-order effects as a result of unsystematic research in conjunction with contradictory research results (McFarland, 1981). Overall, the frequency, size, and nature of question-order effects are matters of uncertainty (Schumann & Presser, 1996). The issue of question-order effects has recently migrated away from marketing and opinion research into the domain of third-person effects.

Third-Person Effect Question-Order Research

The concern for question-order effect in third-person effect varies from researcher to researcher. For some it exists, for others it does not. David and Johnson (1998) reported question-order effects for outcomes that were high in social undesirability, such as media violence (Duck & Mullin, 1995; Innes & Zeitz, 1988). This finding demands the examination of question-order effects as the bulk of third-person effect research focuses on social undesirable issues, such as television violence (Rojas et al., 1996) and pornography (Gunther, 1995; Rojas et al., 1996). Moreover, examining socially undesirable content is the basis for exploring TPE's behavioral hypothesis that predicts censorship of media content. Clearly, examining the predispositions to censor necessitates the need to examine socially undesirable content. Additionally, Price and Tewksbury (1996) revealed a question-order effect for respondents who were high in political knowledge when questions about impact on the

self followed a question about impact on others. Based on these results, the researchers speculated that comparisons between other-then-self questions might not be analogous to self-then-others questions. Hence, this study proposes to test this speculation by implementing methods to test for question-order effects: a time lapse between administration of self-other and other-self questionnaires.

The rationale for this study is not to refute the concept of the third-person effect, but to extract how much of an influence question-order has on the self-other discrepancy of media effects. As Perloff (2002) stated, “Although question-order does not explain away third-person effects, it would be surprising if it had no influence whatsoever, given the role that perceptual contrasts play in third-person perceptions” (p. 501).

Theoretical Explanations for Question-Order Effects

Researchers have offered two main explanations for the occurrence of question-order effects that are relevant to third-person perception: consistency effect and saliency effect.

Consistency effect

The consistency effect operates on the basis that previous answers influence subsequent answers. For example, if an individual answers that they are “very happy” with their marriage, they are likely to answer that they are “very happy” overall. In general, individuals have a need to be consistent that is theoretically supported by the cognitive dissonance theory. Festinger’s (1957) cognitive dissonance theory deals with

relationships between cognitive elements, including attitudes, beliefs, and behaviors. When two of these cognitive elements appear contradictory, such as “I hate peanuts, but I love peanut butter,” dissonance occurs. In general, humans prefer logical harmony among their ideas, beliefs, attitudes, and expectations because it gives them some control over the unpredictable world in which they live and the people with which they deal. The idea of control is consistent with the explanation that people are motivated by a need to control unpredictable life events and this is why thee (and them) more than me (Perloff, 2002).

In general, when our answers are not consistent with our attitudes, beliefs, and behaviors dissonance occurs, and we are uncomfortable. This is especially true with surveys where one can remember and even examine previous answers in order to appear rationale and consistent, such as surveys measuring third-person perception. The measurement of third-person perception involves researchers posing a series of parallel questions about perceived media effects. Typically, these questions are presented in a back-to-back format, for example, self-other or other-self: Overall, how much would you say you (others) would be harmfully affected by watching movies that contain graphic scenes of gratuitous violence (e.g., Lambe & McLeod, 2005).

As a result of this format, respondents can remember as well as examine previous answers in order to avoid dissonance. One way to overcome this impact is for studies to implement a time lapse between surveying perceived effects on self and others. For this reason, this study will impose a time lapse between parallel

questioning in order to reduce the respondent's ability to recall as well as examine their previous answers. The respondent's inability to recall as well as examine their previous answers as a result of the time lapse, the following hypotheses is proposed:

- H2: The difference between perceived effects on self and others will be smaller when there is a time lapse between asking third-person perception questions than when there is no time lapse.

Saliency effect

Saliency effects occur when a particular response is made more cognitively attractive because of preceding questions (Schuman & Presser, 1996). Simply stated, a saliency effect is a primacy effect. Gibson, Shapiro, Murphy, and Stanko (1978) and Cowan, Murphy, and Wiener (1978), for example, found a saliency effect in which respondents reported more victimization when asked attitude questions about crime compared to the sub-sample who completed the same survey without questions about crime.

In the third-person effect, a primacy effect could operate in which the media-impact-on-others questions skews responses by activating a self-serving bias, in which individuals evaluate themselves more favorably than they evaluate others and that they believe they are less likely than others to experience negative events (Paul et al., 2000; Weinstein & Klein, 1996). Hence, this bias could act as a "strong" anchor that influences responses to the second question on self or vice-versa (Perloff, 1999). This influence could result in a magnification of the third-person effect in which individuals

would perceive others as more influenced by media than they would otherwise without the presence of a primacy effect.

Overall, social comparison can be activated in third-person effect research because of the typical model of data collection in which researchers pose a series of parallel questions about perceived media effects. In other words, respondents are asked to indicate how much they have been influenced by a stimulus as well as how much they think others have been influenced by the same stimulus. Thus, comparison is invited by parallel question wording. This impact could be alleviated by the introduction of a time lapse. The implementation of a time lapse would not allow respondents to be cognitively aware they are comparing themselves with others.

To evaluate the effect of a time lapse on the TPE this study will use previous anti-social contexts and pro-social contexts as well as introduce a new context that attracts college students. Violent video games have become increasingly popular among college students and overall have caused a controversy within society as a result of the violent images and themes that seem to be an indispensable component of video games. This study will focus on the perceived effects of violent media, especially violent video games.

Violent Media Content: Videogames

A sizable portion of mass communication research is on violent media content, particularly television violence. Research has consistently shown that television violence has a variety of adverse emotional, attitudinal, and behavioral effects

(Hoffner et al., 2001). Research has also shown that individuals perceive media violence to have a larger effect on others than on themselves (e.g., Duck & Mullin, 1995, Hoffner et al., 2001). This study builds on this research by considering TPE of violent media content. Additionally, this study extends previous TPE research to consider TPE of a technology that has gone beyond the designation of “fad” or “new technology” to a customary component of modern-day entertainment (Vorderer, Bryant, Pieper, & Weber, 2006): the video game.

In 2005 alone, computer and video game software sales totaled \$228.5 billion in the United States (Entertainment Software Association, 2006). Recently, the Entertainment Software Association (ESA) reported that half of all Americans age 6 or older play video games (ESA, 2005) signifying the increasing popularity of video game play. The increasing popularity of video games is due to the fact that they provide a different form of entertainment than traditional film or television. Unlike general films or television, video games involve interactivity. In other words, video games contain content that is modified by the user and can change as play develops (Vorderer et al., 2006). When the player abstains from communicating, the game ceases to exist (Grodal, 2003; Kiouisis, 2002; Newman, 2004). As a result, video games require active involvement from the user, which is in contrast to television entertainment that can be enjoyed passively; “Television is something you watch, video games are something you do, a world that you enter, and, to a certain extent, they are something you ‘become’” (Turkle, 1985, pp. 66-67).

