

DEVELOPMENT AND VALIDATION OF A SCALE TO MEASURE MULTIPLE  
FACETS OF ENJOYMENT OF HORROR FILMS

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## ABSTRACT

### DEVELOPMENT AND VALIDATION OF A SCALE TO MEASURE MULTIPLE FACETS OF ENJOYMENT OF HORROR FILMS

by Christina Pfaff

Research has indicated that the enjoyment of horror films is about more than just thrill seeking or enjoying watching violence and gore (e.g. Sparks, 1987; Tamborini & Stiff, 1987). Research discussed in this paper identified three other factors of interest: the resolution of the film's conflict which is consistently provided by formulaic horror films (justice), the ability to bond with others through a common viewing experience (social), and the potential to learn how to avoid violence in real life (learning). As no one dimension seemed more important than any other in predicting enjoyment of horror films, this study developed and validated a multi-dimensional scale of enjoyment of horror films based on these five factors. An initial instrument containing 50 items was administered to 824 participants. Half this sample, 412 participants, was utilized to pare down the number of items on the scale, leaving a final Enjoyment of Horror Films scale of 28 items spanning the five factors, gore/violence, justice, social, learning, and thrill. The other 412 participants were used to independently validate the scale structure. Overall scale scores and factor scores were correlated to various measures of interest in the horror genre and the new instrument was sufficiently associated with these measures. The final 28-item scale was determined to have sufficient reliability and validity for further analyses.

Individual factor scale scores were explored for gender differences and it was found that three of the five factors showed significant gender differences; gore/violence, learning, and thrill. On all three of these factors, men tended to score higher than women. No gender differences were found on scores for the justice or social factors. Mediation analyses revealed that gender role, as measured by the Bem Sex-Role Inventory (Bem, 1974), partially mediated the relationship between gender and scores on the gore/violence factor. Finally, factor scores were correlated with scores of neuroticism, extraversion, and openness to experiences. Extraversion and its facet scales were found to correlate positively and significantly with all five of the scale factors to some degree. Of the remaining two personality variables, only immoderation (neuroticism), imagination, and adventurousness (openness to experiences) correlated positively and significantly with any of the scale factors.

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## CHAPTER 1

### INTRODUCTION

Violence is a prominent feature in many different forms of popular entertainment, such as sporting events, video games, television shows, and movies. Yet, the presence of violence in entertainment is neither novel nor constrained to contemporary society. There are examples of violence being a part of entertainment throughout the entirety of written history, in everything from cave paintings to the modern horror film (Twitchell, 1985; 1989). A well-known example of violence as entertainment is found in the Roman gladiatorial arena between the first century BCE and the second century CE. Citizens of Rome would come to the arenas to watch the gladiators fight one another to the death. The crowd was even known to become violent themselves if they felt the event did not end satisfactorily. A more universal example would be animal baiting, which has been found throughout many different cultures, only differing in the type of animals used. In India it was elephants, in England it was bears, in the United States it was roosters, and in South Africa it was dogs. While the animal differed, the actual events all consisted of two animals being pitted against one another and fighting to the death for the pleasure of large crowds. In fact, these events were typically well-planned community affairs, often being held immediately after a wake or election or on a major holiday (Nell, 2006). Nell proposes that after societies began to industrialize and enact harsh laws to prevent mistreatment of animals, societies began to either mechanize, as with the demolition derby, or symbolize, as with horror films, these violent rituals.

Within the media, a clear example of violent entertainment is the horror movie. Since its introduction in 1910 with a sixteen-minute short film version of *Frankenstein*, these films have simultaneously fascinated and repulsed people around the world (Crane, 1994). While horror is

one of the most enduring film genres, it has undergone many transformations since it first appeared. Sapolsky and Molitor (1996) investigated content trends in horror films from various decades ranging from 1930 to 1970. The films of the 1930s featured now classic monsters such as Dracula and Frankenstein, but had no overt bloodshed or gross dismemberment. This changed in the 1950s when science fiction horror films were created, targeting teenage audiences with vivid images of blood and gore in full color for the first time. In the 1960s, horror movies began to be centered on the gore, while also including some scenes of explicit sexuality. Finally, the “slasher” film emerged in the 1970s, seemingly taking the portrayal of graphic violence to obscene, arguably unnecessary, levels. The killers in these films operate outside the realm of traditional morality, yet their seeming humanity leaves viewers with the feeling that the real villain is the evil which could reside within anyone. The “slasher” killer has truly become the preeminent monster of contemporary society (Hills & Schneider, 2007).

The slasher film in particular has become a major source of contention as many critics decry them for portraying graphic, and oftentimes sexual, violence against women in particular (Clover, 1992). This has further been argued to lead to increases in real-life violence against women through either classical conditioning, with aggressive cues eliciting further aggressive behavior, or social learning, with aggressive behavior being acquired directly through the experience or indirectly through observing others commit acts of violence (Linz & Donnerstein, 1989). The crux of this argument is that these films portray an inordinate amount of sexual violence towards women. However, content analyses of 89 slasher films from the 1980s (Cowan & O’Brien, 1990; Molitor & Sapolsky, 1993; Weaver, 1991) and the 1990s (Sapolsky, Molitor, & Luque, 2003) have found that men are actually slightly more likely to be the victims in horror films, though women do have longer death scenes. Contrary to popular belief, sex in a horror

movie was not intimately linked with a woman's death; one study found only 21.6% of women who had sex were killed afterwards (Molitor & Sapolsky, 1993), while a second study found 37% of women were killed immediately following sex (Weaver, 1991). While these are obviously larger numbers than seen in reality, these figures hardly support the notion that to have sex in a horror movie is to sign your own death warrant.

While these films might not consistently link sex and violence, there is no denying that the films themselves include extreme examples of violence. Given the prevalence of violence in horror films and other avenues of entertainment, it logically follows that there must be something enjoyable either about the violence itself or the context in which it is generally found. This leads to the obvious question of why people would find violence entertaining. Many studies looking at violent entertainment tend to focus solely on the outcomes of watching violence, (for reviews, see Freedman, 1986; Geen, 1976; Sparks & Sparks, 2000), while ignoring the question of why people like it to begin with. Of those studies which investigate the why, no one theory consistently trumps the others. This leads to the conclusion that perhaps enjoyment of horror films is more multi-dimensional than has been presumed in the past.

In the current study, a multi-dimensional scale to measure enjoyment of horror films was created. Scale dimensions reflected those factors which previous research identified as important elements in the film-viewing experience for both men and women. These factors will be discussed in greater detail in subsequent sections of this paper. After an initial 50-item scale was created, the researcher utilized a student sample to eliminate those items which were not useful in differentiating between reasons for enjoyment to create a 28-item scale. This scale was validated in a separate sample using confirmatory factor analysis and comparing scale scores to

both self-report and behavioral measures of exposure to and enjoyment of horror movies. Finally, scale scores were explored for gender differences and personality correlates.

### Women's Enjoyment of Violent Entertainment

Many models exist which attempt to answer the questions of why people are interested in violence. A full discussion of these is beyond the scope of the paper (for review, see Sparks & Sparks, 2000). Yet, while some of these theories might suggest women like violent entertainment for different reasons than men, none of these theories would suggest that women would not like violent entertainment at all. For example, the selective exposure hypothesis would suggest that women who were exposed to violence in their real lives would be just as interested in violent entertainment as men who were exposed to the same real-life violence. Gender role socialization would suggest that women would enjoy violence because it allowed them to show fear and look to someone else for support. Finally, if violent entertainment is an anti-homicide adaptation as suggested by evolutionary theory, women should be just as interested in violent entertainment as men, if not more so as women are often their children's primary caregivers and thus are expected to defend themselves more vigorously against death.

Despite the fact that few theories predict specific gender differences in horror film enjoyment, women's enjoyment of these types of entertainment is often ignored or dismissed as nonexistent. As such, women's enjoyment has not been a focus of the research. Yet when looking at horror fans, it is found that men and women are fairly equally represented (Fischhoff, 1998; Fischhoff, Dimopoulos, Nguyen, & Gordon, 2005). In fact, one study found a non-significant trend for women to prefer horror movies slightly more than men (Fischhoff, Antonio, & Lewis, 1998). Additionally, Vicary and Fraley (2010) found that women are much more likely than men to prefer true crime books, while men are more likely to prefer books about war and

gang violence. Moreover, in recent years ticket sales to horror movies have revealed that women make up approximately 60% of the audience. This trend culminated in 2009 with the release of *Jennifer's Body*, a horror film created by women intended for a female audience (Spines, 2009).

Cherry (1999) conducted a study investigating female viewers of horror films in order to investigate the assumption that viewers of horror films were adolescent boys and men under the age of 25. Demographic profiles of British audiences revealed that women made up to 50% of the audience at various horror films such as *Scream* (48%), *Silence of the Lambs* (49%), and *Alien*<sup>3</sup> (42%). Cherry cited a market research study conducted by an online gaming company in 1996 which found that among 13 to 18 year olds, 27% of girls named horror as their favorite film genre as compared to only 14% of boys. Cherry found among her participants, gathered from horror fan groups, subscription lists for horror magazines, and horror film festivals, women had and maintained a liking for horror persisting into middle age. She found 68% of female fans were over the age of 25, 30% were over age 35, and 15% were over age 40. However, the majority of her participants indicated they kept their liking for the genre private, viewing films alone or in small groups of similarly minded fans rather than going to the theater. The types of horror films preferred by women tended to be vampire, occult/supernatural, and psychological thriller films rather than slasher films, though self-proclaimed fans tended to prefer slasher films more than non-fans. Additionally, she found that women tended to excuse their preferences by stating they enjoyed certain films for their imagination and ingenuity while condemning others for being formulaic and uninspired. The women in her study tended to dislike films which contained excessive or gratuitous gore. Finally, she found that women tended to judge the quality of the films based on the relationships between the characters, rather than by other standards. Taken together, these illustrate that women enjoy at least some aspects of the horror genre.

## Motivations for Viewing Graphic Horror

Johnston (1995) identified four motivations for viewing graphic horror: gore watching (e.g. 'I like to see blood and guts'), thrill watching (e.g. 'I like to be scared'), independence watching (e.g. 'It makes me feel brave'), and problem watching (e.g. 'I watch when I'm lonely'). These motivations were differentially found to be related to various personality traits, cognitive and affective responses, and the tendency to identify with either the killer or the victims. Gore watching was related to low empathy and fearfulness, high adventure seeking, positive beliefs about the content, the preference for graphic violence, and identification with the film's killers. Thrill watching was related to high adventure seeking and empathy, positive affect before and after viewing, positive beliefs about the content, and the preference for excitement. Independence watching was related to low empathy, positive affect before and after viewing, and identification with the film's victims. Finally, problem solving was related to low empathy, high proclivity for substance abuse, negative affect before and after viewing, and identification with the film's victims. Johnston also looked at gender differences on the various measures. She found that men tended to score higher on the preference for graphic horror and identification with the film's killers, which are both related to the gore watching motivation. Women tended to score higher on identification with the film's victims, which is related to both the independence watching and the problem watching motivations. This study suggests that men and women might be watching these films for different reasons.

