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A thesis submitted to the faculty of
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Master of Arts

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ABSTRACT

The Impact of Statistical, Research-Based, and
Narrative Anti-Pornography Messaging
on Psychological Reactance

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Master of Arts

Although many studies have been published detailing the effects of narratives on persuasion, no literature has been published on the impact of narratives on psychological reactance in the context of anti-pornography campaigns. This study expands on prior narrative research by measuring adults' aged 21-76 (N=187) level of psychological reactance to statistical, research-based, and narrative videos. The study also explored Intrinsic Religious Motivation and perceived threat and susceptibility as factors. No significant relationship between narratives and reduced psychological reactance was found, however, findings indicated that viewing anti-pornography narratives caused individuals to view the threat of pornography as being more severe while simultaneously considering themselves less susceptible to the threat. This suggests the presence of optimistic bias. The study's findings also suggested that having strong beliefs is connected to a having greater perceived threat and susceptibility to pornography addiction.

ACKNOWLEDGMENTS

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CHAPTER ONE

Introduction

Since the early 1960s, a handful of groups have attempted to subvert the widespread use of pornography in the United States. These early efforts were first led by Morton A. Hill, a Jesuit Priest who was concerned with the moral implications that pornography could have on society. In 1962, Hill, along with other ecclesiastical leaders, created the anti-pornography group Morality in Media, known contemporarily as the National Center on Sexual Exploitation (NCOSE), an organization that is still in existence today.

In the decades following the creation of Morality in Media, concern over the effects of pornography has continued, spurred on by the prevalence of pornography on the Internet. As research estimates that 13% of all internet traffic is now dedicated to pornography, lawmakers, journalists and researchers have begun to question the effect of widespread pornography use on society, with some government groups even calling for public health crisis legislation (Ogas & Gaddam, 2011; Grubbs, Exline, Pargament, Volk, & Lindberg, 2017; Ley, 2018). One prominent organization mobilizing against pornography is Fight the New Drug (FTND), a not-for-profit organization founded in 2009. Operating under the motto "Porn Kills Love," Fight the New Drug seeks to inform the public about the risks of pornography using social media, the sale of T shirts, presentations in public schools, and through a "street team" of volunteers.

The following thesis aimed to capture audience reaction to anti-pornography campaigns like those created by FTND and NCOSE. While studies have shown that several health advocacy messages have been successful in persuading people to adopt protection behaviors against a health threat, unsuccessful campaigns can run the risk of inadvertently causing the audience to

react adversely to the message (Dillard & Shen, 2005). This thesis further explored such an effect by testing several anti-pornography message types–statistical, research-based, and narrative videos– and measuring their potential effect on psychological reactance. In addition to narrative research, other factors, such as intrinsic religious motivation, were measured as potential factors influencing reactance.

The thesis will first present a literature review of the previous body of literature on psychological reactance theory. After the introduction of psychological reactance theory, the subject of pornography is discussed, as well as its intersection with religion. FTND will be introduced as an example of anti-pornography campaigns. The thesis then presents a methodology involving exposure of to one of three video conditions, with an explanation of the measurements used. Following these sections, results are presented, ramifications discussed, and conclusions are drawn.

CHAPTER TWO

Literature Review

A common goal of health communication campaigns is to persuade a target audience to change its attitudes or behaviors surrounding a variety of health issues (see Seigel & Beiner's [1997] study of the impact of anti-tobacco campaigns; Stephenson & Palmgreen's [1999] examination of effects of anti-marijuana campaign on adolescents). These campaigns are often used to motivate aversive behaviors toward a potential health threat such as smoking (Grandpre, Alvaro, Burgoon, Miller, & Hall, 2003). Unfortunately, convincing people to protect themselves against a health threat can be a high-stakes endeavor (Dillard & Shen, 2005). While previous health communication studies have determined the importance of using overt directions when seeking to persuade individuals to change an attitude or behavior, research into resistance has demonstrated that telling people what to do can, and often does, backfire (Clee & Wicklund, 1980; Bensley & Wu, 1991; Cho & Salmon, 2007). If executed improperly, an unsuccessful campaign can even run the risk of creating a *boomerang effect,* causing some individuals to act directly opposite to the intent of the message (Burgoon, Alvaro, Grandpre, & Voulodakis, 2002; Dillard & Shen, 2005).

Researchers have developed theories to explain why such an outcome would occur (Dillard & Shen, 2005). One groundbreaking approach–known as *psychological reactance theory* (PRT)– states that people are protective of their autonomy and will react adversely to a message when they feel that their freedom is being limited or threatened (Brehm, 1966; Dillard & Shen, 2005).

Psychological Reactance Theory

At the heart of Psychological Reaction Theory lies the concept that people are highly protective of their freedom to choose, and they will go to great lengths to retain that sense of freedom (Brehm, 1966). As can often be seen prominently in toddlers or teenagers, there is a primal desire within all humans to have the freedom to choose how to think and act. In addition to this desire for freedom, humans also have a strong sense of resistance to anything or anyone that encroaches on their freedom. Because of this predisposition, if a message appears to violate an individual's expectation of freedom (also known as the *threat to freedom)*, people then enter a motivational state in order to regain the freedom that was lost. Researchers have tested whether this motivational state is primarily cognitive or affective; current research supports a model that theorizes a combination of both (Dillard & Shen, 2005; Quick & Stephenson, 2007). That is, first a perception of the threat (negative cognitive perception) becomes apparent, triggering an emotional response (anger). Both of these responses lead to a state which can provoke a person to restore his or her sense of freedom and autonomy in an act known as *restoration* (Shen et al, 2013).

Restoration. After entering this motivational state, individuals can directly restore their lost freedom by doing the opposite of what has been said, or they can react indirectly by discrediting the source of the message or by becoming more interested in the forbidden object (known as the *forbidden fruit effect*; Bushman & Stack, 1996). We often see examples of this effect in real life. For example, a 2011 study examining the effects of loss-framed anti-marijuana messages found that adolescents who watched a moderate threat loss-framed public service announcement reported having *higher* positive attitudes toward marijuana after viewing (Zimmerman, Cupp, Abadi, Donohew, Gray, Gordon, & Grossl, 2014). Further research has

shown that other drug prevention efforts may have resulted in similar reactions; in 1973, the National Commission on Marijuana and Drug Abuse noted in a report that its current drug prevention campaign might "merely stimulate youthful interest in drugs" (Feingold & Knapp, 1977, p. 26)

Taylor (1981; see also Fiske & Taylor, 2013) described human beings as "cognitive misers," who are inclined to perform the least amount of cognitive work necessary in a given situation—and if the attitudinal and/or behavioral changes being requested by a message are deemed too difficult, the individuals may be more motivated to disregard the message wholesale rather than attend to it, which contributes to the discrediting of the source.

Despite 40 years of research, the mechanisms surrounding psychological reactance are still a mystery. Researchers have determined specific conditions under which psychological reactance occurs; for example, research has suggested that as the magnitude of the threat to freedom increases, reactance follows (Brehm 1966). It is also known that if the message's persuasive attempt is discovered, the individual tends to become more resistant (Petty & Cacioppo, 1977). Distinctions within reactance studies have also been made between *dispositional reactance*, which is the temporary motivational state to regain lost freedom, and *trait reactance,* which refers to individuals' likelihood to experience psychological reactance at any given time (Hong, 1992). Indeed, while psychological reactance has been confirmed among all age groups, certain groups of individuals are more susceptible to reactance than others (Brehm & Brehm, 1981). For example, young people tend to be more likely to experience reactance than older individuals, and young men are particularly more reactant than other groups (Hong, Giannakopoulos, Laing, & Williams, 1994).

Research employing psychological reactance theory has been heavily used within the

context of anti-drug campaigns and other campaigns promoting prevention and cessation behaviors–particularly among young adults who may exhibit more instances of reactance (Cho & Salmon, 2007; Hong, Giannakopoulos, Laing, & Williams, 1994). It is clear that these campaigns are well-suited for the study of psychological reactance and resistance because these campaigns often attempt to influence individuals' behaviors and attitudes directly. One can easily see how an attempt to curb a potentially dangerous or unhealthy behavior can trigger a motivational state in its audience. There is however, no research as of yet examining psychological reactance within the context of internet pornography use and potential addiction. Namely, no research has been done exploring the role that psychological reactance plays in the acceptance or rejection of different types of anti-pornography messaging. And yet, organizations such as the National Center on Sexual Exploitation and Fight the New Drugs have continued to lead campaigns that attempt to dissuade pornography use on a personal and public policy level. The following sections will therefore discuss the potential of pornography as a public health concern, and illustrate the need for study regarding anti-pornography campaigns.