The “becoming” aspect of the video game is what elicits the public concern due to the fact that research has revealed that violent content is a key component of most games. Smith, Lachlan, and Tamborini (2003) analyzed 60 popular video games for three game consoles (Nintendo 64, Sega Dreamcast, and Sony Playstation) and found violence in 68% of the games. Of those games 90% were rated for teens (T) and adults (M) and 57% were rated for all audiences (E). Recently, Thompson, Tepichin, and Haninger (2006) specifically examined 36 randomly selected M-rated video games for the major video game consoles: Xbox, GameCube, and Playstation 2. All 36 games (100%) involved intentional acts of violence that depicted injuries to human characters and 25 (69%) of the 36 games depicted injuries to nonhuman characters, including injuries to the player. Overall, Thompson and colleagues observed 6011 character deaths from violence in approximately 42 hours of game play, occurring at an average rate of 145 character deaths per hour. This included 4268 human deaths, occurring at an average rate of 104 human deaths per hours. Additionally, 24 games (67%) depicted deaths from violence of nonhuman characters, including the player, and 33 games (92%) depicted deaths from violence of human characters, including the player. All 36 games (100%) rewarded or required the player to injure characters, while 33 games (92%) rewarded or required the player to kill.

The interactive nature of the games as well as the focus on violent images and themes that seem to be an indispensable component of video games has contributed to the growing fears about their effects. *ABC* (2006) recently reported that research shows

that playing violent video games can make players think other people are out to get them. The same study also found that young men are more likely to think it is acceptable to smoke marijuana and drink alcohol after playing a violent video game. In addition, *CBS* affiliate (2006) in San Francisco reported on a study that found violent video games rewired teen brains. The study found that among those teens who played a violent video game, the part of their brain linked to primitive emotions, such as fear, aggression, and anxiety, fired up more than those who played a non-violent video game. Furthermore, the report ended with a quote by Susan Smiga, a psychiatrist at UC San Francisco; “In my own clinical practice, we see children, usually boys, who are having significant aggression problems, who are usually watching or playing a lot of [violent video games], who have a hard time differentiating violence in those games from reality.” However, throughout research, there continues to be a debate as to whether or not violent video games are linked to aggressive behavior as well as whether or not there are sex differences in the effects.

Violence and Aggression

With media violence there is always inquiry about aggression. Is there a stimulation effect: Does violence cause aggression? Is there a catharsis effect: Does viewing violence allow individuals to alleviate aggression? These are just a few of the questions that are often debated among researchers. Anderson and Dill (2000), Dill and Dill (1998), and Sherry (2001) are a few of the researchers that have linked the effects of violent video games to increased aggressive behavior. But, as Sparks and

Sparks (2002) point out, “little if any research has been done that actually compared the effects on aggressive behavior and thinking of other types of media depictions or content with the effects of violent depictions. Yet, there is certainly good reason to think that other types of media content might inspire aggression as well” (p. 281).

Individuals might not be inclined to admit that they are influenced negatively by violent media content due to a self-serving bias. In other words, people are expected to evaluate themselves more favorably than they evaluate others and to believe they are less likely than others to experience negative events (Paul et al., 2000; Weinstein & Klein, 1996). The next hypotheses of this study propose the classic third-person effect:

H3a: Perceived effects of violent media content on others will be larger than those on self.

H3b: Perceived effects of violent video games on others will be larger than those on self.

Sex Differences

In general, any research examining the link between violence and aggression touches upon the issue of sex differences. Research has reported sex differences in emotion and response to media violence (see Shields, 1987; Zillmann & Weaver, 1996). Paik and Comstock (1994) examined 217 surveys and experiments documenting effects of media exposure on aggression and found that men were slightly more influenced than women on average. As a whole, social norms impart that physical aggressiveness is more acceptable and common for males compared to

females. Thus, with the negative association of video games with violence and aggression, it is no surprise that researchers have consistently found video games are liked more and played more by males than by females (Lucas & Sherry, 2004).

Previous research on TPE and sex differences has found that males are perceived as more influenced by some negative media content than females. For example, Lo and Wei (2002) found that both males and females perceived internet pornography to have greater influence on other males than other females. Remaining consistent with this previous research, the following hypotheses are proposed:

H4a: The perceived effects of violent media content will be larger for males than females.

H4b: The perceived effects of violent video games will be larger for males than females.

Exposure

Although research on how media exposure mediates third-person effects has been inconclusive (Rucinski & Salmon, 1990; Salwen, 1998) some research has found that individuals with more exposure to particular types of content (e.g., pornography, news) believe they have developed resistance to influence (Gunther, 1995). Hoffner and her colleagues (2001) also found that liking and exposure to television moderates the third-person effect. This next set of hypotheses predicts that exposure to violent media (e.g., television, movies) will moderate the third-person effect:

H5a: The third-person effect of violent media content will be negatively related to exposure to violent media content.

- H5b: The third-person effect of violent video games will be negatively related to violent video game play.
- H6a: Liking violent media will be negatively related to the third-person effect.
- H6b: Liking violent video games will be negatively related to the third-person effect.

Chapter 2 *Method*

Procedure

To explore the impact of question-order on the third-person effect, this study used an experimental design: 2 (No Time Lapse/ 5 week Time Lapse) x 2 (self-other/other-self) design. A self-report online questionnaire was administered via SurveyMonkey.com to 418 undergraduates enrolled in COMM 212 (Oral Communication in Business). Students received extra credit for participating in the study. The questionnaire was administered during the Spring Semester of 2007 at the University of Delaware and took approximately 10 to 20 minutes depending on the condition to which the student was assigned. The University's Human Subjects Review Board approved the administration of the questionnaire.

Course sections were randomly assigned to one of four conditions. The first two conditions had no time lapse in the completion of their questionnaires. That is, they completed the entire questionnaire at one time. The first condition consisted of students ($n = 81$) answering questionnaires that included questions pertaining to perceived effects on self followed by perceived effects on others along with general demographic information and frequency of exposure to media content. The second condition was similar to the first, except students ($n = 110$) answered questions on perceived effects on others followed by perceived effects on self. To control for any effects of history, half of the questionnaires in these first conditions were administered at the beginning of the Spring Semester, with the other half administered five weeks

later. The third and fourth conditions consisted of a time lapse of five weeks between administration of questions on perceived effects on self and others. These conditions were over-sampled in order to ensure power to identify question-order effects that are typically small, about .06 (Schumann & Presser 1996). Those in the third condition ($n = 108$) answered questions on self, then questions on others five weeks later. The fourth condition was the opposite, with students ($n = 119$) answering questions on others, then questions on self five weeks later. Because time was a central part of the experimental condition, students were only given one week to complete the questionnaire.

Questionnaire Design

The questionnaire (Appendix A) was designed to measure the following: age, sex, major, year in school, family's social classification, mother and father's education level, media use, frequency of exposure to violent media content, liking violent media content, and the third-person effect.

Age

Respondent's age was gathered by asking, "How old are you? (As of your last birthday)." Ages ranged from 18 to 30 with a mean of 19.72 ($SD = 1.32$).

Sex

Respondents were asked to identify their sex by asking, "What is your sex?" The sample was 44.4% ($n = 185$) male and 55.6 % ($n = 232$) female.

Major

Respondents identified their major by answering the open-ended question, “What is your major?” There were a total of 33 different majors cited in the responses. Of those cited, the top five majors were Business (42.4%), Accounting (33.3%), Finance (33.3%), Management (33.3%), and Marketing (30.3%).

Year in School

Respondents indicated their year in school. The sample consisted of primarily sophomores (51.2%) followed by freshmen (20.2%), juniors (18.3%), and seniors (10.3%) respectively.

Social Classification

Respondents were asked to identify whether their family was working class (blue-collar), working class (white-collar), middle class, upper middle class, or upper class. The sample primarily considered their family as upper middle class (50.8%) followed by middle class (30.6%), working class (white collar) (6.7%), upper class (6.0%), and working class (blue-collar) (5.8%) respectively.