Tamborini and Stiff (1987) interviewed people as they left the film *Halloween II* a week after its opening, measuring sensation seeking, attendance at horror films and films in general, factors affecting overall enjoyment of horror films, general liking of horror films, and liking of the specific film just seen. They then tested the relationships between these variables using path

analysis. They found men's general liking of horror films was predicted by their sensation seeking scores and the enjoyment of horror films for their destruction. However, women's general liking of horror films was predicted by the enjoyment of horror films for their just endings, meaning that the good guy ultimately wins. Additionally, they found that men scored higher than women for general liking of horror films.

Another study asked participants to rank order thirteen films which varied in their level of violence and the gender of the victim for the six most violent films only (Tamborini, Stiff, & Zillmann, 1987). These ranks were used to create a preference for graphic horror score which was then regressed on scores for the BEM sex role inventory, Mach V scale (flattery, deceit, immorality, and cynicism), sensation seeking scale (disinhibition, boredom susceptibility, experience seeking, and thrill/adventure seeking), and film viewing history. When all subjects were taken together, deceit and exposure to horror predicted the preference for graphic horror. When split by gender, men's preference for graphic horror was predicted by their enjoyment of pornography and exposure to horror, while women's preference was predicted by deceit scores. Finally, the researchers looked at predictors of graphic horror by victim gender. They found that for men, boredom susceptibility predicted preference when the victims were male, while enjoyment of pornography, boredom susceptibility, and deceit predicted preference when the victims were female. For women, there were no predictors when the victim was male, but deceit and boredom susceptibility predicted preference when the victims were female.

The final study of interest looked at preference for books with violent subject matters (Vicary & Fraley, 2010). The researchers found that women overwhelmingly choose true crime books over war books or gang violence books. All books used in the study featured a true story of two women, both of whom died in the book. In an attempt to discern why women prefer true

crime, the researchers manipulated book summaries in three different ways. They found women preferred books whose description included a clever trick used by a victim who escaped, an interview of the killer by the FBI to determine motive, and had female victims. These manipulations also increased men's interest in reading the various books, but the pattern was stronger for women.

These four studies all illustrate differences in the preferences of men and women for various types of violent entertainment. It was found that women have different motives for watching horror films, attend horror films for different reasons, have different predictors for their preference of horror films, and have different violent book preferences than men. Taken together, the results of these studies indicate that a problem in the rest of the literature might be that the materials used to measure interest in these types of entertainment were not appropriate for female consumers. This problem is what the current study addressed.

#### Current Measures for Measuring Interest

Sparks (1986) reported the development of a scale to measure the "nature of an individual's experience with scary films" (p. 67). The intention of this measure was to serve as a test of the relationship between cognition and fright responses to various types of mass media. Initially, Sparks asked a small group of college men and women open-ended questions about their experiences with frightening, scary, and horrific films and whether or not they liked these films. Results from these questions led to the development of a 50-item inventory which indicated either enjoyment or dislike for frightening films. Further investigation eliminated items which were ambiguous or repetitive, leaving a final 20-item inventory for future study.

The inventory was administered to 220 college students in order to create a smaller instrument with high internal reliability. Additionally, the students rated how often they had seen

a variety of frightening films (exposure) and how much they liked certain frightening films (enjoyment). Ten items made the final cut to be included in the instrument and scores on this scale were found to be positively correlated with both exposure and enjoyment of frightening films in both men and women, indicating the instrument is a valid measure of the enjoyment of frightening films (EFF).

Sparks (1986) determined that while the instrument was highly correlated to exposure ( $r = .4$ ), percentage of scary movies seen per year ( $r = .49$ ), and liking ( $r = .64$ ) for women, they tended to score lower than men, indicating less enjoyment of frightening films overall.

Tamborini and Stiff (1987) also found men scored higher on measures of liking frightening films than women even when the population being surveyed was horror fans leaving a horror film. However, when one examines the specific items participants responded to (see Sparks, 1986), these items are more in line with the gore watching and thrill watching motivations found by Johnston (1995). Examples of these items include: “I feel exhilarated inside my body when I watch a scary film” and “As far as I’m concerned, the scarier a movie is—the better”. While these are both important motivations when asking why people are interested in horror films, Johnston’s research implied that men were much more likely to enjoy frightening films for these reasons, while women were more likely to watch for independence and problem-oriented motivations. Assuming this is the case, it would mean that the measures used in past research which focus on enjoyment of violence and physical arousal do not adequately measure women’s interest in various types of violent entertainment.

The inadequacy of existing measures is also evident when comparing women’s scores on scales such as the EFF scale (Sparks, 1986) and their answers when explicitly asked if they enjoying scary movies (Fischhoff, 1998; Fischhoff et al., 1998; Fischhoff et al., 2005). These studies

found that when given more open-ended questions, women were just as likely as men to prefer horror films, if not slightly more so. They also reported liking the same types of movie monsters, though women liked violent slasher monsters such as Jason Voorhees, Michael Myers, and the Scream killers significantly more so than men. Looking at the series of studies completed by Fischhoff and colleagues, it seems that at least some women prefer certain types of violent films, which seems to be a divergent conclusion compared to many other researchers. As these studies utilized more open-ended questions, it would again appear as if the existing measures are not sufficient to accurately measure women's enjoyment of violent and/or frightening films, television shows, and books.

#### Definitions of Scale Factors

Taken together, these results indicate that a more multi-dimensional instrument would be more sensitive to women's enjoyment of various types of violent entertainment while still being sensitive to men's enjoyment of the same things. In the following sections, the five factors seen to be the most influential on men and women's enjoyment of horror films in particular will be defined, theoretical support discussed, and key evidence for the inclusion presented. These five factors are as follows: gore/violence, justice, social, learning, and thrill.

##### *Factor 1: Gore/Violence*

This is defined as the enjoyment of horror films primarily for the violence and/or gore that they contain as well as enjoyment watching the suffering of others. This factor is most closely linked to the aesthetic theory of destruction which posits that factors like the complexity, novelty, intensity, and patterning of violent acts are actually what interests an individual (Sparks

& Sparks, 2000). Additionally, sensation seeking would posit that violent entertainment is enjoyed due to its intrinsic capability to satisfy the need for arousing stimuli (Zuckerman, 1996).

This factor also has extensive experimental and correlational support as an important factor in the enjoyment of horror films. Zaleski (1984) found that high sensation seekers tended to prefer negative stimuli over positive stimuli, giving some initial support to the idea that negative stimuli such as violent images will provide enjoyment for a certain subset of the population. The enjoyment of frightening films due to their levels of violence is also what is measured by the EFF scale, which has been linked to both exposure and liking of horror films (Sparks, 1986). Tamborini and Stiff (1987) found that among individuals attending a horror film, men's liking of scary movies was mediated by both an increased preference for power and destruction exhibited in the film as well as increased scores on a measure of sensation seeking. Another study found that adding violent scenes to a nonviolent, nonsexual rock video increased general appreciation for the video (Zillmann & Mundorf, 1987).

As has been discussed earlier in this paper, a large survey using high school students found four different dimensions for viewing graphic horror (Johnston, 1995). The dimension of interest here is gore watching, or liking films due to their violence. High scores on the gore watching dimension were predicted by low empathy and fearfulness as well as high adventure seeking. High scorers on this dimension were also found to have a low amount of negative affect after viewing a horror film, high positive beliefs about the film, high preferences for graphic violence, high identification with the killer, and low identification with the victims. As could be predicted using previous research, men who scored high on the gore dimension were much more likely to prefer graphic violence and identify with the killer than women scoring similarly high.

Finally, two open-ended surveys found more support for the importance of the violence factor. Fischhoff (1998) asked subjects to list their favorite films in general and to what degree various filmic elements were important in their appreciation of these films. Men were more likely to rate violence an important factor in their favorite films, but the overall importance was moderate at best. It was found that in the horror and murder/thriller genres, violence was rated about two points higher in importance than for any other genre. Fischhoff et al (2005) asked subjects to list their favorite movie monsters as well as rate various statements which could explain why they preferred each particular monster. They found that younger people and women tended to prefer the more violent slasher monsters (e.g. Jason Voorhees, Michael Myers, Scream killers) over classic monsters (e.g. Dracula, Frankenstein's monster). Additionally, younger people and men were more likely to say that their preferences were determined by the monster's killing capacity.

#### *Factor 2: Justice*

This is defined as the enjoyment of horror films primarily because they follow an expected pattern wherein the antagonist attacks a group of people until eventually one or more of them begin to fight back and beat the antagonist, even if just for the time being. These movies allow for a resolution of the film's main conflict. This factor is closely linked to the selective exposure hypothesis, which states that people who have more real life exposure with violence are more likely to choose programming with violent themes (for examples see, Wakshlag, Bart, Dudley, Groth, McCutcheon, & Rolla, 1983; Wakshlag, Vial, & Tamborini, 1983). The idea is that the most fearful will respond the most intensely to the distressing parts of violent media and that the greater the stress response and the more satisfying the resolution, the more the program will be enjoyed. While in more conventional violent media, justice is seen as satisfying only

when the initial crime and its punishment are equitable (Raney & Bryant, 2002), in horror films the satisfying resolution depends on either more horrific violence being done to the monster than the monster did to others or just the simple termination of the current threat in horror movie series (Tamborini, 1991).

There is also substantial evidence for the importance of this factor. It has been found that justice resolution leads to increasing liking of the stimuli for children told a suspenseful story (Zillmann, Hay, & Bryant, 1975) and for adults rating enjoyment of crime dramas (Raney & Bryant, 2002; Wakshlag, Bart, Dudley, Groth, McCutcheon, & Rolla, 1983). Bryant, Carveth, and Brown (1981) had participants either low or high on a measure of trait anxiety assigned to light or heavy television viewing of violence with either a clear triumph of justice or no justice resolution for a period of six weeks. It was found that watching shows with a clear resolution of justice led to a decrease in anxiety for those initially high in anxiety, while a lack of justice resolution led to a significant increase in anxiety. This suggests that those who are prone to anxiety might choose to watch horror films due to their clear-cut formula of justice resolution.

Two separate field studies found additional support for this idea. In the early 1970s, a student was murdered at University of Wisconsin-Madison, affording researchers the opportunity to investigate any changes in exposure to violent media immediately afterwards (Boyanowsky, Newton, & Walster, 1974). The week before the murder, two films had been released at theatres near campus: *In Cold Blood* featured two psychopathic murderers while *The Fox* featured a lesbian relationship. The films were showing across the street from each other and both were equally known and controversial. General attendance figures for *In Cold Blood* increased 89% the week following the murder while those for *The Fox* remained relatively stable. Additionally, when offered free tickets to either movie, individuals from the victim's dorm were more likely to

choose *In Cold Blood* the week after the murder than those from a control dorm matched for size, organization, and social class. Tamborini and Stiff (1987) found that among individuals attending a horror film screening, women's liking of frightening films was mediated by their desire for a just ending.