Pornography

Few words in the English language produce such conflict and contradiction as that of the word *pornography*. In 1986, the United States Attorney General defined pornography as "material … sexually specific and intended for the purpose of sexual arousal (United States Attorney General, 1986, p. 228–229). But despite a seemingly succinct definition, pornography is endlessly complex–a subject both profoundly personal yet universal, and a word heavily-laden with political, moral, and societal implications.

Scholars have further elaborated on the Attorney General's Commission by stating that in order for a text to be considered pornography, it must: a) be sexually explicit b) be mediated and

available for public consumption and c) be understood to be intended for the sexual gratification of the viewer (Sullivan & McKee, 2015). While one can operationalize the term pornography as sexually explicit material intended for sexual pleasure, the pornographic text itself can take on a seemingly endless variety of forms, with varying depictions of power and gender (Sullivan & McKee, 2015). According to Harris and Barlett (2002), pornography falls under the category of either being violent (depicting rape, psychological dominance, bondage, torture, etc.) or nonviolent. Even nonviolent material, however, varies greatly in its depiction of sexual behavior, and can range from consensual sexual intercourse between individuals who appear to care for each other to acts of humiliation, dehumanization, or degradation. As Susanna Paasonen (2011) states in her book *Carnal Resonance: Affect and Online Pornography*:

> Access to porn is easier than ever, and it can be accessed for free, anonymously, and in a seemingly endless range of niches, styles, subcategories, languages, and formats that have been impossible in other media—provided that one has the necessary hardware, software, and bandwidth and skill to use them (p. 2).

Pornography has become—and is continuing to become— an increasingly-ubiquitous feature of modern Western society. Pornographic web sites have shown tremendous growth (Lo & Wei, 2002). Research has linked this growth to the convenience and privacy made possible through the Internet (Cooper, 2004; Wright, 2013). Whereas sexually-explicit material was once restricted to print and video that often required a certain level of effort or money to obtain, the advent of the Internet has facilitated an (often) free, unregulated, and vast depository of sexually-explicit materials that can be accessed by anyone with an internet-enabled device (Paasonen, 2011). Participatory culture has also enabled the confluence of the Internet and pornography, as users can contribute to a participatory pornographic culture by uploading webcam videos,

posting photos and illustrations, or writing pornographic fiction (Paasonen, 2011). Although estimates are hard to find concerning the earnings entire internet pornography industry, the New York Times estimated that just one site–the popular pornography site PornHub.com–brings in about one billion dollars annually and 18 million visitors per day ("What It's Like to Report About the Porn Industry," 2018). Various studies (collected by the American Psychological Association) estimate that consumption rates between 50 and 99 percent among men, and 30 percent to 86 percent among women (Tolman et al., 2014). However, as popularity has increased, so have concerns over the consequences of its widespread adoption.

Pornography effects. Even as the number and popularity of pornographic texts continues to increase, research continues to paint a conflicting picture of the effects of pornography use on consumers, with results supporting both positive and negative effects (Peter & Valkenburg, 2010). Several researchers have found educative and relationship benefits, such as self-reported educational insights and sustained sexual interest within long-term relationships (Morgan, 2011; Stulhofer, Busko, & Landripet, 2010). However, negative effects have also been found, such as less progressive sex-role attitudes (i.e. the belief that men are sexually dominant), sexual dissatisfaction, and reported findings of pornography-induced erectile dysfunction among men, a finding which was disputed in a 2015 cross-sectional online study of nearly 4,000 European men published in the Journal of Sexual Medicine, which cited greater sexual responsiveness (Corsianos, 2007; Lo & Wei 2005; Peter & Valkenburg, 2006). Psychological distress has also been linked with the use of pornography among certain groups, particularly those in which it has been taught to be morally wrong (Grubbs, Volk, Exline, & Pargament, 2015).

A large amount of scholarly attention has been paid to the effects of pornography on aggression and violence. Zillman and Bryant (1984) found that participants with repeated

exposure to sexually-explicit media may have become desensitized to sexual violence.

Pornography addiction. Among pornography effects, there has been the claim that pornography is addictive. Pornography addiction is an unofficial term that refers to the compulsive viewing of pornography to achieve or pleasure (See Robinson & Berridge, 2000). Much like other effects of pornography, however, the research consensus on internet pornography addiction has yet to be determined. Some researchers have provided evidence refuting addiction claims (Ley, Prause, & Finn, 2014); however, other research has supported a neurochemical dependency to pornography (Hilton, 2013). In a recent 2017 study, researchers found that functional magnetic resonance imaging (fMRI) scans showed a similarity between self-perceived pornography addicts and people with a substance dependence (Gola et. al, 2017). As of the time of publication of this study, research-backed pornography addiction is still inconclusive within academic literature, and pornography addiction is not included in the DSM V (Hilton, 2013). Although anecdotal evidence of individuals claiming to be addicted is rampant among anti-pornography media and within internet forums, further research and evidence would be needed in order to establish pornography addiction as a valid medical condition (though it should be noted there has been utilization of the term Compulsive Pornography Use as a working clinical diagnosis in some research and medical communities; Bergner & Bridges, 2002).

Despite the inconclusive nature of pornography effects—particularly that of pornography addiction, individuals and groups have expressed concern as pornography use continues to rise.

Pornography concerns: A history of anti-pornography. One of the most prominent arguments against pornography is that it is ideologically anti-women and promotes a culture of objectification and degradation (Buchwald, Fletcher, & Rot, 1993; Russell, 1998). In the 1960s and 70s, radical feminist groups such as Women Against Violence Against Women (WAVAW)

and Women Against Pornography (WAP) mobilized in order to oppose sexually-explicit media, arguing that such depictions were a tool of patriarchal control that "taught men to view women as subhuman, as sex objects designed for use and abuse" (Bronstein, 2011, p. 2). However, this took a sharp turn in the 1980s after the election of Ronald Reagan, an election which Bronstein (2011) claims started a rise of the New Right, a movement that fostered "right-wing reactionism and the emergence of a power structure and grassroots political culture openly hostile to liberal and feminist ideas" (p. 280). A powerful segment of this New Right movement was the Christian conservatism movement. Religious conservatives fought against pornography, abortion, and sex education in schools en masse, perceiving all as threats to the traditional family structure (Bronstein, 2011). Feminists pushed back, arguing that the New Right was using feminist anti-pornography rhetoric as a way to drive their own agenda of attempting to "eradicate non-marital, non-reproductive sexuality and return women to the 'safe' space of the home" (Bronstein, 2011, p. 280). In response, feminists decided to stop pushing for anti-pornography, deciding that concession in any part with the New Right would be too risky.

With the majority of feminist groups falling largely silent about pornography (save for those stating specific opposition to sexual violence), anti-pornography movements have been much less publicized in recent years, and they have shifted their focus to be less on violence and more about sex (Bronstein, 2011). Therefore, the focus of the anti-pornography rhetoric has been largely transmuted from a feminist concern to a moral and religious one (Bronstein, 2011). Save for a few feminist scholars, modern opposition to pornography has been ideologically conservative and often religiously-based, with Christian lobbyist group National Center on Sexual Exploitation (NCOSE) remaining one of the largest anti-pornography organizations to date.

Pornography and Religion

Since the creation of Morality in Media by a group of ecclesiastical leaders, support for the restriction of pornography has been connected to religious organizations (Bronstein, 2011). Judeo-Christian values have historically promoted a life of sexual conservatism, as is evidenced by several Old Testament and New Testament passages forbidding adultery and sexual relationships outside of marriage (see Jeremiah 29:23, The New King James Version). While there is no mention of pornography in the New Testament, in Matthew 5:27–28, the passage states "...Thou shalt not commit adultery: But I say unto you, that whosoever looketh on a woman to lust after her hath committed adultery with her already in his heart" (The New King James Version). To many Christian groups, this is interpreted to mean pornography (Mielke, 1995). The holy scripture of Islam, the Quran, contains a similar passage admonishing the lustful gaze: "Say to the believing men that they should lower their gaze and guard their modesty; that will make for greater purity for them. Surely Allah is well aware of all what they do" (Quran, Yusuf Ali Translation, 24:30–31).

As attitudes regarding sexual norms and behaviors have shifted dramatically over the last century, many religious groups have maintained conservative views. Some Christian religions, including Evangelical religions, the Roman Catholic Church, and The Church of Jesus Christ of Latter-day Saints (or LDS church), have explicitly taught pornography avoidance as a part of church doctrine (Hinckley, 2004). According to Patterson & Price (2012), this opposition is often due to religious concerns about the negative effects it could have on families and on other members within the congregation (Manning, 2006; Patterson & Price, 2012).