Mother and Father's Education Level

Respondents were asked to identify the education level of their mother and/or father's education level. Mothers' and fathers' education levels ranged from less than high school to graduate school. Respondents' mothers' education level was primarily college (45.9%) followed by graduate school (22.7%), some college (16.7%), high school (13.5%), and less than high school (1.2%) respectively. There was a significant

relationship between mother's education level with social classification ($r = .32, p < .01$). Similarly, respondents' fathers' education level was primarily college (38.6%) followed by graduate school (33.0%), some college (14.7%), high school (12.5%), and less than high school (1.2%) respectively. There was a significant relationship between father's education level with social classification ($r = .38, p < .01$).

Media Use

Respondents reported their media consumption of television, movies, and video games. On average, the sample watched 2.68 hours of television ($SD = 2.56$) during a typical weekday and 4.31 hours ($SD = 3.25$) on a typical weekend. The sample attended an average of 0.92 movies a month ($SD = 0.97$) at the movie theater and watched 5.52 movies at home ($SD = 4.87$).

In regards to video games, of the overall sample, 60.5% ($n = 250$) owned video games and 57.27% ($n = 239$) owned game consoles. On average the sample owned 11.0 video games ($SD = 23.88$) and 1.17 consoles ($SD = 1.47$). Males owned significantly more video games ($M = 21.12$) than females ($M = 5.52$): $t(295) = 6.17, p < .001$. Males also owned significantly more video game consoles ($M = 1.91$) than females ($M = 0.59$): $t(313) = 9.66, p < .001$. On average, the sample played video games 1.57 days per week ($SD = 2.20$) and 2.55 minutes per day ($SD = 5.08$). Consistent with ownership, males played more video games ($M = 2.77$) than females ($M = 0.61$): $t(291) = 10.79, p < .001$. Males ($M = 4.64$) also played significantly more hours per week than females ($M = 0.79$): $t(241) = 7.89, p < .001$.

Respondents were asked to list their favorite game. There were a total of 89 different games cited in the responses. Of those cited, the top five were *Madden NFL 2007* (51.7%), *Mario-Kart* (29.2%), *Guitar Hero* (18.0%), *Super Mario Brothers* (12.4%), and a tie between *The Sims* and *Snood* (10.1%).

Frequency of Exposure

Respondents were asked to identify the frequency they are exposed to violent media content (movies, television, and video games) in order to examine whether the amount of exposure moderated the third-person effect. In order to disguise the study's intent on violent media content, several questions were derived asking about respondents' exposure to general types of movies, television programs, and video games.

Descriptions of these types of content were adapted from the parental guidelines of the *Motion Picture Association (MPA)*, *The Entertainment Software Rating Board (ESRB)*, and *The TV Parental Guidelines Monitoring Board* (Table 1). So, respondents were asked to mark how often they watched and played (1 = Never, 5 = Very Frequently) general categories of movies, television, and video games, that ranged from family-oriented, to moderately violent, to excessively violent. To make the descriptions clearer, example titles were included after the descriptions. Table 1 presents the content descriptions for each of the exposure categories.

Table 1: Content Descriptors

Movies	Content Descriptors
Family	Movies that are family oriented that contain content with minimal violence (e.g., <i>Cars</i> , <i>Happy Feet</i> , <i>Ice Age</i>).
Moderate	Movies that contain some violence, but not excessive amounts (e.g., <i>Pirates of the Caribbean</i> , <i>Harry Potter</i> , <i>Shrek</i>).
Excessive	Movies that contain excessive and frequently gratuitous violence (e.g., <i>Saw III</i> , <i>Kill Bill</i> , <i>Miami Vice</i>).
Television	
Family	Prime-time television shows that are family oriented that contain content that includes minimal violence (e.g., <i>American Idol</i> , <i>Deal or No Deal</i> , <i>Super Nanny</i>).
Moderate	Prime-time television shows that contain some violence, but not excessive amounts (e.g., <i>The Office</i> , <i>Gilmore Girls</i> , <i>Grey's Anatomy</i>).
Excessive	Prime-time television shows that contain excessive and frequently gratuitous violence (e.g., <i>CSI</i> , <i>Prison Break</i> , <i>24</i>). Programs on premium channels (e.g., <i>HBO</i>) that contain excessive and frequently gratuitous violence (e.g., <i>The Sopranos</i> , <i>OZ</i>).
Video Games	
Family	Video games that are rated E for everyone. These games contain minimal violence (e.g., <i>Madden NFL 07</i> , <i>Cars</i> , <i>Lego Star Wars II: The Original Trilogy</i>).
Moderate	Video games that are rated T for Teen. These games contain some violence, but not excessive amounts (e.g., <i>Need for Speed: Most Wanted</i> , <i>Call of Duty 3</i> , <i>World of Warcraft</i>).
Excessive	Video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., <i>Gears of War</i> , <i>Grand Theft Auto: San Andreas</i> , <i>Halo</i>).

Movies examples for each rating were drawn from the top grossing movies of 2005 and 2006 according to the website www.boxofficemojo.com. Examples of video and computer games were obtained from the top selling video and computer games of 2005 and 2006 according to the leading market retail research company, the NPD Group. Television shows examples demonstrating the parental guidelines of *The TV*

Parental Guidelines Monitoring Board, were obtained from the Nielson Television Ratings, Tv.com top shows, and parentstv.org.

In order to control for order effects, questions about exposure were reordered in 3 different versions of the questionnaire. Only responses to the violent categories were used in this analysis. In order to develop a violent category for exposure to violent media content categorized as “excessive and frequently gratuitous” were averaged. Exposure to violent media content ranged from 1.00 to 5.00 ($M = 3.01$, $SD = .87$, $\alpha = .64$) Table 2 presents the means and standard deviations for each of the violent exposure categories.

Table 2: Means and Standard Deviations for Exposure to Violent Media Content

<u>Exposure to Violent Media Content</u>	<u>M</u>	<u>SD</u>
Movies that contain excessive and frequently gratuitous violence (e.g., <i>Saw III</i> , <i>Kill Bill</i> , <i>Miami Vice</i>).	3.43	1.09
Prime-time television shows that contain excessive and frequently gratuitous violence (e.g., <i>CSI</i> , <i>Prison Break</i> , <i>24</i>).	3.37	1.20
Programs on premium channels (e.g., <i>HBO</i>) that contain excessive and frequently gratuitous violence (e.g., <i>The Sopranos</i> , <i>OZ</i>).	2.75	1.33
Video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., <i>Gears of War</i> , <i>Grand Theft Auto: San Andreas</i> , <i>Halo</i>).	2.48	1.40
Overall Exposure to Violent Media Content	3.00	.87

Liking Violent Media Content

Respondents were asked how much they liked particular media and attributes of that media. Once again, to disguise the study's intent, questions about violent media content were integrated with other items about nonviolent media content and presented in different orders in different versions of the questionnaire. Respondents were also asked to indicate how much they liked violent media content (1= Not at All, 5 = Very Much). These questions were modeled after McLeod et al. (2001). In order to develop a violent category for liking violent media content categorized as "excessive and frequently gratuitous" were averaged. Liking violent media content ranged from 1.00 to 5.00 ($M = 3.20$, $SD = .89$, $\alpha = .65$) Table 3 presents the means and standard deviations for each of the liking violent media content categories.