### *Factor 3: Social*

This is defined as the enjoyment of horror movies primarily because they are the same films other people are watching (popularity), it allows for bonding with other people over the experience, and it allows for bonding with other people due to a common interest. This factor follows the idea that the horror movie is a modern rite of passage for adolescents which allows for proper gender socialization (Tamborini, 1991). Watching films in general is largely a social experience, with the most popular rentals being the movies everyone talks about, allowing for a common ground in future conversations (Crane, 1994).

As Tamborini (1991) discusses, all societies have initiated rites to control the fear of children and adolescents. These rites are often taught to adolescent males as they were expected to encounter life-threatening situations while hunting. Iconic and/or symbolic representations of threatening objects were shown to young men and they were rewarded when they showed no fear. Ethnographic reports from 110 cultures around the world have found that when gender differences occur, women are taught nurturance, obedience, and responsibility, while men are taught achievement and self-reliance. These differences are found almost exclusively in cultures which placed a premium on men's superior physical strength (Barry, Bacon, & Child, 1957). Miller (1928) discusses many examples of adolescent male initiation rituals, many of which involve exposing young boys to "invisible frights and hair-raising terror of the supernatural working of the ghosts and spirits" (p. 206). For example, the Malays of Coram have boys sit in

the dark while they are exposed to howls, yells, and the rattling of weapons and armor. Young Fijian boys are forced to crawl over seemingly dead bodies symbolizing their ancestors which then come to life and must be fought off by the chief. Following this experience, the young boys will follow the chief in the rest of their training.

The horror film is seen as a modern rite of passage, allowing for men to show their mastery over the new supernatural terror (Sparks & Sparks, 2000). One such example is the documentary *Faces of Death* which contains dozens of scenes of real-life deaths. Young boys must watch this and find the gore cool instead of gross in order to be considered manly by their friends (Goldstein, 1999). In addition to allowing young men to show their mastery of the horror images, these films also allow women to act gender-appropriately by expressing their distress. If a fearful individual is surrounded by those showing mastery, there is a sense of relief and protection, while a fearful individual surrounded by those also showing fear can find comfort in the group. For young women especially, this can lead to acceptance into a social group which should ultimately lead to a greater enjoyment of the film (Tamborini, 1991).

Gender role socialization posits that the enjoyment of film violence comes from the ability to practice traditional gender roles while watching, especially for horror films. Men can show their previously mentioned mastery of terrifying stimuli while women are allowed to show their fear and derive comfort from the men (e.g. Berenstein, 1996; Zillmann & Gibson, 1996; Zillmann & Weaver, 1996). Zillmann, Weaver, Mundorf, and Aust (1986) had participants watch a clip from a horror movie with an opposite-gender companion either acting gender-typical (mastery for men, fearful for women), gender-atypical (fearful for men, mastery for women), or completely neutral. Participants then rated how much they liked the film and their companion. It was found that the film was enjoyed most when the companion was acting in a gender-typical

fashion and that men were liked more by women when they showed mastery during the film. This provided some evidence that liking is affected by the extent to which people engage in typical gender roles.

Additionally, two surveys of motivations for watching horror films found support for the idea that the process is a social one. Johnston (1995) found among the different reasons for liking horror films what was called the independence motivation, or watching in order to feel brave, mature, or to be different. These motivations follow along with the idea of horror movies as rites of passages. Independence watching predicted a positive affect in the viewer both before and after watching the film as well as increased identification with the victim. Lawrence and Palmgreen (1996) created a profile of the typical horror fan. Horror fans were found to attend more movies in general, to be less likely to attend movies alone, to be more impulsive in their decisions to attend movies, and to be more motivated to attend in order to identify with various characters, use the audience to facilitate their own enjoyment, have something to do socially, and to avoid talking to people. This supports the idea that the horror fan uses the films in order to create social bonds with like-minded people, though it seems as if those bonds might be more superficial and idealistic, rather than actual bonds with others given the last finding.

#### *Factor 4: Learning*

This is defined as the enjoyment of horror movies primarily because of a desire to learn how to avoid real life violence, to learn why people would kill, and how to identify potential killers in real-life. This factor is closely linked to the evolutionary theory of anti-homicide adaptations, a subset of homicide design theory. Homicide design theory posits that there are many benefits of committing homicide including the ability to co-opt others resources, defend against future attack, inflict costs on rivals, negotiate status and power hierarchies, deter long-

term mates from sexual infidelity, regain former mates, and obtain sexual access to unobtainable individuals. These benefits lead to pressure for adaptations to kill without detection. The costs of homicide to the victim are extremely high, including loss of future reproduction, damage to existing children, damage to the extended in-group, and gains of the aggressive rival. These costs are so high that there would be pressure for anti-homicide adaptations to evolve in order to avoid death. These adaptations include sensitivity to contexts when one's life could be in danger and the ability to detect homicidal rage in others (e.g. Buss & Duntley, 2009; Duntley, 2005; Duntley & Shackelford, 2008). By watching horror films, one could gain a better way of determining the contexts where one's life is in danger, such as when walking alone at night or when stranded outside of major cities without access to technology.

While there are not many studies explicitly applying evolutionary theory to the interest of violence in entertainment, a few studies do exist which provide potential support to the aforementioned theory. Vicary and Fraley (2010) found that when given a choice between either true crime and war or true crime and gang violence books, women overwhelmingly chose true crime books (77% over war stories, 73% over gang stories) while men showed less preference for true crime (51% over war stories, 57% over gang stories). They also manipulated various aspects of the story's description to determine what factors would increase interest. It was found that including a description of a clever tactic a victim used to escape rather than just saying the victim escaped led 71% of women and 66% of men to choose the "clever trick" book. When one book included a description of an FBI interview with the killer to determine why he committed the crime, 65% of women and 59% of men chose the motive book. Finally, when the victims were female, as is the usual case in serial killings, 59% of women and 52% of men chose the female victim book. Taken together, these results suggest that the interest in true crime at least is

driven by the attempt to learn facts which could have practical usage in the real world (e.g. knowing how to escape a serial killer) and reflect what usually happens in these crime (e.g. female victims instead of male victims preferred).

Boyanowsky (1977) experimentally manipulated perceived threat to female participants in a media study by stating a woman was attacked on a campus five miles away (low threat), on the same campus (high threat), or giving no statement (control). When given the choice between six films (male-male aggression, romantic interlude, self-defense information, sexual orgy, male-female aggression, and romantic comedy), participants in threat conditions had more interest in and watched more footage from the male-male aggression and sexual orgy films. Oddly enough, the subjects did not choose the self-defense film which could have provided more practically useful instructions for how to deal with real threat. However, this gives credence to the theory that individuals will turn to films high in sex and violence such as horror films in order to learn how to deal with real life threats.

#### *Factor 5: Thrill*

This is defined as an enjoyment of horror films primarily because of the physiological thrill that they provide, the individual's desire to feel that fear, and the ultimate enjoyment of the fear response. This factor is related to two theoretical models: (a) arousal jag which states that the reduction or termination of aversive stimuli is rewarding and will lead to the intentional seeking out of aversive stimuli and (b) excitation-transfer which states that witnessing the victimization of those one favors will lead to an excitation of the sympathetic nervous system, the hedonic value of which is cognitively determined by the individual (Sparks, 1996; Sparks & Sparks, 2000; Tamborini, 1991; Zillmann, 1980). Individuals are expected to differ in their experience of fear as positive based on sensation seeking, with high sensation seekers coming to

experience rewarding reactions from viewing graphic horror (Tamborini, 1991; Zillmann & Bryant, 1986).

In the context of horror films, suspense is seen to have occurred when the viewer sympathizes with the protagonist, feels unable to act, and responds emotionally with increased fear, interest, and tension (Tan & Diteweg, 1996). The thrill comes from the consciousness of a real external danger, the knowledge that exposure to this danger is conscious and voluntary, and the confident hope that the fear will be mastered (Mikos, 1996). According to Apter (1992),

“Both the tiger *and* the cage are needed in order for one to experience excitement. The tiger without the cage would be frightening; the cage without the tiger would be boring. Both are necessary in order to experience excitement, then, we need both the possibility of danger and something we believe will protect us from it” (p. 27).

All of which, taken together, suggests that horror films are attractive due to building tension, showing its relevance, and creating safety through unrealism (Walters, 2004).

Studies have given support to the idea that individuals watch horror films in order to experience the physiological thrill. Sparks and Spirek (1988) measured individuals' activation-arousal system before having them watch *The Nightmare on Elm Street* while skin conductance (SCR) was measured. They found that high monitors, arousal-biased individuals prone to higher levels of affective intensity, had larger physiological reactions in general and larger SCR spikes at particularly suspenseful spots. Palmer (2008) had self-proclaimed horror fans watch a mash-up of various horror films. He found that after the film was over, both systolic blood pressure and self-reported positive affect were significantly increased. Sparks (1991) exposed subjects to clips from two violent horror films, measuring their skin conductance while watching one. He found that for men, subjective levels of both distress and delight following the film were positively

correlated, and this data was supported by the physiological data. This seems to suggest that men enjoy the idea of being distressed while viewing a horror film. While not studying horror films specifically, Bryant and Zillmann (1984) found that when subjects were bored, they would choose to watch more exciting television shows which led to a further increase in heart rate. Cantor and Nathanson (1997) also found that children who are more frightened by violent television shows were also the children most interested in watching cartoons, live action shows, and reality shows featuring violence, suggesting that they enjoyed their fear response.

The enjoyment of frightening films due to the physiological thrill they provide is also what is measured by the EFF scale, which has been linked to both exposure and liking of horror films (Sparks, 1986). Additionally, one of the motivations for viewing scary movies found by Johnston (1995) was thrill watching, defined as watching in order to be scared, to have fun, to freak out, and to have something to do. Thrill watching predicted an individual's increased positive affect before and after watching the film, decreased negative affect after viewing the film, increased positive beliefs about the film, increased preference for excitement in horror films, and increased identification for the victim.

### Current Study

Taken together, the research indicates that enjoyment of horror films is about more than just getting a kick out of watching violence and gore, which seems to better predict men's interest in the genre. Factors which are also of interest seem to include the resolution of the film's main conflict which is consistently provided by formulaic horror films (justice), the ability to bond with others through a common viewing experience (social), and the potential to learn how to avoid violence in real life (learning). As these dimensions seem equally important in predicting whether an individual will enjoy watching a horror film, this study presents the

development of a multi-dimensional scale of interest in horror films based on the previously discussed five factors in phase one. The development of the enjoyment of horror films measure will be discussed in great detail later in the paper. In phase two, the validity of the scale was assessed through both self-report and behavioral measures. Finally, overall and individual factor scale scores were explored for gender differences and personality correlates. More information and specific hypotheses associated with phase two are discussed below.

### *Construct Validity*

Data collection for construct validity occurred simultaneously with data collection for initial item and scale development, though the sample was randomly split in half to create derivation and validation samples. Participants completed three measures of construct validity: one behavioral measure looking at response latency to genre-related stimuli and two self-report measures of exposure to and liking of horror films.