Research has shown a link between religiosity and guilt surrounding pornography (Grubbs et al., 2015). According to recent studies, religiosity can also change a person's

perception of what constitutes addiction. For example, a two-part study conducted by Grubbs et al. (2015) found a positive correlation between self-perceived addiction to pornography and religiosity (Grubbs, Exline, Pargament, Hook, & Carlisle, 2015). This relationship was mediated by moral disapproval of pornography use. Within the group that reported having conservative or religious beliefs, a relationship was found between porn viewing and erectile function, suggesting that general shame surrounding sex creates an entirely different issue (Prause & Pfaus, 2015). Due to the fact that religion has been found to play a role in self-perceived addiction to pornography, the line of logical reasoning would follow that religious commitment also plays a part in the presence or absence of psychological resistance when it comes to messages relating to pornography.

Fight the New Drug

As internet pornography expands, "anti-pornography" rhetoric has seen a renaissance. One of the most prominent examples of mobilized anti-pornography groups is Fight the New Drug (FTND). FTND is a not-for-profit organization founded in Utah in 2009 whose mission is to "provide individuals the opportunity to make an informed decision regarding pornography by raising awareness on its harmful effects using only science, facts, and personal accounts" (fightthenewdrug.org). Most recognized by the succinct slogan "Porn Kills Love," FTND spreads awareness against pornography through the sale of T-shirts (often saying "Porn Kills Love," "Fight for Love," or "Love Can't Be Bought"), presentations in public schools, and through a "street team" of volunteers who are given T-shirts, stickers, posters and hand-out cards to distribute.

FTND takes a hard stance against any use of pornography. When describing "pornography" on its website, FTND makes no distinction between types of pornography, but

classifies all pornography as harmful and potentially addictive, much like cocaine or other addictive substances (see "New FMRI Brain Scan Shows Similarities of Porn Struggles…" 2017). Rather than seeking to regulate or criminalize pornography, however, FTND seeks to mitigate the effects of pornography on a personal level through education. It uses social media, the sale of T shirts, and school assemblies and events to both warn against the negative effects of pornography and to provide information about recovery. Specifically, FTND has its own program, Fortify, a "web-based platform of short video lessons and activities designed to educate and empower individuals seeking to find freedom from pornography" (fighthenewdrug.org). FTND employs both narrative and rhetorical messages in its campaigns in an attempt to encourage both the prevention and cessation of pornography use. In its mission statement, the targets of its campaigns are simply "young adults," a population scattered across a veritable spectrum of pornography exposure and attitudes. FTND frequently employs the motto, "Porn Kills Love" on T-shirts as a sort of shorthand for research showing the damaging relational effects of pornography use (Bridges, 2010). In another example, on October 26, 2017, FTND posted to Twitter that "Porn is directly related to problems with arousal, attraction, and sexual performance. It can also lead to less sex within a relationship" (Fight the New Drug, 2017). Much of FTND's campaign consists of these fear appeals or threatening health communications messages intended to arouse fear in its audience (Kessels, Ruiter, & Jansma, 2010). Guttman and Salmon (2004) also note that such "appeals to personal responsibility" are popular among public health and health communication campaigns (p. 542). Another type of message is also commonly used in health communication campaigns: or the use of stories.

Narratives

One way that psychological reactance (and other forms of resistance) has been shown to

be mitigated is through the use of narratives, or by using a story that follows a sequence of events (Hinyard & Kreuter, 2007), though there is more to it than just event structure. Narratives are known within academic literature as "a representation of connected events and characters that has an identifiable structure, is bounded in space and time, and contains implicit or explicit messages about the topic being addressed" (p. 222). This can take the form of a personal experience, anecdote, fictional account, or testimonial (Hinyard & Kreuter, 2007).

Stories have been a popular form of transmitting information for several millennia; in fact, one need only turn on a television or go on the Internet to see the enduring popularity of narratives in society. This is no coincidence—Hinyard and Kreuter (2007) assert that stories are a more natural and "comfortable" form of communication transmission and are therefore more easily processed than information presented in a non-narrative format (p. 778).

There are several other potential reasons why narrative messages may be more effective than purely informational messages. Among these, one possible explanation is that narrative messages tend to generate a greater emotional response from audiences than informational messages (McQueen et al., 2011). These emotional responses, in turn, are able to enhance information processing. Whereas dialectical arguments are cognitively processed, narratives are processed both cognitively and emotionally, which can result in greater message elaboration and greater involvement (Green, 2006; Hinyard & Kreuter, 2007; Green & Brock, 2000; Slater & Rouner, 2002). In some studies, narratives have also been shown to be an effective form of messaging because they overcome counterarguments that arise from biased processing (Dal Cin, Zanna, & Fong, 2002). When a person is presented with new information, the information is processed through the lens of personal schemas and experiences. If the new information presented is inconsistent with prior views, it is typically processed in a manner that reinforces

these prior views, resulting in motivated reasoning (Lodge & Taber, 2013). On the other hand, when an audience is presented with information within the narrative structure, a different set of processes can occur. In what is called narrative transportation, the audience viewing the narrative text becomes "transported" into the story (Hinyard & Kreuter, 2007). During narrative transportation, transported individuals become so engrossed by the story that they become temporarily distanced from their own previous schemas and experiences. While in this transported state, individuals are less likely to disbelieve or counter argue claims. Within the context of psychological reactance, this sense of detachment from previous schemas can be helpful in mitigating one's sense of freedoms being limited.

Slater and Rouner (2002) even go as far as to suggest that narratives are "one of the only strategies available for influencing the beliefs of those who are predisposed to disagree with the position espoused in the persuasive message" (p. 175). However, narratives have only been shown to be effective in mitigating reactance as long as they can hide their persuasive intent; studies have shown that perceived persuasive intent is positively correlated with reactance while engaging with a narrative (Moyer-Guse & Nabi, 2010).

FTND has employed narratives in its persuasive appeals in the form of short quotes, blog posts, and video testimonials. These narratives are most often the personal experiences of people who previously used to view the pornography of celebrity figures or anonymous pornography industry workers but have stopped. These narratives are shared on the organization's social media pages (Facebook, Twitter, and Instagram) alongside non-narrative arguments. After the former NFL player and actor Terry Crews posted a series of videos titled "Dirty Little Secret Series" opening up about his personal experiences with pornography, FTND posted an article on its website titled "7 Hollywood Stars Who Are Speaking Out Against Porn," announcing that

crews had "joined the #fightthenewdrug movement" ("Terry Crews Wants You to Stop Watching Porn," 2006). At the time of this study, the use of narratives by FTND was limited to social media and the organization's website; no advertising space using narrative ads has been paid for by FTND.

Unintended Consequences: Fear, Threat Severity, and Threat Susceptibility.

As reactance is an emotional state as well as a cognitive one, it can be aggravated by a message that causes a negative effect (Dillard & Shen, 2005; Reinhart, Marshall, Feeley, & Tutzauer, 2007). For example, within research, guilt appeals have been linked to higher levels of anger and disgust, all emotions related to the state of psychological reactance (Reinhart et al., 2007). Researchers state that this is because the unpleasant emotions of guilt, in conjunction with the feeling of falling short of an expectation, can be perceived as restrictive or threatening (Reinhart et al., 2007). Furthermore, studies have shown that arousing fear may also have a counterproductive effect. Studies suggest that fear arousal may result in defensive reactions such as risk denial, biased information processing, and allocating less attention to health promotion messages, thus rendering threatening health information an ineffective behavior change method (Kessels et al., 2010).

Extended Parallel Process Model. One way of understanding the mechanism of fear when individuals are faced with a threat to health or safety is through a model known as the Extended Parallel Process Model (EPPM). This model was developed from older theoretical models, including the Fear-As-Acquired Drive Model (Hovland, Janis, & Kelly, 1953), the Parallel Process Model (Leventhal, 1970), and Protection Motivation Theory (Rogers, 1975). According to the Protection Motivation Theory, individuals experience fear when faced with a threat and will, therefore, take a series of actions as a way to control this fear (Witte, 1994).

Protection Motivation Theory proposes that individuals may respond to the threat by a) taking protective action against a threat (known as *danger control*) or b) denying the threat (known as *fear control*) or ignoring the threat completely. The way individuals respond to a threat is determined by the threat severity (how severe the threat is perceived to be), the threat susceptibility (the level in which one believes they risk experiencing the threat; Witte, 1994), self-efficacy and response efficacy (one's belief in their own ability to avoid the risk), and the feasibility of being able avoid the risk (Gore & Bracken, 2005). The level in which one perceives a threat to be severe can have an impact on whether one responds positively or negatively to a health message.

A distinction should be made here between health threat, as outlined by the EPPM, and threat to freedom, as put forward by PRT. Perceived threat refers to the cognitive processes that occur when an individual is faced with a threat to one's health or safety, whereas threat to freedom is the immediate threat one feels when one's freedom is being threatened. The functions of the threats are also very different; the solution to a health threat is the compliance to a health message, whereas one only experiences the solution to a threat to freedom by reacting against a message. Despite these differences, both EPPM and PRT researchers testing EPPM have operationalized reactance, with EPPM defining reactance as perceived manipulation, message minimization, and message disparagement (Hall et al., 2016).