Table 3: Means and Standard Deviations for Liking Violent Media Content

<u>Liking Violent Media Content</u>	<u>M</u>	<u>SD</u>
Movies that contain excessive and frequently gratuitous violence (e.g., <i>Saw III</i> , <i>Kill Bill</i> , <i>Miami Vice</i>).	3.42	1.15
Prime-time television shows that contain excessive and frequently gratuitous violence (e.g., <i>CSI</i> , <i>Prison Break</i> , <i>24</i>).	3.61	1.13
Programs on premium channels (e.g., <i>HBO</i>) that contain excessive and frequently gratuitous violence (e.g., <i>The Sopranos</i> , <i>OZ</i>).	3.14	1.30
Video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., <i>Gears of War</i> , <i>Grand Theft Auto: San Andreas</i> , <i>Halo</i>).	2.63	1.43
Overall Liking Violent Media Content	3.20	.89

Third-person Effect

Respondents were asked questions to assess the third-person effect.

Respondents were asked to indicate how much they perceive others to be (Low SES vs. High SES and Men vs. Women) affected by violent media content (1 = Not at All, 5 = Very Much). These questions were modeled from Lambe and McLeod (2005) and Scharrer (2002). Once again, in order to disguise the intent of the study, respondents were presented with several items about nonviolent as well as violent content. And, in order to protect against any order effects, these questions were presented in different order in 3 different versions of the questionnaire. In order to assess perceived effects of violent media content, respondents' perceived effects of violent media content were summed for each target group. Perceived effects of violent media content on low SES ranged from 1.00 to 5.00 ($M = 3.17$, $SD = 1.01$, $\alpha = .90$) and high SES ranged from 1.00 to 5.00 ($M = 3.04$, $SD = .98$, $\alpha = .91$). Perceived effects on men ranged from 1.00 to 5.00 ($M = 3.19$, $SD = 1.06$, $\alpha = .90$) and on women ranged from 1.00 to 5.00 ($M = 2.87$, $SD = .96$, $\alpha = .83$). Perceived effects of violent media content on self ranged from 1.00 to 5.00 ($M = 2.48$, $SD = .98$, $\alpha = .86$).

In order to create a measure perceived effects on "others," scores for all groups were averaged. Perceived effects of violent media content on others ranged from 1.00 to 5.00 ($M = 3.06$, $SD = .80$, $\alpha = .93$). Perceived effects of violent video games on others ranged from 1.00 to 5.00 ($M = 3.04$, $SD = .87$, $\alpha = .69$) and on self ranged from

1.00 to 5.00 ($M = 2.14$, $SD = 1.20$). Table 4 presents the means and standard deviations for those items dealing with perceived effects of violent content on low SES and high SES and table 5 presents the means and standard deviations for those items dealing with perceived effects of violent content on men, women, and self. Table 6 presents the means and standard deviations for those items dealing with overall perceived effects of violent content on low and high SES, men and women, self, and others.

Table 4: Means and Standard Deviations for Perceived Effects of Violent Content on Low SES and High SES

<u>Perceived Effects of Violent Content</u> <u>on Low and High SES</u>	<u>Low SES</u>		<u>High SES</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Movies that contain excessive and frequently gratuitous violence (e.g., <i>Saw III</i> , <i>Kill Bill</i> , <i>Miami Vice</i>).	3.16	1.16	3.04	1.10
Prime-time television shows that contain excessive and frequently gratuitous violence (e.g., <i>CSI</i> , <i>Prison Break</i> , <i>24</i>).	3.06	1.12	2.91	1.10
Programs on premium channels (e.g., <i>HBO</i>) that contain excessive and frequently gratuitous violence (e.g., <i>The Sopranos</i> , <i>OZ</i>).	3.25	1.20	3.18	1.13
Video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., <i>Gears of War</i> , <i>Grand Theft Auto: San Andreas</i> , <i>Halo</i>).	3.22	1.16	3.04	1.13
Overall Perceived Effects of Violent Media Content	3.17	1.01	3.04	.98

**Table 5: Means and Standard Deviations for Perceived
Effects of Violent Content on Men, Women, and Self**

<u>Perceived Effects of Violent Content</u> <u>on Low and High SES</u>	Men		Women		Self	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Movies that contain excessive and frequently gratuitous violence (e.g., <i>Saw III</i> , <i>Kill Bill</i> , <i>Miami Vice</i>).	3.22	1.20	3.01	1.18	2.65	1.16
Prime-time television shows that contain excessive and frequently gratuitous violence (e.g., <i>CSI</i> , <i>Prison Break</i> , <i>24</i>).	3.08	1.19	2.89	1.10	2.54	1.13
Programs on premium channels (e.g., <i>HBO</i>) that contain excessive and frequently gratuitous violence (e.g., <i>The Sopranos</i> , <i>OZ</i>).	3.22	1.23	2.90	1.15	2.60	1.19
Video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., <i>Gears of War</i> , <i>Grand Theft Auto: San Andreas</i> , <i>Halo</i>).	3.24	1.24	2.69	1.26	2.14	1.20
Overall Perceived Effects of Violent Media Content	3.19	1.07	2.87	.96	2.48	.98

Table 6: Means and Standard Deviations for Overall Perceived Effects of Violent Media Content on Low and High SES, Men and Women, Self, and Others

Overall Perceived Effects of Violent Media Content	<u>M</u>	<u>SD</u>	<u>α</u>
Low SES	3.17	1.01	.90
High SES	3.04	.98	.91
Men	3.19	1.07	.90
Women	2.87	.96	.83
Others	3.06	.80	.86
Self	2.48	.98	.93

Chapter 3

Results

This chapter presents the findings of this study, the statistical tests of the study's hypotheses. Additional related analyses are also summarized.

Socioeconomic Status

Hypothesis 1 predicted that lower SES individuals will be perceived as more affected by violent media content than high SES individuals. This hypothesis was supported. Low SES individuals ($M = 3.17$) were perceived as significantly more affected by media violence than high SES individuals ($M = 3.04$): $t(415) = 2.64, p < .01$. This effect was unrelated to respondent's own SES self-classification. There was no significant correlation between size of perceived effects on low SES and respondents' SES ($r = -.01, p = .91$) or high SES and respondents' SES ($r = .02, p = .78$). Because of this study's additional focus on violent video games, whether respondent's perceived that low SES individuals would be more affected by violent video games than high SES individuals was also tested. Low SES individuals ($M = 3.22$) were perceived as significantly more affected than high SES individuals ($M = 3.04$): $t(411) = 3.18, p < .01$.

Question-Order Effects

The second hypothesis predicted that the TPE was affected by question-order. That is, the magnitude of the effect would be smaller when there is a time lapse between asking third-person perception questions than when there is no time lapse. This hypothesis was not supported, however the effect for time lapse approached significance ($F(1, 417) = 3.53, p = .06$). The sample size for this study was not as large as planned for, and power for this question-order effect was only 0.47.

Because there was a significant negative relationship between exposure to violent media and sex (males, $r = -.44, p < .01$) a follow-up analysis of variance was conducted using sex as a covariate. Although sex was not a significant covariate ($F(1, 416) = 0.38, p = .54$), time lapse became significant ($F(1, 411) = 4.10, p < .05$). Because this study also focused on video games, a second test of hypothesis two considered if time-lapse affected magnitude of third-person effects of violent video games. There was no effect for time lapse on third person effects ($F(1, 411) = 0.01, p = .94$). When sex was used as a covariate, sex was significant ($F(1, 411) = 17.69, p < .01$), but time lapse was not ($F(1, 411) = 0.20, p = .65$). Table 7 presents the ANOVAs for the question-order effects.