*Response Latency.* Horror movies are seen by many critics as featuring excessive violence directed against women (e.g. Clover, 1989; Williams, 1996). This leads to the previously mentioned argument that viewing scenes of violence will lead an individual to be more violent, especially against women. Given this argument, it seems possible that women may not want to admit to liking films within the horror genre as these films are seen by others as promoting violence towards women as a group. Additionally, Cherry (1999) posited that “women appear to have become a hidden audience for horror, repressing their liking for it because such a response is seen as unfeminine” (p. 190) after completing her study attempting to profile female viewers of horror films. The majority of her participants reported that they kept their liking for the horror genre private, viewing these films alone or in small groups. As a result,

we included an objective measure of exposure to and familiarity with the horror genre for validation purposes.

Participants were asked to name as many horror movies as they could think of as quickly as possible. More specific detail about this measure will be discussed later. Response latency is defined as the time elapsed from an item's onset onscreen, in this case the presentation of a line to enter the name of a horror film on, until the response of the participant, in this case the submission of the film name by pressing a key (Doerfler & Hornke, 2010). It has been found that when an individual is exposed repeatedly to a particular stimulus, this will lead to positive feelings of familiarity which will facilitate their responding to various measures (Garcia-Marques, Mackie, Claypool, & Garcia-Marques, 2010). By this logic, a horror movie fan who has repeatedly exposed him- or herself to horror movies will have decreased reaction times when compared to individuals who do not expose themselves to horror movies.

*Hypothesis 1a:* Higher scores on general interest in horror films will be associated with decreased response latency.

*Hypothesis 1b:* Higher scores on the enjoyment of horror films inventory will be associated with decreased response latency.

*Exposure and Enjoyment of Horror Films.* Participants were given a list of 60 films from three different genres, including the target genre of horror as well as action/adventure and romantic comedy. For each film, participants were asked to indicate if they had ever seen it, and if so, how much liked it. Obviously, the genre of interest is horror films for all participants, but there might be some interesting things found in the other genres. Perhaps individuals who also watch a large proportion of action/adventure will prefer horror movies for their violence and thrill, while individuals who also watch a large proportion of romantic comedy will prefer horror movies for their social aspects. The presence of other genres also serves to get a measure of

general film exposure. Additionally, participants rated how much they liked each film seen on a scale of (1) *disliked extremely* to (5) *liked extremely*.

*Hypothesis 2a:* Higher scores on general interest in horror films will be associated with higher exposure and liking scores for films in the horror genre.

*Hypothesis 2b:* Higher scores on the enjoyment of horror films inventory will be associated with higher exposure and liking scores for films in the horror genre.

### *Gender Differences*

While the goal of this study is to create a more multi-dimensional scale to measure interest in horror films in both male and female viewers, this does not mean that opposite gender participants will score equally on all five factors. Previous research has found that men tend to like horror films for the power and destruction they exemplify (Tamborini & Stiff, 1987) as well as for the graphic violence they contain (Johnston, 1995). Men are also more likely to experience positive feelings about a horror movie when they are experiencing physiological distress (Sparks, 1991). Women, on the other hand, are more likely to prefer horror films which ultimately show good triumphing over evil (Tamborini & Sparks, 1987). Women also prefer to expose themselves to violent media which contains useful information for avoiding real-life violence (Vicary & Fraley, 2010). No gender differences have been found concerning the social dimension of horror movie viewing (Lawrence & Palmgreen, 1996).

While gender may be an important predictor of factor scores, it has been accepted in the field that sex-appropriate attitudes and behaviors are not rigidly assigned to a biological sex and that individuals can characterize themselves as masculine, feminine, or both, or even characterize themselves outside of any gender-roles (Bem, 1974; Spence & Helmreich, 1978). Bem (1974) first conceptualized androgyny as the presence of both masculine and feminine traits within the

same person. The Bem Sex-Role Inventory (BSRI) measures an individual's masculinity, femininity, and androgyny based on his or her endorsement of different personality characteristics. Masculine characteristics include such traits as self-reliant, forceful, and analytical, while feminine characteristics include such traits as yielding, affectionate, and compassionate.

Bem (1975) found that individuals high in Masculinity and Androgyny showed less social conformity than individuals high in Femininity, regardless of biological sex. Individuals high in Femininity and Androgyny were also found to be more involved with a kitten, were more interactive with a human baby, and were more nurturing towards another student sharing an unhappy emotion than individuals high in Masculinity (Bem, 1975; Bem, Martyna, & Watson, 1976). Only androgynous men and women scored high in both independence (lack of social conformity) and nurturance, while feminine men and women scored high only in nurturance and masculine men and women scored high only in independence (Bem, Martyna, & Watson, 1976). Bem and Lenney (1976) also found that sex-typed individuals preferred to engage in more sex-stereotypic behavior and felt significantly worse after being forced to perform cross-sex activities than androgynous or cross-sex-typed individuals.

There is also some evidence that gender role affects how an individual perceives violent entertainment, though there are not many studies in this area. Tamborini, Stiff, and Zillmann (1987) found a small negative correlation between BSRI scores and preference for graphic horror, meaning that the more feminine a person scored, the less they preferred graphic horror. However, this relationship was not a significant predictor in a regression equation. Gunter and Furnham (1985) found that individuals low in masculinity and high in femininity or androgyny, regardless of biological sex, rated British crime dramas as more violent than individuals high in

masculinity. They also found that feminine and androgynous individuals rated male aggressors as more realistic, more frightening, more personally disturbing, and more likely to disturb other people while rating female aggressors as more exciting. Masculine individuals, on the other hand, rated male aggressors as less violent, frightening, and personally disturbing while rating female aggressors as more violent, frightening, and personally disturbing. Biological sex was only weakly related to these ratings.

The best evidence that gender role mediates the relationship between biological gender and a response to horror films comes from Mundorf, Weaver, and Zillmann (1989). They had students watch various violent horror films in small same-sex groups and then rate each segment for fright, boredom, and enjoyment responses. Individuals completed self-ratings for the various elements as well as projected ratings for their same-sex peers and opposite-sex peers. Masculine and feminine individuals of both sexes tended to either under- or over-estimate their peers' fright, boredom, and enjoyment responses while androgynous and undifferentiated individuals were more accurate in their estimations, but there were also some interesting differences in self-ratings based on gender role. Masculine women had significantly higher fright responses than feminine, androgynous, and undifferentiated women. Both masculine and feminine men had higher boredom responses than undifferentiated men. Finally, masculine men had higher enjoyment responses than feminine men.

While these studies indicate that there are differences in how individuals respond to violent films based on their gender role, there have been no studies investigating if gender role would affect reasons to view a horror film in the first place. Research discussed at the beginning of this section indicates that men are more likely to prefer horror films for their inclusion of gory elements and their ability to provide a physiological thrill (gore and thrill factors) while women

are more likely to prefer horror films for their inclusion of just endings and their inclusion of practical information to avoid real-life violence (justice and learning factors). However, it is possible that the differences on scale factors based on biological sex, if they do exist, will be mediated by the individual's gender role, with masculine individuals scoring higher on gore and thrill factors than feminine individuals and vice versa for the justice and learning factors.

*Hypothesis 3:* Men will score higher on the 'gore/violence' and 'thrill' factors.

*Hypothesis 4:* Women will score higher on the 'justice' and 'learning' factors.

*Hypothesis 5:* There will be no gender differences on the 'social' factor.

*Hypothesis 6:* Gender role will mediate the relationship between gender and factor scores for the 'gore/violence', 'thrill', 'justice', and 'learning' factors

### *Personality Correlates*

Participants rated 180 items from the IPIP representation of Costa and McCrae's (1992) NEO facet scales from the domains of neuroticism, extraversion, and openness to experience. Neuroticism is thought to be a measure of affective adjustment and is represented with items such as "have frequent mood swings". Extraversion is thought to be a measure of quantity and intensity of interpersonal interpretations and is represented with items such as "make friends easily". Openness to experience is thought to be a measure of the appreciation of experience for its sake and the tolerance of the unfamiliar and is represented with items such as "enjoy hearing new ideas" (Piedmont, 1998). Agreeableness and conscientiousness were not included due to concerns about the length of the measure and because the researcher was unable to find any research which would indicate a link between the two domains and interest in violent entertainment.

While not much research exists linking the five factor model of personality to interest in violent media of any kind, one study did find several of the domains and their underlying facets were related to exposure to and liking of violent media (Krcmar & Kean, 2005). Specifically, higher overall neuroticism scores as well as higher scores on the angry hostility subscale were related to increased exposure to violent media, but not to liking of violent media. This could be related to the current study's learning factor, wherein people watch horror films in order to learn how to avoid real-life violence. Higher excitement seeking and assertiveness scores and lower activity scores, all three of which are extraversion subscales, were associated with increased liking of violent media, but not to exposure to the same. This factor could be related to the current study's social factor, wherein people watch horror films in order to be part of a group. Finally, higher scores on one facet of openness to experience, openness to aesthetics, was found to relate to increased liking of violent media, though again not to exposure. This factor seems as if it could be related to interest in horror films in general as horror films are often seen as a less mainstream art form.

*Hypothesis 7:* Higher scores on the enjoyment of horror films inventory, especially the learning factor, will be associated with higher domain and facet scores for neuroticism.

*Hypothesis 8:* Higher scores on the enjoyment of horror films inventory, especially the social factor, will be associated with higher domain and facet scores for extraversion.

*Hypothesis 9:* Higher scores on the enjoyment of horror films inventory will be associated with higher domain and facet scores for openness to experience.

*Hypothesis 10:* Higher scores on the neuroticism domain will be associated with higher exposure scores for the horror film genre.

*Hypothesis 11:* Higher scores on the extraversion and openness to experience domains will be associated with higher liking scores for the horror film genre.

## CHAPTER II

### METHOD

#### Participants

There were 824 participants (542 women, 266 men, and 16 not reporting) included in the final analysis. Most of the participants (about 90%) were recruited via Central Michigan University's Sona system, web-based software for managing participant pools. The remaining 10% of the sample was recruited by the researcher online through forums for self-proclaimed horror movie fans, social networking sites, and regular e-mail to interested parties in other parts of the country. Student participants received credit toward their final grade in their psychology course of choice upon completion of the survey while the non-student participants were not compensated for their participation. The lack of compensation could have led to under-responding among non-students.

The mean ages of female and male participants were 19.80 years ( $SD = 2.91$ ) and 20.02 years ( $SD = 4.46$ ), respectively. Approximately 85% of the sample had obtained a high school diploma or GED as their highest degree while 6% had obtained a two-year college degree, 6% had obtained a four-year college degree, and less than 1% had obtained a Masters or Professional degree. The ethnic makeup of the participants was as follows: 87.6% Caucasian, 4.6% African American, 2.2% Hispanic/Latin American, and 2.9% other including Asian American, Native American, and Pacific Islander.