In his Psychological Reactance Theory (1966), Brehm made the pivotal claim that people are protective of their choices and will resist a message when they feel that their freedoms are being limited. Considering Brehm's theory, then, it will stand to reason that messages intended to influence its audience to personally avoid viewing sexually explicit materials will be met with, at worst, vehement resistance from a large segment of the population and at best indifference.

Still, organizations such as the National Center on Sexual Exploitation (formerly Morality in Media) have continued to lead campaigns that attempt to dissuade pornography use on a personal and public policy level (Paasonen, 2011).

Research at this point has been inconclusive on the effects of pornography and the existence of pornography addiction. However, this study is important for several reasons. Owing to the prevalence of pornography in various forms and with various studies demonstrating that pornography is, in fact, detrimental, it then becomes necessary to consider the effects of campaigns such as FTND and NCOSE. Furthermore, more empirical testing of psychological reactance is necessary for understanding how messages are received (O'keefe, 2012; Burgoon et al., 2002).

The purpose of this study was to examine the roles that narratives, threat susceptibility and severity, and intrinsic religious motivation have on psychological reactance, within the context of pornography addiction. Although abundant literature has been published on pornography effects and over 40 years of research has been done regarding psychological reactance (Brehm, 1966), no academic research has yet examined psychological reactance in the context of pornography attitudes. Furthermore, little research has been done examining other factors that attenuate reactance, such as the perception of threat severity and susceptibility. In light of the research discussed so far, the following hypotheses are proposed:

H1: The narrative condition will prompt less psychological reactance among viewers than the statistical or research-based condition.

H2: Religiosity will correlate positively with threat severity (H2a) and negatively with threat susceptibility (H2b).

The following are the research questions of this study:

RQ1: Is reactance related to severity (RQ1a) or susceptibility (RQ1b)?

RQ2: Are religion and susceptibility related?

RQ3: How does condition (statistical, research based, or narrative) impact threat severity?

RQ4: How does condition (statistical, research based, or narrative) impact threat susceptibility?

CHAPTER THREE

Methods

The purpose of this study was to examine the relationship between threat susceptibility, threat severity, religiosity, and psychological reactance using different types of messages that communicated the risks of pornography.

Video Selection

For the experiment stimuli, three persuasive messages discussing the risks of pornography use were selected from Youtube. Each video discussed issues associated with pornography use and were roughly three minutes long (ranging from 174 seconds to 207 seconds). The videos were selected as experimental stimuli for several reasons. Videos were chosen if they discussed personal risks of pornography use without being considered overtly persuasive or forceful in its position, as this could affect reactance. Videos also had to discuss the topic of sexual behavior without the use of graphic or explicit imagery or language. Videos were also selected that were similar in length. Three minutes was decided as the perfect time to convey the necessary information while remaining succinct enough to avoid high drop-off rates among participants. From these requirements, the researcher was able to gather three videos containing different conditions.

Participants

The experiment consisted of responses from 187 individuals who were randomly assigned to one of three message conditions: narrative, statistical, and research-based.

The survey was taken by 218 people in total; however, out of the 218 individuals who completed the survey, the data from only 187 ($N = 187$) participants was used for the experiment

due to drop out rates. Participants were timed using an in-survey timer that recorded how many minutes were spent on their respective stimulus (video) pages, and any individuals whose time spent on the page was less than the run time of the video were removed from the sample. Overall, ($N = 10$) individuals were removed from the statistical sample due to having view times shorter than the length of the video (<174 seconds). From the research sample, 13 ($N = 13$) were removed (<180 seconds). And from the narrative sample, 8 were removed ($N = 8, < 207$ seconds). Overall, there were 44 ($N=44$) respondents in the narrative condition, 94 ($N = 94$) in the research condition, and 49 ($N=49$) respondents within the statistical condition. The research-based condition has more participants than the other conditions because this data will be used in a follow-up study with a larger sample size, comparing additional types of message conditions. All participants were compensated $2 either through Amazon Mechanical Turk or in person upon completion of the survey.

Participants were recruited online using Amazon Mechanical Turk and through snowball sampling. Participants who were recruited through snowball sampling were students at a large university. Snowball sampling was used in addition to Amazon Mechanical Turk in order to ensure a greater variety of participants, as only using workers from a single company could run the risk of the sample being rendered ungeneralizable. Each of the participants gathered were residents of the United States. Both male and females were recruited for this study, though the majority of the respondents were male, with 123 males (65.8%) and 64 females (34.2%). Because the subject of pornography discussed, participants were also required to be at least 18 years of age or older to participate in the study. The age of participants ranged from 21 to 76, with the average age of 35 (m=35.03). A full demographic overview of participants can be found in Table 1.

Procedure

This experiment was conducted exclusively online through an internet survey using Qualtrics software. The experiment consisted of a set of questions and exposure to video stimuli. After viewing the video, participants resumed the questionnaire by reporting their reactions to the video, including level of psychological reactance and severity and susceptibility of the threats presented in the message. This procedure lasted around 20 minutes in length. Below is a full explanation of each step of the procedure.

Recruitment tool. Following approval from the Brigham Young University Institutional Research Board, a brief description of the study was posted on Amazon Mechanical Turk's job listing page. Within the description inviting individuals to participate in the academic study, a disclaimer was included to warn individuals that mature subject matter would be discussed within the study. If participants wished to proceed after reading the description, an anonymous Qualtrics survey link was given to the participants. If the participant was gathered using snowball sampling and the participant agreed to take part in the study, a link was distributed through email. Participants were given a full explanation of the nature of the subject matter being discussed prior to taking part in the study, and it was indicated that participants had the option to leave the experiment at any time. After reading through the implied consent form at the beginning of the survey communicating the risks associated with the study, participants who agreed to the risks began the experiment.

Experimental manipulation. The survey began by asking participants to volunteer non-identifying demographic information including their age, state of residence, and level of education. Following the initial demographics questions, participants (*N*=187*)* were then asked a series of questions examining their level of religious involvement. If the participants reported

that they belonged to an organized religion, they were asked to specify the denomination and were then taken to a set of questions that measured religious commitment. The questions were adapted from the Intrinsic Religious Motivation (IRM) Scale developed by Hoge as a validated measure of religious commitment (Hoge, 1972). (See Appendix A) Participants answered questions measuring their level of Intrinsic Religious Motivation on a 4-point Likert scale.

After completing the series of questions from the IRM scale, participants were then sent to a page of the survey containing one of three randomly-distributed links. Each link led to a separate video on the video-publishing platform Vimeo.com. The videos were each in the form of one of three conditions: a research-based video, a statistical video or a narrative video. The page containing the video link was equipped with a timer measuring time spent on the page in order to verify that participants had finished watching their assigned video to its conclusion. Any identifying information linking back to the Youtube channel or the organization that created the video was taken out of the video. All three videos were approximately the same length.

Condition 1: statistical video. Within the statistical video group, participants were shown a video presenting statistical poll data about pornography use and addiction. In the video, infographics were shown as a voice-over of a female read the statistics aloud. The statistics purported a variety of information such as the percentage of people who claimed to be addicted to pornography, the effect of pornography on divorce rates, and how many individuals were accessing pornography at work. No interpretation of the data was given within the video (See Appendix B).

Condition 2: research-based video. Within the research-based video group, participants were shown a video presenting factual information from a research standpoint concerning the potential effects of pornography use and addiction. The information presented within the video

was less dependent on utilizing numbers to advance an argument, but rather explains the neurological processes of pornography addiction in layman terms. And while the narrator was not shown, the narrator is assumed to be a young adult male. A series of hand-drawn cartoons are shown throughout video in order to illustrate what was being said. (See Appendix B).

Condition 3: narrative video. Within the narrative group, participants were shown a video of a first-person account in which the main narrator shared his personal experiences with pornography addiction. Throughout the duration of the video, the narrator explained his involvement with pornography including his exposure to pornography as a child, his struggle with addiction as an adolescent and young adult, and his life as someone who no longer views pornography. Although the narrator explains that his life is better without using pornography, no direct command or recommendation was communicated to the audience. The narrator was shown and was a young Caucasian male who appeared to be sitting in his home. Slow, melancholic music played in the background. (See Appendix B).