Table 7: ANOVAs for Question-Order

Source	df	F	P <
Time Lapse	1	3.53	.06
Error	415	(.82)	
Source			
Sex	1	.38	.00
Time Lapse	1	4.10	.04
Error	413	(.81)	
Source			
Video Game Sex	1	17.69	.00
Video Game Time Lapse	1	.20	.65
Video Game Error	408	(1.35)	

Note: Values enclosed in parentheses represent mean square errors.

The Third-Person Effect

Hypothesis 3a predicted a larger perception of effects of violent media content on others than on self. This hypothesis was supported. Others ($M = 3.06$) were perceived as significantly more affected by media violence than self ($M = 2.49$): $t(416) = 13.2, p < .001$. Hypothesis 3b predicted a larger perception of effects of violent video games on others than on self. This hypothesis was also supported. Others ($M = 3.05$) were perceived as

significantly more affected by violent video games than self ($M = 2.14$; $t(411) = 15.5$, $p < .001$).

Sex Differences

Hypothesis 4a predicted larger perceived effects for violent media content for males than females. This hypothesis was supported. Males ($M = 3.19$) were perceived as significantly more affected by media violence than females ($M = 2.87$): $t(415) = 5.72$, $p < .001$. Hypothesis 4b predicted the same for violent video games. This hypothesis was also supported. Males ($M = 3.24$) were perceived as significantly more affected by violent video games than females ($M = 2.69$): $t(411) = 6.79$, $p < .001$.

Exposure to Violent Media Content

Hypothesis 5a predicated that the TPE of violent media content would be negatively related to exposure to violent media content. This hypothesis was not supported ($r = -.03$, $p = .25$).

Hypothesis 5b predicted that the TPE of violent video games would be negatively related to violent video game play. This hypothesis was supported. There was a significant negative correlation between TPE of violent video games and video game play ($r = -.11$, $p < .05$).

Liking Violent Media Content

Hypothesis 6a predicted that liking violent media content would be negatively related to the TPE. This hypothesis was not supported. There was no significant negative relationship between liking violent media content and the TPE ($r = -.05, p = .17$).

The last hypothesis, 6b, predicted that liking violent video games would be negatively related to the TPE. This hypothesis was supported. There was a significant negative relationship between liking violent video games and the TPE ($r = -.20, p < .001$).

Chapter 4

Discussion

This study tested the perceptual hypothesis of the third-person effect (TPE) and had four overall goals. The first goal was to replicate findings of prior research that found TPE of violent media content (e.g., Lambe & McLeod 2005; McLeod et al., 1997; McLeod et al, 2001; Rojas et al., 1996; Scharrer, 2002). Additionally, this study sought to build upon this previous research by examining the TPE of a new popular medium with typically violent content: video games. Secondly, this study set out to examine the role stereotypes play in perceptions of media effects, specifically those stereotypes associated with socioeconomic status and sex. In other words, this study set out to examine how stereotyped perceptions of high and low SES and sex affected third-person perceptions. The third goal of this study was to examine whether exposure to and/or liking of violent media content moderated the third-person effect. Exposure to violent media content as well as liking of violent media content as moderators of the TPE is a relatively new idea within third-person effect research (see McLeod et al., 2001). Finally, the current study attempted to examine how question-order might affect measurements of third-person perception. In other words, the study sought to examine if typical third-person questionnaire design primed individuals to report a larger perception of effects between self and others. Question-order effects have been long debated within

the third-person literature (e.g., David & Johnson, 1998; Dupagne et al, 1999; Price & Tewksbury, 1996), however, this is the first study that implements a time lapse between asking questions about self and other to control for question-order effects.

In general, results of this study's hypotheses supported the perceptual hypothesis of the third-person effect as well as the existence of a question-order effect within third-person effect research. The results of this study offer additional insight into those factors that contribute to third-person effects. The next section will review and discuss the findings of the study.

Results Summary and Interpretation

Third-Person Effect

The findings of previous research on the third-person effect of violent media content have been robust. For instance, Perloff (1996) reported that 15 of 16 studies regarding violence that he examined supported the perceptual hypothesis. Additionally, Rojas and colleagues (1996) found that pornography and violence on television were perceived to have a greater impact on others than on self. Remaining consistent with the robust findings of the third-person effect, this study found that individuals perceive others to be more affected by violent media content than themselves. Meta-analysis reveals that in general the effect size, or magnitude of difference between estimated media effects on self and others, is $r = .50$. In comparison, this study found a somewhat smaller

effect size of $r = .31$. A possible explanation for this somewhat smaller effect size could be the implementation of the time lapse.

Violent video games were also perceived as affecting others more than self. The effect size for violent video games was $r = .39$, which was larger in comparison to the effect size of violent media in general. An explanation for a higher effect size could be due to the fact that video games are receiving more media attention than ever about their negative effects. Additionally, the larger effect size could be due to the fact that the sample consisted of college students, who have grown up with the medium. In essence, they have had more exposure to video games and might have different views about them. In order to test this cohort effect, further research needs to examine a wider sample, including older adults, and their perceptions of effects of violent video games on self and others.

Stereotypes

Throughout life we are taught not to judge others, that everyone is equal. If this was so, then the third-person effect would not exist. The third-person effect is based on beliefs that there are perceived differences between self and others from other social groups. Recent research has begun to examine more specific groups of “others” in order to examine how stereotypes affect third-person effects. This study examined two stereotypes that individuals use

regularly to estimate how vulnerable an individual is to media impact:

socioeconomic status and sex.

This study replicated the findings of Scharrer (2002) by finding that lower SES individuals were perceived as more affected by violent media content than higher SES individuals. This study also found that lower SES individuals were perceived as more affected than higher SES individuals by violent video games. In order to control for in-group comparisons, which have been found to play role in the perceptions of media effects (Perloff, 2002), this study found no relationship between respondent's own SES and perceived effects on low and high SES groups. Thus, the respondent's own SES did not play a role in their perceptions supporting the hypothesized impact on third-person perceptions.

Finding that lower SES individuals are perceived as more affected than higher SES individuals by violent video games might appear as a contradiction as higher SES individuals have more resources to obtain the violent video games along with the accompanying game consoles. However, this finding makes theoretical sense.

A concept drawn from attribution theory, known as egotistical differential attributions, often referred to as a self-serving bias, is used throughout the literature as one of the reasons individuals perceive others as more affected by negative media content than themselves (Paul et al., 2000;

Weinstein & Klein, 1996). This concept asserts that individuals view the prospect of being persuaded by a “negative message” as characteristic of less intelligence. Consequently, individuals do not admit to or claim to be persuaded by the “negative message.” Prior research has shown a positive relationship between educational attainment and socioeconomic status (McKay et al., 2003). Thus, those with higher education or “intelligence” are associated in a higher SES and therefore might be viewed as capable of averting the effects of violent video games.

This study also found that sex stereotypes play a role in third-person perception. As children, we are taught through societal norms that it is acceptable and common for males to act more aggressively than females. Third-person effects research has found that males are perceived as more affected by violent media content than females (Lo & Wei, 2002). This study’s results support this research and found greater perceived effects on males for media violence in general as well as for violent video games specifically. This is consistent with expectations as males are primarily associated with playing video games and the primary content of video games is violence. Post-hoc analyses point out that the effects of sex stereotypes are stronger for female respondents. *T*-tests showed that women perceived men as significantly more affected ($M = 3.35$) than women ($M = 2.95$): $t(413) = p < .001$.