The initial sample was comprised of 902 participants, but 30 cases were eliminated for failure to complete any measures and an additional 48 were eliminated due to incomplete or missing responses. Thirty-eight cases were removed due to failure to complete the validity measures, response latency and exposure/liking of horror films, or the scale developed by the

researcher, enjoyment of horror films. An additional ten cases were removed due to non-purposeful responding defined as either having a short duration ( $\leq 20$  minutes) with low individual variability ( $SD \leq .6$  on one or more of the EHF, IPIP, or BSRI) or having inconsistent responses on eleven pairs of personality items.

Eleven pairs of personality items, ten from the IPIP and one from a general measure of horror film interest, were chosen to examine response inconsistency as the items would lead to similar (e.g. “I prefer to be alone” and “I want to be left alone”) or opposing (e.g. “I have a vivid imagination” and “I do not have a good imagination”) responses. If the responses were intended to be opposing, one of the items was initially reverse-scored. After this, all the items were recoded so that both negative options (*strongly disagree* and *disagree*) were scored as 1, the neutral option (*neither agree nor disagree*) was scored as 2, and both positive options (*strongly agree* and *agree*) were scored as 3. Difference scores were then calculated for each of the eleven pairs which could equal 0, meaning no difference, 1, meaning one of the items was scored as neutral while the other was scored in either direction, or 2, meaning that the items were scored in opposing directions. Cases which had six or more pairs with a difference score of two were eliminated from the analysis.

Finally, twenty-one participants did not complete either one or both of the personality measures, the IPIP representation of Costa and McCrae’s (1992) NEO facets or the Bem Sex-Role Inventory. Responses were marked as incomplete if at least one full page of items was not completed (one page contained twenty items for each scale). Visual examination by the researcher of these participants’ data did not reveal any evidence that the first measures were completed non-purposefully, so the participants were kept in the data set but had their personality measures eliminated. Missing values in the remaining cases were replaced with the

neutral response option “sometimes” for the IPIP scales as recommended by the NEO PI-R test manual (Costa & McCrae, 1992) and “true about half the time” for the Bem Sex-Role Inventory.

The final sample was split in half, with 412 cases in each file, in order to have separate samples for derivation (group 1) and validation (group 2) of the scale of interest, enjoyment of horror films. The sample was split randomly and there does not appear to be overrepresentation by any one group. The derivation sample is composed of 264 women and 138 men with mean ages of 19.68 years ( $SD = 2.85$ ) and 19.79 years ( $SD = 4.03$ ), respectively, while the validation sample is composed of 278 women and 128 men with mean ages of 19.92 years ( $SD = 2.96$ ) and 20.27 years ( $SD = 4.87$ ), respectively.

### Materials and Procedure

The survey instrument was administered to all participants over the internet. The survey was administered using Qualtrics Survey Software and the link was distributed to any possible participants. It took participants about 30-35 minutes on average to complete the survey, though individual times varied greatly due to the survey being offered over the internet rather than in a mediated setting. Subjects were given an electronic consent form which explained the purpose of the study and were asked to check a box if they agreed to participate. The survey then began by ascertaining how many horror films the individual had seen in their lifetime as a single item measure of being a horror movie fan. Next, participants completed the measure of response latency to ensure that the names of horror movies had not been primed by virtue of the survey instrument itself. Following this, the scales were presented in the following order: enjoyment of horror films, exposure and liking of horror films, the IPIP representation of Costa and McCrae’s (1992) NEO facets, the Bem Sex Role Inventory, and a demographics questionnaire. These measures will all be discussed in greater detail in the following sections.

### *Response Latency*

Participants were asked to type the titles of as many horror films that they could think of as fast as possible. They were asked to only name one film per series and/or franchise (e.g. only one film each from the *Saw*, *Friday the 13<sup>th</sup>*, and *Halloween* franchises). Each film was entered on a separate page from the others, allowing for the measurement of how long it takes participants to name each horror film once they have begun the timer (Appendix B for participant directions). While the participants were asked to include as many as possible, only 10 titles were recorded. After they reached ten, they were directed to the next part of the survey. If an individual was unable to think of 10 films, they could move on to the next part of the survey by checking a box at the bottom of the page. Each page had this box and in each case, it directed the participant to the next part of the survey. Participants were asked which factor was most responsible for the time it took them to complete the measure to determine what the differences in response latency were actually due.

### *Enjoyment of Horror Films*

Participants were given 50 items covering the five factors of interest to this study: gore/violence, justice, social, learning, and thrill (Appendix C). Subjects rated each item on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. This measure will be discussed in great detail in the results section, so it will not be discussed further here.

### *Exposure and Enjoyment of Horror Films*

Participants were given a list of 60 films from three different genres: romantic comedy, action/adventure, and horror (Appendix D). These films were chosen using a website updated daily which catalogs overall box office performance by genre, with the top grossing 20 films in

each genre being placed on the final list (Gray, 1999). If the list of top grossing films included more than one film from a series, only the top grossing film per series was included in order to ensure the lists were diverse. Participants were asked to indicate for each film if they had seen it and if so, how much they liked it on a scale of (1) *disliked extremely* to (5) *liked extremely*.

Exposure to the various film genres is defined as the total number of films seen in each category, which can range from 0 to 20. Liking of the horror genre is defined as the summation of scale scores for liking, which has a maximum value of 100.

### *Personality Traits*

Participants were asked to rate 180 items from the IPIP representation of Costa and McCrae's (1992) NEO facet scales on a 5-point scale ranging from (1) *very inaccurate* to (5) *very accurate* (Appendix E). All six facets of each of the following three domains were included: neuroticism, extraversion, and openness to experience. Facets of neuroticism are anxiety, anger, depression, self-consciousness, immoderation, and vulnerability. Facets of extraversion are friendliness, gregariousness, assertiveness, activity level, excitement-seeking, and cheerfulness. Finally, facets of openness to experience are imagination, artistic interests, emotionality, adventurousness, intellect, and liberalism. These three domains were chosen as prior research has indicated that these are the three domains most related to interest in violent entertainment (Krcmar & Kean, 2005).

The IPIP scales have been shown to have comparable internal consistency to the actual NEO PI-R domains scores. The alpha reliabilities for the IPIP domains are .86 for Neuroticism, .79 for Extraversion, and .83 for Openness to Experience (Goldberg et al., 2006), while the alpha reliabilities for the NEO PI-R domains are .92 for Neuroticism, .89 for Extraversion, and .87 for Openness to Experience (Costa & McCrae, 1988). Facet scores have also been shown to have

comparable internal consistency to the NEO PI-R facet scores with all reliability estimates falling between .71 and .88 (Goldberg et al., 2006). In the current sample, alpha reliabilities for the IPIP domains were .94 for Neuroticism, .94 for Extraversion, and .88 for Openness to Experience. Most of the facet scales had internal reliability estimates similar to prior research between the values of .68 to .89, but activity level, emotionality, and adventurousness fell below this range at .61, .53, and .59, respectively. While these are lower than previous research, the estimates are still within acceptable parameters.

### *Bem Sex Role Inventory*

Participants completed the 60-item Bem Sex-Role Inventory (BSRI; Bem, 1974) on a 7-point scale ranging from (1) *never or almost never true* to (7) *almost always true* (Appendix F). The BSRI measures masculinity, femininity, and androgyny based on the individual's endorsement of a list of personality characteristics. There are 20 masculine and 20 feminine items, with 20 neutral, non sex-typed items. Masculinity and femininity scores are calculated by averaging the individual's 20 responses together which will give a mean score between 1 and 7 for each gender identity.

Originally, the instrument was scored so that an individual had three scores: a Masculinity score (mean score of all masculine items), a Femininity score (mean score of all feminine items) and an Androgyny score (Student's *t* ratio for the difference between masculine and feminine scores). High positive androgyny scores were defined as more feminine and high negative androgyny scores were defined as more masculine while androgyny scores near zero were defined as more androgynous (Bem, 1974). This method was critiqued for not differentiating between those who scored low on both scales and those who scored high on both scales, so Bem (1977) proposed a different scoring method, the median-split, which compares an

individual's Masculinity and Femininity scores to the sample median, a method originally used on the Personal Attributes Questionnaire (Spence & Helmreich, 1978). Masculine individuals score above the sample median on Masculinity and below the sample median on Femininity. Likewise, Feminine individuals score below the median on Masculinity and above the median on Femininity. If both Masculinity and Femininity scores are above the sample median, the individual is classified as androgynous, while if both scores are below the sample median, the individual is classified as undifferentiated.

Orlofsky, Aslin, and Ginsburg (1977) proposed a hybridization of the  $t$  ratio method and the median split which provides a single androgyny score which is the difference between the masculinity and femininity scores multiplied by a constant (2.322). If the  $t$  ratio is greater than 1, the individual is labeled as Feminine while if the  $t$  ratio is less than -1, the individual is labeled as Masculine. Scores between -1 and 1 are labeled as androgynous unless both the Masculinity and Femininity scores fall below the respective medians, 4.8 and 5.15 in the current sample, respectively. Orlofsky and colleagues found this index to be more sensitive as in their sample, individuals scored using the hybrid method were found to differ significantly on the Attitudes towards Women scale while individuals scored using the median-split method did not. This scoring procedure also has the benefit of providing a single  $t$  ratio score to be used in analysis while still providing a categorical variable based on gender role. Within our sample of 412 individuals, 51 were classified as Masculine (29 men and 22 women), 82 as Feminine (7 men and 75 women), 145 as Androgynous (52 men and 93 women), and 124 as Undifferentiated (37 men and 87 women) with 10 individuals missing a score.

Initial psychometric properties for the BSRI were computed using students from two colleges. The alpha reliabilities were .86 for the Masculinity scale in both settings, .82 for the

Femininity scale in both settings, and .85 and .86 for the Androgyny scale in Stanford and Foothill respectively. Four-week test-retest correlations were sufficiently high for Masculinity,  $r = .9$ , Femininity,  $r = .9$ , and Androgyny,  $r = .93$  (Bem, 1974). Various validation studies found differences between individuals based on their gender identity. The alpha reliabilities in the current sample were .87 for the Masculinity scale and .80 for the Femininity scale.

### *Demographics*

Participants were asked a series of demographic questions after completion of the rest of the survey elements (Appendix F). Additionally, a four-item scale measuring general interest in horror films was administered in order to gain an individual's overall interest in the genre, outside of their scores on enjoyment of differing factors.

## CHAPTER III

### RESULTS

#### Phase One: Scale Derivation

##### *Data Collection and Initial Item and Scale Development*

Scale items reflected the five factors previously discussed: gore/violence, justice, social, learning, and thrill. All items were created specifically for this instrument by the researcher utilizing previous research findings as well as informal interviews with small groups of people. Examples of items from each factor include, “I watch horror movies in order to see people die in extremely violent and interesting ways” (gore/violence), “The best part of a horror movie is seeing the monster die in the end” (justice), “My friends and I love to watch horror movies together” (social), “Horror movies provide me with an explanation for why an individual would kill” (learning), and “I love the physical rush that watching horror movies gives me” (thrill).