Post-Test

At the conclusion of the three-minute video, participants were then asked to self-report on a series of questions measuring their level of psychological reactance to the stimuli. These questions were taken from Dillard and Shen's Psychological Reactance Scale (PRS; Dillard & Shen, 2005). (See Appendix A). The scale included items such as "The message tried to make a decision for me" "The message tried to manipulate me" and "The message tried to persuade me." Participants rated their agreement on seven-point Likert scales ranging from 1 = *Strongly disagree* to 7 = *Strongly agree*. Respondents also rated how angry, annoyed, irritated, and aggravated they felt while watching the video in order to capture the emotional dimension to reactance.

Measures

Religiosity. Religiosity was measured using the Intrinsic Religious Motivation (IRM Scale) created by Dean R. Hoge (1972). The scale contains 10 items, including: "In my life I experience the presence of the Divine," "I try hard to carry my religion into all other dealings in my life" and "Nothing is as important to me as serving God as best I know how." Participants rated their agreement ranging from 1 = *Strongly disagree* to 4 = *Strongly agree.* The IRM scale has traditionally been a measure of religious commitment within Christianity, and as a result, Christian terms are used (the name of God is used as a descriptor for deity; Hoge, 1972). Therefore, in order to accommodate subjects who may belong to other non-Abrahamic religions, an adapted scale was used, and "God" was replaced with the term "higher power." All else in the scale remained the same. This scale was administered only among those who reported to belonging to a religion, resulting in a sample size of $N = 65$. A factor analysis was performed, which showed excellent scale performance ($M = 2.702$, $SD = .654$, $\alpha = .875$).

Threat severity and threat susceptibility. Recently, researchers have emphasized the need for more research to be done on the processes of resistance (Burgoon, Alvaro, Grandpre, & Voloudakis, 2002; Dillard & Shen, 2005; Jacks & Cameron, 2003). In light of this, another potential factor was considered when examining the process of psychological reactance: threat severity and threat susceptibility. This measure sought to explore these two variables by using a scale known as the Risk Behavior Diagnosis Scale (RBD; Witte, 1996). The scale is used by Witte (1996) within the framework of the Extended Parallel Process Model; however, because it is a validated scale that has produced reliable results assessing threat perception, the scales measuring threat susceptibility and severity were used for the purposes of this study (Witte, Cameron, McKeon, & Berkowitz, 1996;).

Perceived susceptibility and severity were each measured on a 5-item scale and were measured separately. Respondents rated their agreement to statements assessing perceived threat severity and susceptibility on a scale from *1= Strongly Disagree to 7 = Strongly Agree.* The language within the scale was adapted to reflect the subject of the study; that is, the threat that was referenced in the measure was "pornography addiction."

Threat severity. Participants were asked to rate their agreement to statements measuring perceived susceptibility including, "I believe that the threat of pornography addiction is severe," and "I believe that the threat of pornography addiction is serious." A factor analysis was performed, which showed excellent performance (M = 3.824, SD = 1.062, (α = .913, N = 187).

Threat susceptibility. Subjects assessed their level of perceived susceptibility to the threat of pornography addiction by answering questions including, "I believe that I am at risk for becoming addicted to pornography." A factor analysis was performed, which showed excellent performance (M = 2.396, SD =1.255 (α = . 913, N = 187).

Psychological reactance. Psychological reactance was measured using Dillard & Shen's Psychological Reactance Scale (PRS). As psychological reactance has been theorized as both a cognitive and affective process, questions measured both cognitive and affective states (Dillard & Shen, 2005; Quick & Stephenson, 2007; Rains & Turner, 2007). Nine items were used in order to measure both of these components. A factor analysis was performed to measure validity (M = 2.9411, SD = .92, α = .92).

Debriefing

After the completion of the survey, participants were given the contact information of the researchers and invited to contact them if they had any further questions regarding the study.

They were then compensated for their time through Amazon Mechanical Turk or through in-person compensation.

Statistical Analysis

Statistical analyses were performed using IBM SPSS software. The analytical approach utilized was bivariate correlation and one-way ANOVA to confirm statistical significance and compare the variables against one another.

The video conditions were coded in order to perform bivariate correlation. The statistic condition was given a value of 1, the research-based was given the value of 2, and the narrative was given a value of 3.

CHAPTER FOUR

Results

The study consisted of a cross-sectional analysis of pornography-related messages with the goal of identifying how narrative message impacts psychological reactance, as well as internal religious commitment, threat severity and susceptibility.

Bivariate Correlation Matrix

A bivariate correlation matrix was created to examine relationships among the variables (see Table 2). H1 stated that an inverse relationship should exist between condition and psychological reactance, such that those in the narrative condition (coded 3) would have lower reactance than those in either the research-based (coded 2) or statistical (coded 1) conditions.

H1 Results

The first hypothesis predicted that that the use of narrative audiovisual stimuli would attenuate psychological reactance among respondents. Prior literature predicted such an effect; however, this was not found to be the case in this study (Green, 2006). Results indicated that the correlation was in the direction predicted, however the result was found to be non-significant ($r =$ -.118, $p = .108$), preventing the confirmation of the hypothesis. Given that this relationship approached significance, a one-way ANOVA was conducted to further ascertain the nature of the relationship. While this too was non-significant, $F(2, 184) = 1.597, p = .205$, it is notable that the graphed means were in the direction predicted by H1 (see Figure 1), such that those in both the narrative ($M = 2.834$) and research-based ($M = 2.883$) conditions manifested lower psychological reactance than those in the statistical condition ($M = 3.149$). It is possible that the sample simply lacks the statistical power needed to discern a significant difference in this case, a difference (and the notable reduction in psychological reactance that the research-based condition manifested)

which should be explored in future studies. Other factors that were not accounted for may have also been the reason for this discrepancy–for instance, the video stimuli may not have been long enough for transportation effects to occur.

H2 Results

H2a predicted that religiosity would be positively correlated with threat severity, and the bivariate correlation matrix confirmed this ($r = .395$, $p = .001$), showing that those who scored higher on the religiosity scale reported greater perceived threat severity toward pornography. The findings from H2a further validate the link between religion and perceptions of pornography addiction as was previously demonstrated by Grubbs et al., who made the connection between religiosity and perceived pornography addiction (Grubbs, Exline, Pargament, Hook, & Carlisle, 2015). H2b, which predicted a negative correlation between religiosity and threat susceptibility, was found to be non-significant ($r = .163$, $p = .195$).

RQ 1 Results

RQ 1 addressed whether psychological reactance shared a relationship with reported levels of threat severity (RQ1a) and threat susceptibility (RQ1b). Results of the bivariate correlation matrix indicated a weak inverse correlation between psychological reactance and threat severity ($r = -.193$, $p = .008$), suggesting that participants who reported having experienced a higher level of psychological reactance should have rated lower threat severity of pornography addiction. The bivariate correlation measuring the relationship between psychological reactance and threat susceptibility, on the other hand, showed a moderate positive correlation ($r = .352$, $p < .001$). That is, results indicated that participants who reported experiencing higher psychological reactance using the PRS also measured as reporting higher levels of threat susceptibility.

RQ 2 Results

RQ2 simply asked whether religiosity was related to threat susceptibility to pornography addiction. The bivariate correlation indicated that there was no relationship between these two variables ($r = .163$, $p = .195$).

RQ 3 Results

RQ3 examined whether one of the conditions–narrative (coded 1), research-based (coded 2), and statistical (coded 3)–had a significant impact on self-reported threat severity. The bivariate correlation matrix showed no significant relationship between condition and threat severity ($r = .053$, $p = .468$). To confirm these findings, a one-way ANOVA was conducted with condition as the predictor, and threat severity as the outcome. This test confirmed the non-significant relationship, $F(2, 184) = .312$, $p = .732$.

RQ 4 Results

RQ4 investigated the impact of video condition–narrative (coded 3), research-based (coded 2), and statistical (coded 1)–on threat susceptibility. The bivariate correlation matrix showed a moderate inverse relationship ($r = -.273$, $p < .001$), meaning that those who viewed the narrative video reported experiencing lower threat susceptibility than those within the statistical or research video groups. In other words, those within the narrative condition felt less at risk of developing a pornography addiction after viewing. Conversely, while susceptibility was lower, threat *severity* was higher within the same group. To gain further insight into this finding, a one-way ANOVA was performed and found to be significant, $F(2, 184) = 7.429$, $p = .001$ (see Table 3). Post-hoc comparisons utilizing the Bonferroni test indicated that the narrative condition ($M = 1.879$, $SD = 1.074$) prompted significantly less perceived threat susceptibility than the statistical condition ($M = 2.850$, $SD = 1.170$). Furthermore, comparisons between the research based-

condition ($M = 2.401$, $SD = 1.294$) and the narrative condition approached significance ($p = .059$)—and, given greater statistical power, likely would have turned so. The graphed means from this analysis show the direction of this relationship (see Figure 2).