Women also perceived men as significantly more affected by violent video games ($M = 3.44$) than women ($M = 2.75$): $t(413) = p < .001$. These findings as well as the findings of LO and Wei (2002) suggest that sex could play a significant role in perceptions of effects. Future TPE research needs to continue to consider the role in which sex plays in perceptions of third-person effects.

Violent Media Content: Exposure to and Liking

Third-person effects research has just begun to explore potential moderators of the third-person effect. This study set out to examine two moderators that have been examined in previous research: exposure to violent media content and liking violent media content. McLeod and his colleagues (2001) have found that both exposure to violent media content and liking violent media content moderated the TPE. In other words, the more a person exposes themselves to violent media content and the more they like violent media content, the more they are likely to view other individuals that view the same content as less affected by that media content than individuals who do not expose themselves to the particular media content. Contrary to theoretical arguments and previous research, this study failed to find both exposure to violent media content and liking violent media content moderated the TPE. However, there was a significant relationship between both exposure to violent media content and liking violent media content and sex.

A possible explanation for this finding is that males are exposed to and like violent media content more than women. In fact, analyses revealed that males liked and watched violent media content and video games more than females. Moreover, males might have more control over selective exposure. Perse and Ferguson (1993) found within married households, males are in control of the remote more often than females. Therefore, women have a smaller role in choosing the type of media they view and therefore do not necessarily enjoy what they are being exposed rather they are forced to watch what the male viewer chooses. Future research should examine who controls the media selection within the household.

Although analyses found that viewing violent media did not moderate the third-person effect, there was a significant relationship between TPE of violent video games and amount of video game play. The more an individual played video games, the less they perceived others to be affected. If an individual admits others are affected by the same material they themselves expose themselves to, they are in essence admitting that the media content also affects them. This finding supports Festinger's (1957) cognitive dissonance theory which deals with relationships between cognitive elements, including attitudes, beliefs, and behaviors.

A possible explanation for a significant finding in regards to violent video games is that video games are a more interactive medium than television

or movies. In other words, the player is in control of the game, thus in an interactive sense they are performing the action. Therefore, individuals are less inclined to believe violent video games have an affect because they will be in essence to be admitting they like to kill.

And, unlike television and movies, video games can offer a solitary media experience. Liking violent video games was also significantly and negatively related to the third-person effect: Those who liked video games reported less of a TPE. Future research needs to further examine the significant link between exposure, liking, and the TPE for video games. Does the type of medium play a role in the perception of the effect? Does playing video games with others affect third-person perception? Additionally, future research should consider the aspects of video games that enhance the moderating impact of liking and exposure on third-person effects.

Question-Order Effects

A main purpose of this study was to examine the role that question-order had on the TPE. This study sought to examine the effect that a 5-week time lapse would have on the size of third-person perception. Analyses revealed an effect that approached significance ($p < .06$) despite the moderate power of 0.47.

The effects of question-order in this study are consistent with previous question-order effect research which found small effects of about .06

(Schumann & Presser, 1996). A significant question-order effect was identified when respondent's sex was used as a covariate. An explanation for this finding is that previous research has demonstrated that females excel over males in the recognition of previously presented objects and pictures except for those items dealing of male-oriented objects (Rehman & Herlitz, 2007). Thus, in the present study there is a possibility that females were able to recall their previous answers better than males. Future research should examine this possibility.

Additionally, there was no overall significant question-order effect on the TPE of video games, even when using sex as a covariate. Future research needs to consider more research on question-order effects to see if it is content bound. In general, there is a need to consider question-order effects in all media effects research in order to get true depiction of effects.

Summary of Findings

Overall, this study's findings were consistent with those of previous TPE research. This study also contributed new information about the TPE. First, this study was able to find a question-order effect that approached significance despite modest power. Finding such an effect with modest power suggests that question-order affects third-person research. To what degree and how big of a role question-order plays in the comparisons of self and others should be considered in future research. Clearly, researchers should take steps

to control for question-order effects. Secondly, the study reinforced evidence that the TPE is robust, existing even when question-order effects are present. This study's findings also expanded the literature to include TPE of a new medium with growing popularity: the video game. People clearly believe that video games can cause harm – but on others more than on themselves.

Furthermore, this study adds to the literature about possible explanations for the TPE. Additionally, the significant findings about sex stereotypes and respondents' sex suggests that sex stereotypes might play more of a role in mass media than once thought. How much does media content interact with personal experience to lead people to see males as more affected by violent media content?

Limitations and Future Research

The largest limitation that this study faced was the lack of participation of recruited students that affected the power of the question-order analyses. The number of participants was lower than expected. Future research should explore question-order effects with larger sample sizes. Another limitation is that, as expected, there was maturation as a result of the 5-week time lapse (23%). A way to eliminate this in future research is to have students take the questionnaire at a specific time and place, such as a monitored computer lab. This study relied on volunteers to fill out the surveys on their own time.

Additionally, the effect of sex in question-order reinforces the importance of sex in future TPE studies.

A theoretical limitation of this study is that the study design did not take into account how much or how often individuals socially compare themselves with others. Future studies should utilize Buunk and Gibbons' (1999) measurement of social comparison orientation (SCO) to assess individual differences in the inclination to compare oneself with others. One would expect that those individuals who are more likely to compare themselves with others would be especially more inclined to compare themselves and might have higher TPE. Moreover, this personality attribute might make respondents especially susceptible to question-order effects.

Lastly, scholars should continue to examine how and why exposure to violent media content and liking media content moderate the TPE. This study found support for the moderating influence of exposure and liking only for violent video games. Thus, scholars should examine if the type of violent media content plays a role in whether or not exposure and/or liking violent media content moderates the TPE.

Finally, future research should build upon this study by examining the impact of perceptions of violent video games on willingness to censor. Third-person effects researchers are often interested in how the perceptions of effects on others are linked to willingness to restrict access to media content (Davison,

1983). This is referred to as the behavioral hypothesis. The behavioral hypothesis asserts that “people’s expectation of media impact on others leads them to take action, perhaps because they want to thwart the predicted effects” (Perloff, 2002, p. 490). In general, the behavioral hypothesis offers a “provocative” explanation of public support for censorship. Research has found that third-person perceptions predict support for restricting pornography (Gunther, 1995), television violence (Rojas et al., 1996; Salwen & Dupagne, 1999) antisocial rap (McLeod et al., 1997), and liquor and gambling advertising (Shah et al., 1999). Moreover, Rojas et al. (1996) found that as the third-person effect increased, so did support for censorship. In other words, the more individuals perceived others to be affected by violent television, the more likely they were to support censorship on television. Future research should explore if third-person perceived effects of video games is linked to supporting for restricting their content.

Is especially timely to consider how third-person effects of violent video games might be linked to call for greater restriction. Video games have elicited such public concern is the “becoming” aspect of the game: “. . . video games are something you do, a world that you enter, and, to a certain extent, they are something you ‘become’” (Turkle, 1985, pp. 66-67). Individuals are worried about the impact that this medium will have on children. This was clearly demonstrated at the United States Senate’s Judiciary Subcommittee on

the Constitution, Civil Rights, and Property Rights hearing discussing the issue of laws restricting game sales (United States Senate on the Judiciary, 2006).