Initially, there were 75 items (15 items per factor). This version of the scale was reviewed by a selection of six graduate students and two faculty at Central Michigan University (CMU) who rated each item for (1) factor belongingness (e.g. gore/violence, justice, social, learning, or thrill) and (2) selected factor representativeness (e.g. well, somewhat, or poor). All raters were provided with operational definitions of each factor (Appendix A for letter given to raters). Items were kept for the final version of the scale if more than 50% of raters selected the same factor and, additionally, if more than 50% of raters endorsed “well” for item representativeness on that factor. The final version of the scale for this study had 50 items (11 gore/violence, 9 justice, 11 social, 7 learning, and 12 thrill).

### *Refinement of Scales and Items*

Item/scale analyses were conducted using data from group 1, which contained 412 individuals randomly chosen from the total sample of 824 participants. Overall, women were overrepresented (65.7%) while men accounted for only 34.3% of the sample. Initial reliability analyses were conducted by subdomain. Throughout the analyses, emphasis was placed on (1) item discrimination, measured by corrected item total correlation (*CITC*), (2) comparison of this value against the item's correlation with non-parent scales, and (3) item variability. If an item had a particularly low *CITC*, if its correlation with other scales were greater than its *CITC*, or if the item had low variability compared to other items in the scale, the item was marked for removal. Additionally, items were reviewed for ambiguous wording and redundancy when item statistics were equivalent.

Beginning with the gore/violence factor, one of the eleven items from the item pool, "I like horror movies more when the killer is not very violent, like Norman Bates in *Psycho*", had the lowest overall *CITC* (.10). All other items had *CITCs* larger than .50. In order to further pare down the gore/violence scale, items which were similar in content were examined side-by-side and one item from each grouping was deleted. The first grouping contained items 8, "For me, blood and guts are what make a horror movie enjoyable", and 40, "Horror movies have too much blood and guts for my taste". The two *CITCs* (.74 and .71, respectively) and standard deviations (*SDs*; 1.17 and .19, respectively) were similar, so item 8 was removed in order to retain a higher number of reverse-scored items. The second grouping contained items 19, "I enjoy watching horror movies which feature many gory scenes", and 22, "I like horror movies because over the top, unrealistic gore is fun to watch". Item 22 is a more complicated and ambiguous item with a lower *CITC* (.71) than item 19 (*CITC* = .86), so it was removed from the scale. Finally, the third

grouping contained items 34, “I don’t like horror movies due to their excessive violence”, and 44, “I don’t enjoy horror movies because the violence is largely gratuitous”. Item 44 had a lower *CITC* (.60) and had a more ambiguous meaning, so it was removed from analysis. This left a final gore/violence scale of seven items (Items 3, 11, 19, 28, 34, 40, and 49) with a mean inter-item correlation (*IIC*) of .59 and *CITCs* ranged from .62 to .84.

Moving on to the thrill factor since both the gore/violence and thrill factors have the most empirical support and rationale behind them, all of the initial 12 items had *CITCs* larger than .50. As a result, items which were similar in content were analyzed side-by-side in order to delete redundant items. The first grouping contained items 4, “I don’t enjoy watching horror movies as they make it difficult for me to breathe”, and 13, “I enjoy the way horror movies seem to take my breath away”. The two items had similar *CITCs* (both were .60), but item 4 had a lower *SD* than item 13 (1.06 and 1.17, respectively). Since the two items were similar in everything but the direction they were coded, item 4 was removed from analysis. The second grouping contained items 7, “I don’t enjoy the way watching horror movies makes me physically feel” and 36, “I enjoy the physical rush watching horror movies gives me”. Both items had *SDs* of 1.19, but item 7 had a lower *CITC* (.65), so it was removed from analysis. The final grouping contained items 1, “I like horror movies as they let me feel fear in safe environments”, 16, “I don’t like watching horror movies because I don’t like feeling afraid”, 27, “I enjoy horror movies because it’s fun to be afraid”, and 41, “The more scared a horror movie makes me, the more I enjoy it”. Items 1 and 27 had the lowest *CITCs* (.63 and .74, respectively) and *SDs* (1.18 and 1.24, respectively) of the group, so they were removed from analysis. Finally, in order to keep the number of items on the gore/violence and thrill subscales equal, item 36 was removed as it was similar to item 50, “I like watching horror movies as I can feel my adrenalin rush”, but the wording of 36 seemed more

ambiguous. This left a final thrill scale of seven items (Items 13, 16, 21, 31, 41, 46, and 50) with a mean *IIC* of .51 and *CITCs* ranged from .55 to .74.

Of the remaining scales, we will now discuss the social subdomain. Item 39 had a negative *CITC* (-.07), so it was removed from analysis without further exploration. Item 17, “I only like watching horror movies everybody talks about” had a low *CITC* (.06), so it was removed from analysis. Two pairs of items were similar in content domain, so the items were analyzed in dyads in order to delete redundant items. The first dyad contained items 6, “I enjoy myself more when watching horror movies in large groups”, and 14, “I don’t enjoy watching horror movies in large groups”. As the two items had similar *CITCs* (.52 and .49, respectively) and *SDs* (1.04 and 1.02, respectively), item 6 was removed in order to retain one of the reverse-scored items. The second dyad contained items 35, “I enjoy watching horror movies without my friends around”, and 47, “I like horror movies as my friends and I can watch them together”. Item 35 had a lower *CITC* (.14), so it was removed from analysis. After the removal of these items, reliability analyses were rerun and item 24, “I enjoy watching horror movies by myself” had a negative *CITC* (-.03), so it was removed. This left a final social scale of six items (Items 10, 14, 30, 32, 42, and 47) with a mean *IIC* of .32 and *CITCs* ranged from .23 to .71.

The next subdomain we will discuss is the learning scale. Item 5, “I don’t like horror movies because the violence is too unrealistic to teach me anything about real life violence”, had a very low *CITC* (.03) and correlated higher with gore/violence ( $r = .40$ ), justice ( $r = .09$ ), social ( $r = .15$ ), and thrill ( $r = .44$ ), so it was removed from analysis. Items 9, “I like horror movies because they teach me to never trust people in power”, and 26, “I like horror movies because I find them educational”, had moderate to high *CITCs* (.27 and .41, respectively), but low *SDs* (.93

and .90, respectively), so they were removed. This left a final learning scale of four items (Items 12, 15, 37, and 43) with a mean *IIC* of .25 and *CITCs* ranged from .11 to .45.

The final subdomain to discuss is the justice scale. Items 18, 23, 33, and 48 had negative *CITCs* (-.18, -.07, -.05, and -.25, respectively), so they were removed from analysis. Item 29, “I dislike horror movies because the monster could get away at the end”, had a low *CITC* (.01). Additionally, this item was determined to have ambiguous wording, so it was removed from analysis. Item 20 correlated higher with the thrill scale ( $r = .37$ ) than with the justice scale ( $CITC = .36$ ), and item 45 correlated higher with the social scale ( $r = .44$ ) than with the justice scale ( $CITC = .31$ ), but in order to keep the justice and learning scales equal in number of items, these two items were retained. This left a final justice scale of four items (Items 2, 20, 25, and 45) with a mean *IIC* of .33 and *CITCs* ranged from .43 to .46.

Overall, the discussed deletions resulted in a 28-item Enjoyment of Horror Films Scale (7 gore/violence, 4 justice, 6 social, 4 learning, and 7 thrill). Cronbach’s alpha internal consistency estimate for the total scale was calculated at approximately .89. Internal consistency estimates were .91, .66, .73, .57, and .88 for gore/violence, justice, social, learning, and thrill, respectively. These scales were then evaluated using the second group of the sample for construct validation and hypothesis testing.

## Phase Two: Construct Validation and Hypothesis Testing

### *Validation of Enjoyment of Horror Films Scale*

Psychometric characteristics of the 28-item Enjoyment of Horror Films Scale were examined using data from group 2 as described in the method section. Internal consistency estimates were .92, .62, .72, .63, .89, and .89 for gore/violence, justice, social, learning, thrill,

and the entire scale, respectively. A 28 x 28 inter-item covariance matrix was submitted to a Confirmatory Factor Analysis (CFA) to inspect factor loadings and model fit. One factor loading was freed for each item and all cross loadings were fixed. Variances of the latent factors were set to 1 to set scale and the latent factors were allowed to covary freely. Table 1 shows the factor loadings for all scales. Mean factor loadings were .78, .54, .54, .55, and .73 for gore/violence, justice, social, learning, and thrill, respectively. Overall, with the expected exception of chi-

Table 1. *Factor Loadings for Enjoyment of Horror Films Scale*

Item Number	Gore/Violence	Justice	Social	Learning	Thrill
EHF_3	0.70	--	--	--	--
EHF_11	0.77	--	--	--	--
EHF_19	0.84	--	--	--	--
EHF_28	0.87	--	--	--	--
EHF_34R	0.73	--	--	--	--
EHF_40R	0.75	--	--	--	--
EHF_49	0.82	--	--	--	--
EHF_2	--	0.54	--	--	--
EHF_20	--	0.48	--	--	--
EHF_25	--	0.60	--	--	--
EHF_45	--	0.54	--	--	--
EHF_10	--	--	0.27	--	--
EHF_14R	--	--	0.21	--	--
EHF_30	--	--	0.70	--	--
EHF_32	--	--	0.50	--	--
EHF_42	--	--	0.78	--	--
EHF_47	--	--	0.76	--	--
EHF_12	--	--	--	0.75	--
EHF_15	--	--	--	0.59	--
EHF_37	--	--	--	0.67	--
EHF_43R	--	--	--	0.18	--
EHF_13	--	--	--	--	0.68
EHF_16R	--	--	--	--	0.80
EHF_21R	--	--	--	--	0.65
EHF_31R	--	--	--	--	0.74
EHF_41	--	--	--	--	0.86
EHF_46R	--	--	--	--	0.65
EHF_50	--	--	--	--	0.76

Note.  $N = 412$ . Item descriptions can be found in Appendix C. R indicates items which were reverse-scored.

square, fit indices were suggestive of a good fitting model:  $\chi^2 (340, N = 412) = 1061.74, p < .001, \chi^2/df = 3.12, RMSEA = .08, CFI = .96, GFI = .83$  and  $SRMR = .08$ .

### *Construct Validity*

In order to determine if the Enjoyment of Horror Films scale actually measured the intended constructs, it was correlated to various indices of interest in horror films. As the direction of all relationships was predicted, all tests will be one-tailed. The correlations between the five factor scores, the overall scale score, and the measures of construct validity can be found in Table 2. The five factors were found to have strong positive correlations between themselves, as would be expected, with the strongest relationship found between gore/violence and thrill,  $r (401) = .69, p < .001$ , and the weakest between gore/violence and justice,  $r (401) = .18, p < .001$ .

Additionally, all five factors correlated strongly with overall scores on the measure, with correlations ranging from .52 to .88. Scores on the five factors and the overall scale scores were also correlated to a four-item measure of general interest in horror films (Appendix G, Question 10, parts b-e for statements). The measure of general interest was found to strongly correlate to gore/violence, justice, social, learning, thrill, and overall scale score, with correlation coefficients of .69, .28, .45, .35, .83, and .80, respectively. These initial analyses provide good evidence that the Enjoyment of Horror Films scale measures the intended constructs. In the following sections, the major indices of construct validity, response latency in naming horror films, exposure to horror films, and enjoyment of horror films, will be discussed.