CHAPTER FIVE

Discussion

This study sought to observe the effect of different message types on psychological reactance when examined within the framework of internet pornography. The resulting relationship between message type and psychological reactance were not found to be statistically significant. However, the study also sought to examine the role that message type had on perceived threat and susceptibility (and vice versa), while using religion as a variable. The analysis of these variables yielded significant results, including a significant positive correlation between narrative messages and threat severity and a negative correlation between narrative messages and threat susceptibility. These and other findings potentially present an insight into how messages pertaining to pornography are received, as well as provide information into the effects of video narratives on threat perceptions.

As was predicted, religious commitment (as measured by IRM) played a significant role in individuals' personal perceptions surrounding pornography addiction. As was illustrated previously, having a religious background can affect an individual's views on pornography, and a potential confirmation of this can be seen here within the data. Namely, those who reported having higher religious internalization viewed pornography addiction as being a more severe threat than those with a lower IRM score. What can be concluded from this finding is that concern over pornography addiction and religion seem to be linked, although the nature of the link has yet to be definitively determined in this thesis. One reason for this could be due to prior exposure to religious rhetoric that included warnings about the risks of pornography. Perhaps those who rated highly in IRM have a greater likelihood of considering spiritual implications (e.g., the spiritual consequences of sin) when considering the threat of pornography addiction;

that is, the spiritual cost of pornography on one's spiritual well-being could be perceived as being far greater than any physical or mental consequences that may occur. A study by Patterson & Price (2012) could also potentially explain this phenomenon by pointing out that the threat of pornography addiction also has emotional and psychic costs for religious individuals, as pornography goes against the social norm in certain religious circles (Patterson & Price, 2012).

Individuals who reported having greater Intrinsic Religious Motivation were less likely to experience psychological reactance after viewing anti-pornography messages. This was counterintuitive to the prediction that feelings of guilt associated with religiosity and pornography would increase negative feelings, thus triggering greater psychological reactance. However, it could be that religious commitment mitigates the perception of a threat-to-freedom pertaining to pornography use, or perhaps negative emotions occurred, but did not escalate to reactance due to cognitive reappraisal. Though generally not discussed when relating to psychological reactance, cognitive reappraisal can occur following an emotional reaction, wherein an emotional reaction is then reinterpreted using prior schemas and experiences (Denson, 2015). While cognitive and affective elements were not studied as separate variables within this thesis, it could be that negative emotions are occurring within the IRM group, but religious commitment and beliefs contextualize these emotions and prevent the outright rejection of the message. Further analysis of the data should be done in order to determine whether cognitive and affective reactance occurred among these individuals. Guilt and its effect on psychological reactance could also provide an opportunity for future research.

The findings within the study provide a greater understanding into the relationship between religion and acceptance to the message, which could potentially be helpful to both anti-pornography advocates and health communication practitioners alike. Findings indicate that

those who rank low on the IRM scale or were excluded from the scale due to having no religious affiliation (which was the vast majority of subjects) may have to be approached differently if message designers want to be effective with them, as reactance rates were higher among this group. Threat was also an issue among this group, with a significant negative relationship between reactance and threat severity. That is, individuals who have no religious background or who are less religious may lack the sense that the threat associated with pornography addiction is a severe enough problem. If one were to use EPPM as a guide, these findings would suggest that in order to prompt protective behaviors, threat severity should be emphasized among this group–that is, negative effects ought to be heavily emphasized. FTND's campaigns often stress threat severity by emphasizing physical, mental, and relational effects. However, it could be that individuals rating themselves as being low in IRM may not view addiction to pornography as a health threat in the same way it is viewed by those with high levels of IRM. In that case, practitioners wishing to advocate for greater preventative behaviors against pornography–particularly among those who are not religious–may need to shift the focus from individual risk to the negative impact of pornography on society. It is unknown whether threat on a societal scale would create the same effect as a personal threat in this instance; however, if achieved, a greater sense of threat severity could potentially reduce psychological reactance, and, if coupled with an increased sense of susceptibility and a sense of self-efficacy, it could lead to the adoption of protection behaviors.

The link found between threat susceptibility and narratives add an interesting dimension to narrative persuasion that could be used to further narrative research. Respondents in the narrative condition tended to report that they believed the threat of pornography addiction to be severe, but do not tend to think of themselves as being potentially susceptible. This finding,

coupled with findings that showed a greater mean of severity ($M = 3.8235$) than a mean of susceptibility ($M = 2.3957$) among the sample could suggest the presence of a perceptual bias (known within some persuasion studies as the third-person effect). Kirscht et.al (1966) and other researchers have speculated on this phenomenon by theorizing that people are overly optimistic in their perception of personal risk. Not only do individuals tend to downplay their own risk, but they tend to think that those around them are much more likely to experience a health or safety problem than they are (Harris & Guten, 1979; Weinstein, 1980; Kirscht, Haefner, Kegeles, & Rosenstock, 1996). This is found to be true with pornography as well: in a study conducted by Lo & Wei (2002), it was suggested that individuals tend to view the threat of pornography as being more severe to others than to themselves. Interestingly, this trend is especially true among females, who not only view their threat as being low, but were more likely to perceive greater effects of pornography on males than on other females (Lo & Wei, 2002). Previous studies have also suggested that the magnitude of this perceptual bias leads to greater support for restrictions on pornography; that is, viewing pornography as being more severe in others could potentially lead to the support of anti-pornography attitudes (Gunther, 1995; Lo & Wei, 2002). This could suggest that the use of statistics, which report and emphasize the prevalence of behaviors among others, could potentially be a non-confrontational and effective tool of persuasion when attempting to change attitudes about a potential health risk.

  As was previously stated, the results of this study suggest the presence of the third person effect. What is interesting to note, however, is the significant relationship that susceptibility shares with the narrative condition. This suggests that viewing a short narrative testimonial may actually cause some viewers to distance themselves from a potential health threat, as though by viewing the experience of another person, viewers were able to create a mental gulf between

themselves and the threat. If true, this finding could have a significant bearing on how health messages are approached in the future. However, this could also be affected by external factors not explored in the study, such as the viewer's identification with the narrator. Earlier studies have investigated the outcome of similarity to characters and its effect on persuasion, demonstrating that similarities in race, sex, and age between a character and viewer can create identification and can theoretically increase persuasion. This was not explored in this study but should be further investigated. The need for identification may be an important factor in motivating behavior-change when using short-form narratives in a video format.

Limitations

In *The Sage Handbook of Persuasion,* Shen et al. (2013) characterize reactance as a black box in which message features go in and outcomes come out, with very little understanding of what happens in between. This illustrates well the fact that mechanisms of psychological reactance, even up the present day, have yet to be fully discovered. Brehm and Brehm (2013) have stated that reactance at this point is merely an intervening variable and is not meant to be a definitive or self-sustaining measure (Shen et. al, 2013). It was proposed that researchers should ensure that the negative emotions measured are related to psychological reactance and not to other outside variables. This study built on such notions through intending to triangulate reactance findings by measuring them alongside threat severity and susceptibility. However, measuring reactance with psychological reactance is difficult, as it is hard to translate the mechanisms of threat and the process of the EPPM Model to that of PRT. Furthermore, despite showing correlations between EPPM and PRT variables, it is impossible to determine in which ways threat severity and susceptibility have an effect on reactance within the study, or vice versa. What this study can do is create a slightly illuminating look at the intersection of message type,

threat, and reactance that could potentially launch greater inquiry into the subject. This is, however, an imperfect procedure that would require replication and more detailed measures into the antecedents of reactance. Further research is necessary to study the link between susceptibility and severity relates to psychological reactance.

Another limitation of the study was the use of videos. Using audiovisual stimuli is still uncharted territory in the study of narrative research. That is, although narratives have been thoroughly studied, only a handful of such studies have used videos as stimuli (Rains, 2013). Furthermore, unlike written narratives–which only require rewriting in order to manipulate from a narrative to non-narrative message type–audiovisual stimuli are very difficult to manipulate while controlling for outside variables. Although lengths were taken to select videos with similar subject matter and video length, the videos used as variables in this experiment were all produced by different organizations and therefore could have affected viewer response in a variety of ways (e.g. the vernacular used, speed of narration, characteristics of the narrator, the visual presence of the individual within the video, the music used, tone, form, etc.). Perhaps the only way to truly control for all variables between video conditions would be to produce and manipulate new videos for the purpose of the experiment–an undertaking that requires time, money and a level of knowledge of video production. As a way to test for audience reactance to existing campaigns, this method may suffice if greater controls for variance can be determined. More research is needed in this area, particularly as videos become increasingly popular as a form of communication.

Finally, as illustrated in previous sections, pornography is by nature a complex subject that is difficult to be definitively measured. In his research exploring the connection between pornography and sexual aggression, E.C. Nelson (1982) stresses that exposure to pornography

has different effects on people with different personality traits and attitudes. Reaction to pornography, therefore, would be just as varied.