This study found that individuals do perceive others to be affected by violent video games. Future research needs to examine whether if these predictions are able to forecast support for restrictions on video game content as video games are clearly a current concern within our society. Additionally, this study added further support for the robust findings of the third-person effect. Clearly, people tend to see others are more affected by violent media content as demonstrated since the Davison experiments that took place over 20 years ago. The results of this study point out that the effect is strong – existing even when controlling for question-order effect. It is time for future research to move past the perceptual hypothesis and begin examining the role these perceptions play in support for restrictions on violent media content.

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Appendix A

Welcome to the University of Delaware Communication Department Media Survey. The survey is 11 pages long and should take you about 20 minutes to complete. Thank you for participating.

We are interested in learning about your media use and attitudes about the media.

Your answers will be anonymous and confidential.

We would like to know how much media you consume.

1. Yesterday, about how many hours of television did you watch? _____ hours
2. You may not have watched the same amount of television yesterday as you usually do. About how many hours of television do you usually watch on the average weekday? _____ hours
3. About how many hours of television do you usually watch on the average weekend? _____ hours
4. In a typical month, how many movies do you attend at the movie theater? _____
5. In a typical month, about how many movies do you watch at home? _____
6. In a typical week, how many days per week do you play video/computer games (including playing games on a computer)? _____
7. In a typical week, how many hours do you play video/computer games? _____ hours
8. How many video game consoles (i.e., *Xbox, Playstation, Nintendo, Gameboy*) do you currently own? _____
9. Please write in the title of your favorite video/computer game-the one you play the most _____

Now, we would like to know how frequently you use the following types of media.

On a scale from 1 to 5 (where “1” indicates “Never” and “5” indicates “Very Frequently”), please choose the number that you feel represents how frequently YOU are exposed to the following types of media content. . .

1. Movies that are family oriented that contain content with minimal violence (e.g., *Cars, Happy Feet, Ice Age*).
2. Movies that contain some violence, but not excessive amounts (e.g., *Pirates of the Caribbean, Harry Potter, Shrek*).
3. Movies that contain excessive and frequently gratuitous violence (e.g., *Saw III, Kill Bill, Miami Vice*).
4. Prime-time television shows that are family oriented that contains content that includes minimal violence (e.g., *American Idol, Deal or No Deal, Super Nanny*).
5. Prime-time television shows that contain some violence, but not excessive amounts (e.g., *The Office, Gilmore Girls, Grey’s Anatomy*).
6. Prime-time television shows that contain excessive and frequently gratuitous violence (e.g., *CSI, Prison Break, 24*).
7. Programs on premium channels (e.g., *HBO*) that contain excessive and frequently gratuitous violence (e.g., *The Sopranos, OZ*).
8. Video games that are rated E for everyone. These games contain minimal violence (e.g., *Madden NFL 07, Cars, Lego Star Wars II: The Original Trilogy*).
9. Video games that are rated T for Teen. These games contain some violence, but not excessive amounts (e.g., *Need for Speed: Most Wanted, Call for Duty 3, World of Warcraft*).
10. Video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., *Gears of War, Grand Theft Auto: San Andreas, Halo*).

Now, we would like to know how much you like the following type of media.

On a scale from 1 to 5 (where “1” indicates “Not at All” and “5” indicates “Very Much”), please choose the number that you feel represents how much YOU like the following types of media content. . .

1. Movies that are family oriented that contain content with minimal violence (e.g., *Cars, Happy Feet, Ice Age*).
2. Movies that contain some violence, but not excessive amounts (e.g., *Pirates of the Caribbean, Harry Potter, Shrek*).
3. Movies that contain excessive and frequently gratuitous violence (e.g., *Saw III, Kill Bill, Miami Vice*).
4. Prime-time television shows that are family oriented that contains content that includes minimal violence (e.g., *American Idol, Deal or No Deal, Super Nanny*).
5. Prime-time television shows that contain some violence, not excessive amounts (e.g., *The Office, Gilmore Girls, Grey’s Anatomy*).
6. Prime-time television shows that contain excessive and frequently gratuitous violence (e.g., *CSI, Prison Break, 24*).
7. Programs on premium channels (e.g., *HBO*) that contain excessive and frequently gratuitous violence (e.g., *The Sopranos, OZ*).
8. Video games that are rated E for everyone. These games contain minimal violence (e.g., *Madden NFL 07, Cars, Lego Star Wars II: The Original Trilogy*).
9. Video games that are rated T for Teen. These games contain some violence, but not excessive amounts (e.g., *Need for Speed: Most Wanted, Call for Duty 3, World of Warcraft*).
10. Video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., *Gears of War, Grand Theft Auto: San Andreas, Halo*).

For this next set of questions, think about the following types of media and the effects that they would have on you.

Indicate the degree to which these media would effect you on a scale ranging from “1” for “not affected at all” to “5” for “very affected.”

1. Movies that are family oriented that contain content with minimal violence (e.g., *Cars, Happy Feet, Ice Age*).
2. Movies that contain some violence, but not excessive amounts (e.g., *Pirates of the Caribbean, Harry Potter, Shrek*).
3. Movies that contain excessive and frequently gratuitous violence (e.g., *Saw III, Kill Bill, Miami Vice*).
4. Prime-time television shows that are family oriented that contains content that includes minimal violence (e.g., *American Idol, Deal or No Deal, Super Nanny*).
5. Prime-time television shows that contain some violence, but not excessive amounts (e.g., *The Office, Gilmore Girls, Grey's Anatomy*).
6. Prime-time television shows that contain excessive and frequently gratuitous violence (e.g., *CSI, Prison Break, 24*).
7. Programs on premium channels (e.g., *HBO*) that contain excessive and frequently gratuitous violence (e.g., *The Sopranos, OZ*).
8. Video games that are rated E for everyone. These games contain minimal violence (e.g., *Madden NFL 07, Cars, Lego Star Wars II: The Original Trilogy*).
9. Video games that are rated T for Teen. These games contain some violence, but not excessive amounts (e.g., *Need for Speed: Most Wanted, Call for Duty 3, World of Warcraft*).
10. Video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., *Gears of War, Grand Theft Auto: San Andreas, Halo*).

For this set of questions, we are interested in your thoughts about how the media effect other people.

Think about the following types of media and the effects that they would have on the TYPICAL MALE.

Indicate the degree of the effects on a scale ranging from “1” for “not affected at all” to “5” for “very affected.”

1. . . . watching movies that are family oriented that contains content with minimal violence (e.g., *Cars, Happy Feet, Ice Age*).
2. . . . watching movies that contain some violence, but not excessive amounts (e.g., *Pirates of the Caribbean, Harry Potter, Shrek*).
3. . . . watching movies that contain excessive and frequently gratuitous violence (e.g., *Saw III, Kill Bill, Miami Vice*).
4. . . . watching prime-time television shows that are family oriented that contains content that includes minimal violence (e.g., *American Idol, Deal or No Deal, Super Nanny*).
5. . . . watching prime-time television shows that contain some violence, but not excessive amounts (e.g., *The Office, Gilmore Girls, Grey’s Anatomy*).
6. . . . watching prime-time television shows that contain excessive and frequently gratuitous violence (e.g., *CSI, Prison Break, 24*).
7. . . . watching programs on premium channels (e.g., *HBO*) that contain excessive and frequently gratuitous violence (e.g., *The Sopranos, OZ*).
8. . . . playing video games that are rated E for everyone. These games contain minimal violence (e.g., *Madden NFL 07, Cars, Lego Star Wars II: The Original Trilogy*).
9. . . . playing video games that are rated T for Teen. These games contain some violence, but not excessive amounts (e.g., *Need for Speed: Most Wanted, Call for Duty 3, World of Warcraft*).
10. . . . playing video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., *Gears of War, Grand Theft Auto: San Andreas, Halo*).