*Response latency.* The first hypothesis was that higher scores on the enjoyment of horror films inventory and higher scores on general interest in horror films would be associated with

Table 2. *Correlations Among Enjoyment of Horror Films Scales and Construct Validity Measures*

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Gore/Violence	<b>0.92</b>	--	--	--	--	--	--	--	--	--	--
2. Justice	0.18*	<b>0.62</b>	--	--	--	--	--	--	--	--	--
3. Social	0.31**	0.50**	<b>0.72</b>	--	--	--	--	--	--	--	--
4. Learning	0.36**	0.34**	0.31**	<b>0.63</b>	--	--	--	--	--	--	--
5. Thrill	0.69**	0.32**	0.52**	0.34**	<b>0.89</b>	--	--	--	--	--	--
↻ 6. EHF	0.80**	0.52**	0.70**	0.56**	0.88**	<b>0.89</b>	--	--	--	--	--
7. General Interest	0.69**	0.28**	0.45**	0.35**	0.83**	0.80**	<b>0.94</b>	--	--	--	--
8. Exposure	0.42**	0.19**	0.31**	0.23**	0.51**	0.52**	0.59**	--	--	--	--
9. Enjoyment	0.56**	0.27**	0.46**	0.37**	0.69**	0.70**	0.70**	0.37**	--	--	--
10. Number Films	0.20**	0.12**	0.24**	0.17**	0.27**	0.29**	0.33**	0.38**	0.25**	--	--
11. Average Time	-0.12*	-0.03	-0.01	-0.08	-0.13**	-0.13**	-0.09*	-0.15**	-0.08	-0.25**	--

*Note:* *N* ranges from 377 to 410. Internal consistency estimates using Cronbach's alpha are in bold on the main diagonal. EHF is the overall score for Enjoyment of Horror Films. Average Time is the total amount of time participants took to complete the response latency task divided by the total number of films they named.

\*. Correlation is significant at the 0.05 level (one-tailed).

\*\*. Correlation is significant at the 0.01 level (one-tailed).

decreased response latency. In other words, individuals who scored highly on both measures were expected to take less time to come up with the names of horror films during a free response task. As can be seen in Table 3, there was no consistent association between any of these variables. Most relationships were not significant and correlation coefficients were both positive and negative, which was not anticipated. Scores on the general interest in horror films measure were not significantly related to the time it took to name any of the 10 film titles, with correlation coefficients ranging from -.09 to .08.

Overall scores on the Enjoyment of Horror Films inventory were only associated with the time it took to name the first horror film title,  $r(386) = -.12, p = .02$ , meaning that individuals who scored higher on the inventory took less time to name the first horror film title. This

Table 3. *Correlations of Response Latency to Enjoyment of Horror Films and General Interest in Horror Films*

Variables	Gore/ Violence	Justice	Social	Learning	Thrill	Total Enjoyment	General Interest
Film 1	-0.07	-0.07	-0.05	-0.06	-0.09*	-0.12**	-0.09*
Film 2	0.01*	0.04	0.00	-0.01	0.05	-0.06	0.08
Film 3	-0.08	0.01	-0.03	-0.04	-0.06	-0.08	-0.06
Film 4	-0.05	0.01	-0.01	-0.04	-0.04	-0.06	-0.04
Film 5	-0.05	0.07	0.00	-0.16**	-0.08	-0.08	-0.07
Film 6	-0.01	0.00	0.05	0.01	0.02	0.03	0.04
Film 7	-0.06	0.08	0.09	-0.03	0.00	-0.00	-0.00
Film 8	-0.11*	0.02	-0.04	0.06	-0.14*	-0.10	-0.08
Film 9	0.08	0.02	-0.06	0.15**	0.06	0.03	0.07
Film 10	-0.12*	-0.03	0.04	0.08	-0.13*	-0.09	-0.04

Note: *N* ranges from 210 to 407. Some values equal -0.00 as values were truncated for report.

\*. Correlation is significant at the 0.05 level (one-tailed).

\*\*. Correlation is significant at the 0.01 level (one-tailed).

relationship was in the expected direction, but overall scale scores were not related to the time it took to name the second through the tenth horror films. Correlation coefficients for this relationship ranged from  $-.10$  to  $.06$ . Specific scale scores, gore/violence, justice, social, learning, and thrill, were not related to response latency for the majority of the film titles. These relationships can be further examined in Table 3, but they do not seem to differ from what would be expected by chance. No obvious relationships or potential trends were found while looking at the data individually.

The response latency data was combined to create a pair of numbers for each participant reflecting their performance on the given task. First, the total number of horror films they were able to come up with was summed for each participant. Scores on this measure ranged from 1 to 10 ( $M = 8.02$ ,  $SD = 2.61$ ), with over 54% of participants providing all 10 possible titles. Second, the response latency data for each participant was summed and divided by the total number of horror films they named to determine the average time it took each participant to name a film. The average was employed over a simple summation to control for the fact that not all participants named all ten possible films. Scores on this measure ranged from 3.78 to 129.26 seconds ( $M = 14.12$ ,  $SD = 11.02$ ). These relationships can be found at the bottom of Table 2 and more closely reflect what we would have expected of this data. The total number of horror movies named was positively related to all five factor scores and the overall scale score, with correlation coefficients ranging from  $.12$  to  $.29$ . Additionally, the total number of horror movies named was positively related to general interest in horror films,  $r(388) = .29$ ,  $p < .001$ . Taken together, this indicates that the higher an individual scored on these six measures of interest and enjoyment of horror films, the more horror films they were able to name when given a free response task. This is what we would expect to see if we were measuring the intended constructs.

The average latency to name these films revealed more of the expected trend than did the data considered individually. Average latency was negatively related to gore/violence,  $r(404) = -.12, p = .02$ , thrill,  $r(405) = -.13, p = .004$ , overall enjoyment of horror films,  $r(387) = -.13, p = .005$ , and general interest in horror films,  $r(399) = -.09, p = .04$ . The relationship between average latency and learning was trending towards significance,  $r(407) = -.08, p = .06$ , but the relationships between average latency and the justice and social factors did not,  $r(405) = -.03$  and  $r(403) = -.01, p > .05$ , respectively. Taken together, this indicates that, at least for some measures of horror film enjoyment and interest, individuals who score higher on enjoyment took less time, on average, to come up with their total number of horror films. While our initial research hypotheses were not supported, there is still good evidence that the scales are adequately measuring individual's interest in and enjoyment of horror films.

*Exposure and enjoyment of horror films.* The second hypothesis was that higher scores on the enjoyment of horror films inventory and higher scores on a general interest in horror films measure would be associated with higher exposure and liking scores for films in the horror genre. Exposure scores were calculated based on how many films each participant had seen out of 20 potential horror films. Scores on this scale ranged from 0 to 20 ( $M = 10.23, SD = 4.83$ ). Figure 1 shows the mean number of films viewed in each genre in total and by gender. Enjoyment scores were taken by summing the ratings of each film the individual had seen and dividing it by the total number of films seen to compute an average enjoyment score for each individual. Again, average enjoyment scores were utilized over absolute enjoyment scores in order to control for variability among total number of films seen by each individual. Figure 2 shows the average enjoyment scores of each film genre in total and by gender.

The relationships between exposure to and enjoyment of horror films and the scales of interest can be found in Table 2. Both exposure to horror films and average enjoyment of horror films were positively related to all factor scales, overall enjoyment of horror films, and general interest in horror films. Correlation coefficients between exposure to horror and enjoyment of horror film factor scores ranged from .19 to .51, while correlation coefficients between average enjoyment of specific horror films and factor scores ranged from .27 to .69. Both scores had the weakest relationship with the justice factor and the strongest relationship with the thrill factor. General interest in horror also correlated positively with exposure to horror,  $r(401) = .59, p < .001$ , and average enjoyment of horror,  $r(397) = .70, p < .001$ .

Table 4 presents the correlations between the Enjoyment of Horror Films scale and exposure and enjoyment scores for all three film genres included in the survey (horror, romantic comedy, and action/adventure). While some of the scores for the non-target genres were significantly associated with scores on the Enjoyment of Horror Films scales, none of the

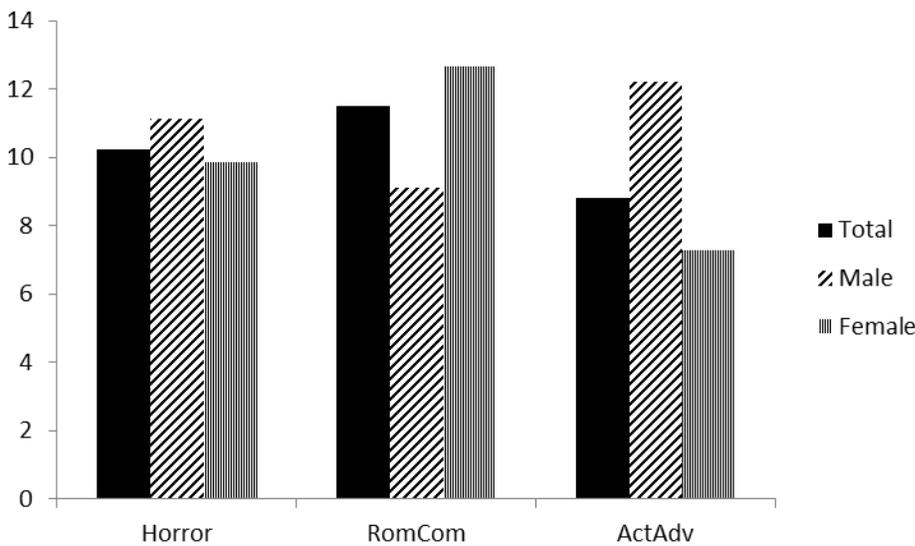


Figure 1. Mean number of films seen by genre, overall and by gender.

relationships were as strong as those between the target genre and the scale scores. Exposure to and enjoyment of Romantic Comedy scores tended to be negatively related to the various scale scores, though both scores were positively related to justice scores. Exposure to and enjoyment of Action Adventure scores were all positively related to the scale scores. Taken together, response latency, exposure, and enjoyment scores all provide good evidence for the construct validity of the Enjoyment of Horror Films scale and indicate that scale scores do not systematically generalize to other film genres.