Conclusion

Whether an individual considers pornography as dangerous and unpleasant or innocuous and entertaining, the fact remains that pornography as a form of media is here to stay, at least for the foreseeable future. Whether pornography addiction is a legitimate condition is still up for debate as of the time of this publication; however, by capturing reactions of individuals to video messages discussing pornography, the researchers were able to make connections between the presence of narratives, religion and the perception of pornography addiction. As was predicted from previous research, there was a strong correlation between religious internalization and pornography threat perception, as well as a connection between religiosity and acceptance of the message, indicating that pornography and religion are connected, and that those who are more religious are more likely to view pornography addiction as a legitimate risk. Findings also suggested that a level of skepticism exists about whether individuals are susceptible to becoming addicted. narratives about pornography could cause individuals to perceive the threat of pornography as being more severe but considered themselves less susceptible to the threat. This suggests the skepticism or still exists when communicating. Although many the effects of pornography are still yet unknown–there is still a lot of research to be done surrounding pornography and other forms of sexually explicit media–the public movement against pornography is a significant one that is deserving of further study, thus providing fertile ground for new, timely health communication research.

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TABLES

Table 1.
Demographic Information

Gender:	Male	123	65.8%
	Female	64	34.2%
Age	21-35	129	69.0%
	35 and older	58	31.0%
Education	High school diploma	20	10.7%
	Some college	36	19.3%
	Associate's degree/2	32	17.1%
	year degree	71	38.0%
	4 year college degree	16	8.5%
	Master's degree	2	1.06%
Religious Affiliation	Christian-Catholicism	33	17.6%
	Christian-Protestantism	24	12.8%
	Christian-Latter-Day Saint	2	1.06%
	Hinduism	2	1.06%
	Judaism	3	1.60%
	No religion	122	65.2%
	Total	187	

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

Table 2.

Bivariate Correlation Matrix.

	1.	2.	3.	4.	5.
1.		-.059	-.118	.053	-.273***
2.			-.087	.395**	.163
3.				-.193**	.352***
4.					.222**
5.					

Note: $N = 187$ for all variables except IRM, where $N = 65$.

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

Variable Key
1. Condition
2. IRM
3. Reactance
4. Severity
5. Susceptibility

Table 3.
One-Way Analysis of Variance of Susceptibility by Video Condition

	df	*SS*	*MS*	*F*	*p*
Between groups	2	21.887	10.944	7.429	.001
Within groups	184	271.052	1.473		
Total	186	292.939			

FIGURES

Figure 1.
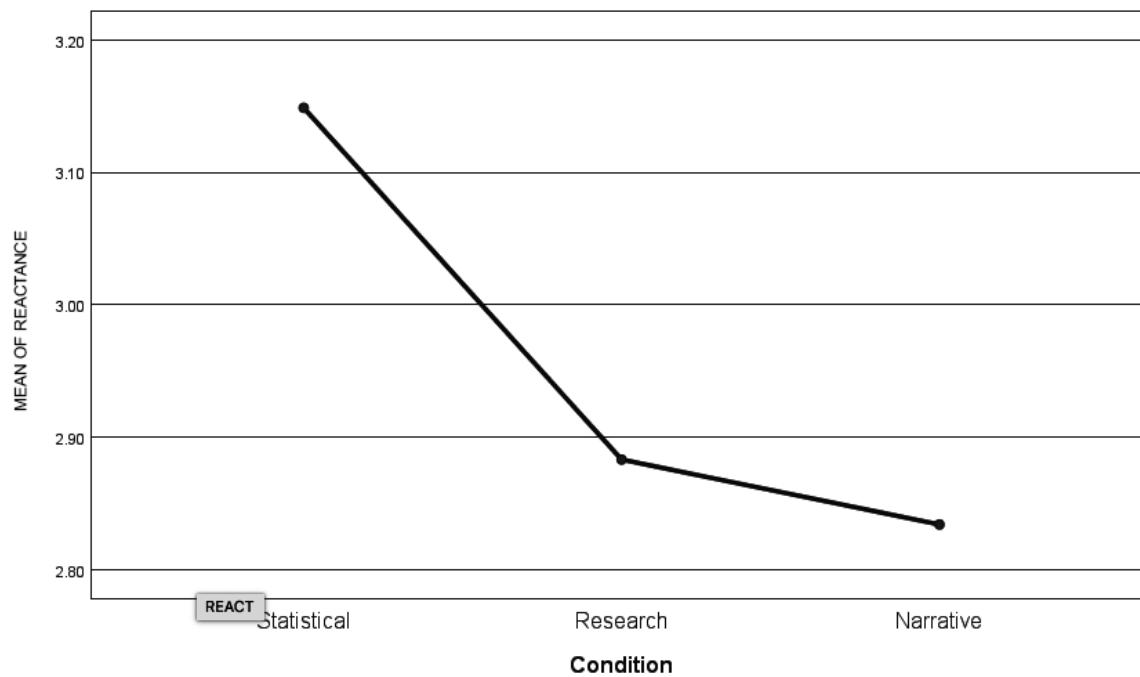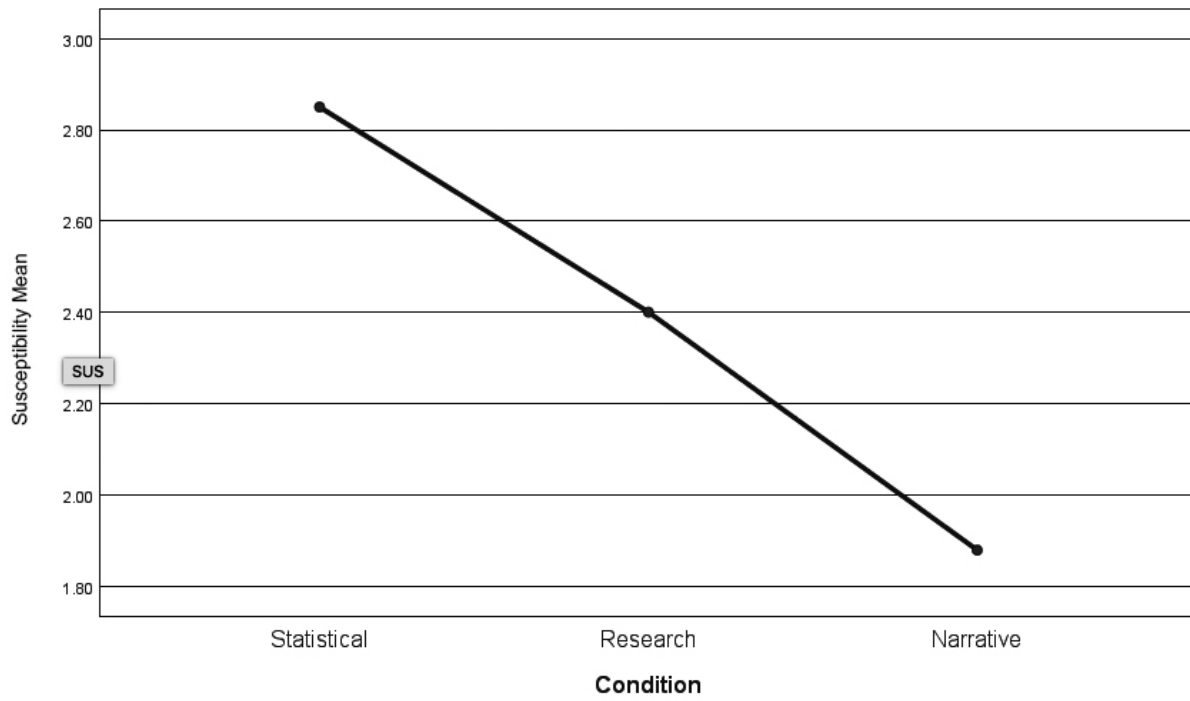*ANOVA Means Plot of Psychological Reactance by Video Condition*

Figure 2.
ANOVA Means Plot of Susceptibility by Video Condition

APPENDIX A

SCALES

Scale 1

10-Item Religious Intrinsic Motivation Scale (Hoge 1972)

1. My faith involves all of my life. (I)

2. One should seek God's guidance when making every important decision. (I)

3. In my life I experience the presence of the Divine. (I)

4. My faith sometimes restricts my actions. (I)

5. Nothing is as important to me as serving God as best I know how. (I)

6. I try hard to carry my religion over into all my other dealings in life. (I)

7. My religious beliefs are what really lie behind my whole approach to life. (I)

*8. It doesn't matter so much what I believe as long as I lead a moral life. (E)

*9. Although I am a religious person, I refuse to let religious considerations influence my everyday affairs. (E)

*10. Although I believe in my religion, I feel there are many more important things in my life. (E)

Scale 2

Psychological Reactance Scale

1. The message threatened my freedom to choose
2. The message tried to make a decision for me
3. The message tried to manipulate me
4. The message tried to persuade me

Participants rated their agreement on seven-point Likert scales ranging from 1 = *Strongly*

disagree to 7 = *Strongly agree.*

Counter-arguing ($\alpha = .94$)

1. Did you criticize the message you just saw while you were reading it?
2. Did you think of points that went against what was being said while you were reading the message?
3. While reading the message, were you skeptical of what was being said?