Now, think about the following types of media and the effects that they would have on the TYPICAL WOMAN.

Indicate the degree of the effects on a scale ranging from “1” for “not affected at all” to “5” for “very affected.”

1. . . . watching movies that are family oriented that contains content with minimal violence (e.g., *Cars*, *Happy Feet*, *Ice Age*).
2. . . . watching movies that contain some violence, but not excessive amounts (e.g., *Pirates of the Caribbean*, *Harry Potter*, *Shrek*).
3. . . . watching movies that contain excessive and frequently gratuitous violence (e.g., *Saw III*, *Kill Bill*, *Miami Vice*).
4. . . . watching prime-time television shows that are family oriented that contains content that includes minimal violence (e.g., *American Idol*, *Deal or No Deal*, *Super Nanny*).
5. . . . watching prime-time television shows that contain some violence, but not excessive amounts (e.g., *The Office*, *Gilmore Girls*, *Grey’s Anatomy*).
6. . . . watching prime-time television shows that contain excessive and frequently gratuitous violence (e.g., *CSI*, *Prison Break*, *24*).
7. . . . watching programs on premium channels (e.g., *HBO*) that contain excessive and frequently gratuitous violence (e.g., *The Sopranos*, *OZ*).
8. . . . playing video games that are rated E for everyone. These games contain minimal violence (e.g., *Madden NFL 07*, *Cars*, *Lego Star Wars II: The Original Trilogy*).
9. . . . playing video games that are rated T for Teen. These games contain some violence, but not excessive amounts (e.g., *Need for Speed: Most Wanted*, *Call for Duty 3*, *World of Warcraft*).
10. . . . playing video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., *Gears of War*, *Grand Theft Auto: San Andreas*, *Halo*).

Now, think about the following types of media and the effects that they would have on LOW SOCIOECONOMIC STATUS INDIVIDUALS (e.g., people without much disposal income or poor).

Indicate the degree of the effects on a scale ranging from “1” for “not affected at all” to “5” for “very affected.”

1. . . . watching movies that are family oriented that contains content with minimal violence (e.g., *Cars*, *Happy Feet*, *Ice Age*).
2. . . . watching movies that contain some violence, but not excessive amounts (e.g., *Pirates of the Caribbean*, *Harry Potter*, *Shrek*).
3. . . . watching movies that contain excessive and frequently gratuitous violence (e.g., *Saw III*, *Kill Bill*, *Miami Vice*).
4. . . . watching prime-time television shows that are family oriented that contains content that includes minimal violence (e.g., *American Idol*, *Deal or No Deal*, *Super Nanny*).
5. . . . watching prime-time television shows that contain some violence, but not excessive amounts (e.g., *The Office*, *Gilmore Girls*, *Grey’s Anatomy*).
6. . . . watching prime-time television shows that contain excessive and frequently gratuitous violence (e.g., *CSI*, *Prison Break*, *24*).
7. . . . watching programs on premium channels (e.g., *HBO*) that contain excessive and frequently gratuitous violence (e.g., *The Sopranos*, *OZ*).
8. . . . playing video games that are rated E for everyone. These games contain minimal violence (e.g., *Madden NFL 07*, *Cars*, *Lego Star Wars II: The Original Trilogy*).
9. . . . playing video games that are rated T for Teen. These games contain some violence, but not excessive amounts (e.g., *Need for Speed: Most Wanted*, *Call for Duty 3*, *World of Warcraft*).
10. . . . playing video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., *Gears of War*, *Grand Theft Auto: San Andreas*, *Halo*).

Now, think about the following types of media and the effects that they would have on HIGH SOCIOECONOMIC STATUS INDIVIDUALS (e.g., people with a lot of disposable income or wealthy).

Indicate the degree of the effects on a scale ranging from “1” for “not affected at all” to “5” for “very affected.”

1. . . . watching movies that are family oriented that contains content with minimal violence (e.g., *Cars*, *Happy Feet*, *Ice Age*).
2. . . . watching movies that contain some violence, but not excessive amounts (e.g., *Pirates of the Caribbean*, *Harry Potter*, *Shrek*).
3. . . . watching movies that contain excessive and frequently gratuitous violence (e.g., *Saw III*, *Kill Bill*, *Miami Vice*).
4. . . . watching prime-time television shows that are family oriented that contains content that includes minimal violence (e.g., *American Idol*, *Deal or No Deal*, *Super Nanny*).
5. . . . watching prime-time television shows that contain some violence, but not excessive amounts (e.g., *The Office*, *Gilmore Girls*, *Grey’s Anatomy*).
6. . . . watching prime-time television shows that contain excessive and frequently gratuitous violence (e.g., *CSI*, *Prison Break*, *24*).
7. . . . watching programs on premium channels (e.g., *HBO*) that contain excessive and frequently gratuitous violence (e.g., *The Sopranos*, *OZ*).
8. . . . playing video games that are rated E for everyone. These games contain minimal violence (e.g., *Madden NFL 07*, *Cars*, *Lego Star Wars II: The Original Trilogy*).
9. . . . playing video games that are rated T for Teen. These games contain some violence, but not excessive amounts (e.g., *Need for Speed: Most Wanted*, *Call for Duty 3*, *World of Warcraft*).
10. . . . playing video games that are rated M for Mature. These games contain excessive and frequently gratuitous violence (e.g., *Gears of War*, *Grand Theft Auto: San Andreas*, *Halo*).

Here a few general questions about you.

1. What is your sex?
 - a. Male
 - b. Female

2. How old are you (as of your last birthday)? _____ years

3. What is your major? _____

4. What year in school are you?
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior

5. What is the zip code of your home town? _____

6. Please indicate your parent(s) education level

Mother	Father
Less than High School	Less than High School
High School	High School
Some College	Some College
College	College
Graduate School	Graduate School

7. Please indicate if your family is . . .
 - a. Working Class (Blue-Collar)
 - b. Working Class (White-Collar)
 - c. Middle Class
 - d. Upper Middle Class
 - e. Upper Class

8. About how many video games do you own? _____

9. Below is a list of video game genres. Of those please check the 3 you own the most of.

- a. Sports Simulations (Madden NFL 07)
- b. Driver-Flying (Need for Speed: Most Wanted)
- c. Adventure (Lego Star Wars II: The Original Trilogy)
- d. First-Person Shooter (Halo)
- e. Role-Playing (World of Warcraft)
- f. Fighting (Grand Theft Auto: San Andreas)
- g. Puzzle (Tetris)
- h. Strategy (Age of Empires III)
- i. Simulation (The Sims)
- j. Classic Games (Chess, Solitaire, hearts)

10. Below is a list of video game genres. Of those please check the 3 you play the most.

- a. Sports Simulations (Madden NFL 07)
- b. Driver-Flying (Need for Speed: Most Wanted)
- c. Adventure (Lego Star Wars II: The Original Trilogy)
- d. First-Person Shooter (Halo)
- e. Role-Playing (World of Warcraft)
- f. Fighting (Grand Theft Auto: San Andreas)
- g. Puzzle (Tetris)
- h. Strategy (Age of Empires III)
- i. Simulation (The Sims)
- j. Classic Games (Chess, Solitaire, hearts)

The survey is now complete!!!!

Thank you for participating.