Participants rated their agreement on seven-point scales ranging from 1 = *No, not at all* to 7 =

Yes, very much so.

Cognitive appraisal ($\alpha = .87$)

1. The message was pleasant (valence)
2. The message got in the way of what I wanted (obstacle, reverse coded)
3. The message was reasonable (legitimacy)
4. The message was fair (legitimacy)

Participants rated their agreement on seven-point Likert scales ranging from 1 = *Strongly*

disagree to 7 = *Strongly agree.*

Anger ($\alpha = .97$) To what extent did this message make you feel ...

1. irritated
2. angry
3. annoyed

Participants rated their response on seven-point scales ranging from 1 = *Not at all* to 7 = *Very*

strongly.

Scale 3

Excerpt of the Risk Behavior Diagnosis Scale (Witte 1996)

Perceived Threat

1. I believe that the threat of pornography addiction is severe.

2. I believe that the threat of pornography addiction is serious

3. I believe that the threat of pornography addiction is significant

Perceived Susceptibility

1. I am at risk for becoming addicted to pornography

2. It is likely that I will become addicted to pornography

3. It is possible that I will become addicted to pornography

*Note: for this study, the term "pornography addiction" was inserted.

APPENDIX B

LINKS TO VIDEOS

Research-Based: https://vimeo.com/270481862

Statistical: https://vimeo.com/291655622

Narrative: https://vimeo.com/270517748

APPENDIX C

IMPLIED CONSENT

My name is Alison Ostler and I am a graduate student in the School of Communications at Brigham Young University. I am conducting this research under the supervision of Dr. Kevin John. You are invited to participate in a research study examining viewer reactions to different types of videos about pornography addiction. The purpose of this research is determine whether certain types of message features in videos are met with less skepticism than others, and whether certain mediating factors, such as religious involvement, exist.

In addition to questions, the survey will also require the participant to view a 3-minute video clip discussing pornography addiction. Please note that the content contained within the video clip in no way reflects the opinions of the researchers or of the sponsoring university.

Please note that while the survey contains questions in which attitudes regarding pornography will be measured, you will NOT be asked to report on prior pornography use or past sexual behavior. Please note that while no explicit sexual depictions are shown during the study, pornography and sex are frequently mentioned. During the video clip, strong sexual language describing physiological reactions to pornography may be used. You are not required to take this survey, nor are you required to answer questions with which you are uncomfortable.

You must be over 18 years of age in order to be eligible to participate in this study.

Should you choose to participate in this study, it will require the completion of the following survey questions and a viewing of a 3-minute video. It should take approximately 15-20 minutes of your time. You will not be asked to give any personally identifiable information in order to complete the survey. After completion of the survey you will be compensated. (Please note, however, that incomplete studies may be rendered ineligible for compensation).

This survey involves minimal risk to you. The benefits, however, may impact society by helping increase knowledge about the effectiveness of narrative videos.

You do not have to be a part of this study if you do not want to be. If you choose to participate and then change your mind, you may exit the study at any time and we will delete your responses. We will be happy to answer any questions you have about this study. If you have further questions about this project, or if you have a research-related problem, you may contact me, Alison Ostler, at arostler@byu.edu, or my advisor, Dr. Kevin John at kevin_john@byu.edu.

If you have any questions about your rights as a research participant you may contact the IRB Administrator at A-285 ASB, Brigham Young University, Provo, UT 84602; irb@byu.edu; (801)

422-1461. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

The completion of this survey implies your consent to participate. If you choose to participate, please complete the following survey.

APPENDIX D

SURVEY

Are you at least 18 years of age or older?

What is your age?

What is your gender?

In which country do you currently reside?

In which state do you currently reside?

What is your highest level of education?

Are you a current member of an organized religion?

What is your religious affiliation?

Buddhism (1)

Christian-Catholicism (2)

Christian-Eastern Orthodox (12)

Christian-Protestantism (3)

Christian-Jehovah's Witness (4)

Christian-Latter-Day-Saint (11)

Hinduism (5)

Islam (6)

Judaism (7)

Sikhism (8)

Unitarian Universalism (13)

Other (9)

None/Non-Denominational (10)

Please answer how well each statement applies to you.

Strongly disagree (1) Disagree (2)   Somewhat agree (3)   Strongly agree (4)

My faith involves all of my life (1)

Although I believe in my religion, I feel there are many more important things in my life (2)

In my life, I experience the presence of the Divine (3)

My faith sometimes restricts my actions. (4)

Nothing is as important to me as serving a higher power as best I know how (5)

It doesn't matter so much what I believe as long as I lead a moral life. (6)

Although I am a religious person, I refuse to let religious considerations influence my everyday affairs (7)

One should seek the guidance of a higher power when making every important decision (8)

My religious beliefs are what really lie behind my whole approach to life (9)

I try hard to carry my religion over into all my other dealings in life (10)

Q33 The following page contains a link to a 3-minute video discussing the use of Internet pornography. Please note that video is intended for research purposes only and is not a substitute for medical or psychological advice. The opinions contained within the video are not created or endorsed by the researchers, nor do the opinions reflect the opinions of Brigham Young University. Following the video, you will be asked a series of questions. Please note that while no explicit pornographic content will be portrayed, the video talks about sexual subject matter, including the viewing of pornography and the physiological response to sexual stimuli, that may

be sensitive to some viewers.

I agree, take me to the video (1)

Q95

Instructions: (Please follow all instructions carefully)

Please copy the link below and paste it into a new window in your browser to view the video. Do not close this window while watching the video.

Please watch the video only once. Once you have finished the video, please return to this survey page and click the arrow to move onto the next page. (Note: Do NOT go to the next page until you have finished the video, or your responses may not be recorded).

Strongly disagree (1) Somewhat disagree (2)   Neither agree nor disagree (3)Somewhat agree (4)   Strongly agree (5)

I believe that the threat of becoming addicted to pornography is severe. (1)

I believe that the threat of pornography addiction is serious (2)

I believe that the threat of pornography addiction is significant (3)

Q64

        Strongly disagree (1) Somewhat disagree (2)   Neither agree nor disagree (3)

Somewhat agree (4)   Strongly agree (5)

I am at risk for developing a pornography addiction (1)

It is likely that I will become addicted to pornography (2)

It is possible that I could develop an addiction to pornography (3)

It is likely that someone close to me will become addicted to pornography (4)

Q65 From strongly disagree to strongly agree, please rate how each statement best fits you

Strongly disagree (1) Disagree (2)   Somewhat disagree (3) Neither agree nor disagree (4)

Somewhat agree (5)   Agree (6)   Strongly agree (7)

I agree with all of the information that was presented in this video (1)
The video seems to convey credible information (2)
The video is threatening my freedom to choose (3)
The video tried to make a decision about pornography for me (4)
I felt that the video is trying to persuade me (5)
The video is trying to manipulate viewers (6)

Q66 Tell us how you felt about the video after viewing it (1-No, Not at all, 2-Hardly 3-Slightly 4-Neutral 5-Somewhat 6-Yes 7-Yes, very much)

Did you criticize the video you just saw while you were watching it? (1)
Did you think of points that went against what was being said while you were watching the

video? (2)

While watching the video, were you skeptical of what was being said? (3)

Q67 To what extent did the video make you feel ...

	No, Not at all	Neutral	Very strongly
	0 1 1 2 3 4 4 5 6 6 7		

Irritated (1)

Angry (2)

Annoyed (3)

Q68 On a scale from "strongly disagree" to "strongly agree," please rate how each statement currently applies to you.

The video was pleasant (1)

The video affected me emotionally (2)

The content in the video was reasonable (3)

The video was fair (4)

The video is getting in the way of what I want (5)

I was mentally involved in the video while I was watching (6)

I could picture myself in the scene of events in the video (7)

The video was humorous at times (8)

I found myself thinking of ways the video could have turned out differently. (9)

I found my mind wandering while watching the video (10)

I was mentally involved in the video while I was watching (6)

After watching the video, it was easy to put it out of my mind (11)

While I was watching the video, activity going on in the room around me was on my mind (12)

The events of the video are relevant to everyday life (13)

I was interested to see what happened after the video (14)

Q69 Is there anything that you would like to add that you feel the survey may have missed?