### *Descriptive Statistics and Gender Differences*

Descriptive statistics for the total sample of group 2 (412 participants) on all main variables can be found in Table 5. Means and standard deviations of the variables, broken down by gender and standardized mean differences (Cohen's *d*; Cohen, 1988) can be found in Table 6. Most variables showed no evidence of skewness or kurtosis, though average time to name horror

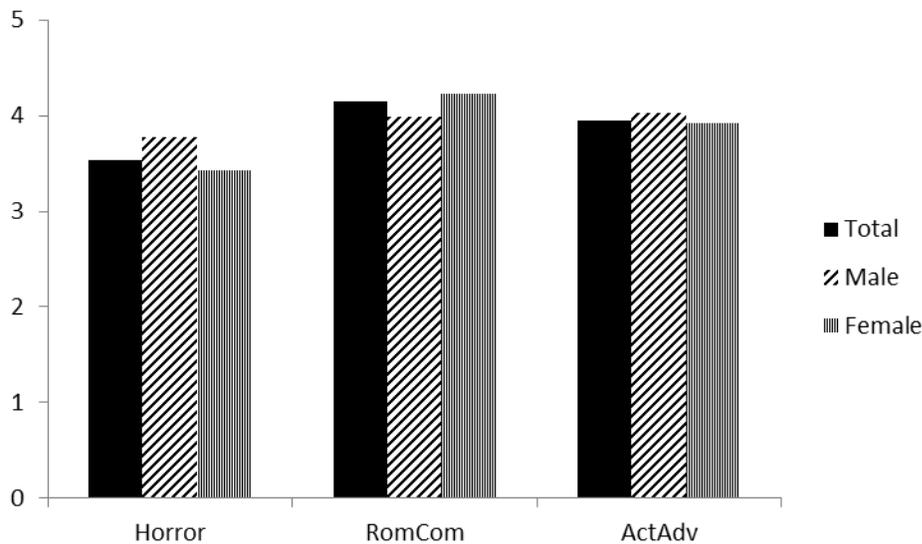


Figure 2. *Average enjoyment of films seen in each genre, overall and by gender.*

Table 4. *Correlations of Exposure and Enjoyment of Film Genres to Enjoyment of Horror Films.*

Variables	Gore/Violence	Justice	Social	Learning	Thrill	Total Enjoyment
<b>Exposure</b>						
Horror	0.42**	0.19**	0.31**	0.23**	0.51**	0.59**
Rom Com	-0.13**	0.12*	-0.00	-0.00	-0.09	-0.03
Adventure	0.27**	0.09	0.02	0.12*	0.17**	0.14**
<b>Enjoyment</b>						
Horror	0.56**	0.27**	0.46**	0.37**	0.69**	0.70**
Rom Com	-0.20**	0.10*	0.09	-0.01	-0.09	-0.08
Adventure	0.10*	0.15*	0.04	0.05	0.10	0.02

Note: *N* ranges from 384-409. Rom Com is Romantic Comedy. Some values equal -0.00 as values were truncated for report.

\*. Correlation is significant at the 0.05 level (one-tailed).

\*\* . Correlation is significant at the 0.01 level (one-tailed).

films was positively skewed and highly kurtotic.

*Overall enjoyment of and interest in horror films.* On the Enjoyment of Horror Films scale as a whole, men ( $M = 92.57$ ,  $SD = 15.13$ ) tended to score higher than women ( $M = 81.89$ ,  $SD = 17.69$ ). This gender difference was moderately high ( $d = .65$ ) and significant,  $t(380) = 5.71$ ,  $p < .001$ . Additionally, men ( $M = 13.69$ ,  $SD = 4.63$ ) tended to score higher than women ( $M = 11.44$ ,  $SD = 4.86$ ) for general interest in horror films; this difference was moderate ( $d = .48$ ) and significant,  $t(398) = 4.37$ ,  $p < .001$ . These results are similar to other research measuring enjoyment of horror films, which found that men tended to score higher than women overall (Sparks, 1986), though the scores of both groups indicated positive scores on both scales overall.

*Enjoyment of horror films scales.* Scores on the gore/violence factor revealed that men ( $M = 21.71$ ,  $SD = 5.94$ ) scored much higher than women ( $M = 15.97$ ,  $SD = 6.14$ ). This gender difference was very high ( $d = .95$ ) and significant,  $t(397) = 8.76$ ,  $p < .001$ . For a scale with seven items with “3” meaning “neutral”, any mean lower than 21 indicates items tended to be negatively endorsed, meaning women tended to negatively endorse items on this scale, while men tended to have neutral responses. Scores on the thrill factor also revealed that men ( $M =$

25.61,  $SD = 5.44$ ) scored higher than women ( $M = 21.76$ ,  $SD = 7.04$ ). This difference was high ( $d = .61$ ) and significant,  $t(399) = 5.41$ ,  $p < .001$ . Again, for a seven-item scale, any mean lower than 21 indicates items tended to be negatively endorsed, meaning women tended to endorse

Table 5. *Descriptive Statistics for All Main Variables*

Variables	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	Skewness	Kurtosis
Enjoyment Horror Films	85.17	17.60	32	130	-.59	.20
Gore/Violence (7)	17.82	6.62	7	35	.28	-.62
Justice (4)	12.67	2.82	4	19	-.65	.47
Social (6)	20.88	4.50	6	29	-.76	.73
Learning (4)	11.03	2.98	4	19	.12	-.37
Thrill (7)	22.93	6.78	7	35	-.39	-.72
Total Horror Movies	8.02	2.61	1	10	-.99	-.36
Average Time	14.12	11.02	3.78	129.26	5.35	41.78
General Interest	12.16	4.90	4	20	-.10	-1.07
Exposure						
Horror	10.23	4.83	0	20	-.06	-.82
Romantic Comedy	11.50	4.21	2	20	-.01	-.81
Action Adventure	8.81	4.82	0	20	.38	-.74
Enjoyment						
Horror	3.53	.75	1	5	-.81	.67
Romantic Comedy	4.15	.48	2.58	5	-.70	.15
Action Adventure	3.95	.56	1	5	-1.29	4.30
Masculinity	4.80	.80	1.45	6.95	-.13	.62
Femininity	5.09	.66	3.10	6.70	-.39	-.04
Androgyny	0.68	2.06	-6.62	7.31	.12	.24
Neuroticism	166.18	30.28	73	274	.24	.62
Anxiety	30.06	6.43	11	49	.02	.14
Anger	28.03	7.54	10	48	.08	-.33
Depression	23.48	7.37	10	47	.61	.23
Self-Consciousness	26.59	6.14	11	46	.20	.14
Immoderation	31.29	5.29	17	49	.01	.00
Vulnerability	26.74	5.84	11	45	.25	.10
Extraversion	215.17	26.94	93	278	-.57	1.33
Friendliness	38.14	6.27	13	50	-.58	.78
Gregariousness	36.01	6.64	12	50	-.49	.43
Assertiveness	34.86	6.11	11	50	-.39	.63
Activity Level	31.47	4.44	14	46	-.33	1.08
Excitement Seeking	34.82	6.12	11	49	-.35	.33
Cheerfulness	39.88	5.69	13	50	-.62	.97
Openness to Experiences	207.84	21.84	154	272	.21	-.36
Imagination	36.69	5.64	20	50	.05	-.39
Artistic Interests	38.17	6.14	22	50	-.34	-.53
Emotionality	34.68	4.37	21	47	-.10	.00
Adventurousness	34.69	4.39	18	49	-.06	.57
Intellect	34.01	6.45	16	50	.25	-.32
Liberalism	29.53	5.83	13	50	.24	.13

Note:  $N = 388-412$ . Average Time is measured in seconds. Masculinity and Femininity scores from the BSRI are reported separately.

Table 6. *Descriptive Statistics for All Main Variables by Gender*

Variables	Men		Women		<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Enjoyment Horror Films	92.57	15.13	81.89	17.69	.65
Gore/Violence (7)	21.71	5.94	15.97	6.14	.95
Justice (4)	12.82	2.48	12.65	2.95	.06
Social (6)	21.06	4.18	20.83	4.65	.05
Learning (4)	11.58	2.96	10.78	2.94	.27
Thrill (7)	25.61	5.44	21.76	7.04	.61
Total Horror Movies	8.23	2.48	7.96	2.64	.11
Average Time	13.86	12.88	14.04	9.36	-.02
General Interest	13.69	4.63	11.44	4.86	.48
Exposure					
Horror	11.11	4.92	9.85	4.74	.26
Romantic Comedy	9.12	4.08	12.64	3.80	-.89
Action Adventure	12.20	4.51	7.27	4.11	1.14
Enjoyment					
Horror	3.77	.58	3.42	.80	.50
Romantic Comedy	3.98	.54	4.23	.44	-.51
Action Adventure	4.03	.46	3.92	.59	.21
Masculinity	5.12	.79	4.64	.75	.62
Femininity	4.86	.66	5.19	.63	-.51
Androgyny	-0.62	1.53	1.27	2.01	-1.06
Neuroticism	158.60	27.60	169.56	30.91	-.37
Anxiety	27.30	5.62	31.27	6.39	-.66
Anger	26.23	7.03	28.80	7.63	-.35
Depression	22.78	6.89	23.80	7.58	-.14
Self-Consciousness	25.66	6.28	27.01	6.05	-.22
Immoderation	31.73	5.47	31.12	5.21	.11
Vulnerability	24.90	4.96	27.57	6.03	-.48
Extraversion	214.23	27.14	215.61	26.94	-.05
Friendliness	37.73	6.17	38.32	6.32	-.09
Gregariousness	35.19	6.03	36.40	6.87	-.18
Assertiveness	34.90	5.88	34.82	6.22	.01
Activity Level	31.06	5.06	31.64	4.14	-.13
Excitement Seeking	35.92	5.87	34.34	6.18	.26
Cheerfulness	39.44	5.52	40.08	5.77	-.11
Openness to Experiences	203.69	22.12	209.79	21.47	-.28
Imagination	36.48	5.65	36.79	5.65	-.05
Artistic Interests	35.05	6.09	39.60	5.61	-.78
Emotionality	33.35	4.43	35.27	4.23	-.44
Adventurousness	34.57	4.28	34.76	4.44	-.04
Intellect	35.02	6.37	33.65	6.47	.21
Liberalism	29.21	6.20	29.73	5.59	-.09

Note: *N* = 119-128 men and 263-278 women. Positive *d* values indicate men *M* > women *M*.

these items neutrally while men had a slight tendency to endorse these items positively. These relationships support hypothesis 3 that men will score higher than women on gore/violence and thrill factors.

Scores on the justice factor revealed that men ( $M = 12.82$ ,  $SD = 2.48$ ) and women ( $M = 12.65$ ,  $SD = 2.95$ ) scored about the same. The gender difference was extremely small ( $d = .06$ ) and non-significant,  $t(399) = .58$ ,  $p = .56$ . For a scale with four items with “3” meaning “neutral”, any mean lower than 12 indicates items tended to be negatively endorsed, meaning men and women tended to endorse these items neutrally. Scores on the learning factor revealed that men ( $M = 11.58$ ,  $SD = 2.96$ ) tended to score slightly higher than women ( $M = 10.78$ ,  $SD = 2.94$ ). This difference was moderate ( $d = .27$ ), but significant,  $t(401) = 2.53$ ,  $p = .01$ . Again, for a four-item scale, any mean lower than 12 indicates negative endorsement, meaning men and women tended to endorse these items slightly negative. Hypothesis 4 stated that women would score higher than men on these two facets, which is not what we found. Instead, there was no gender difference found for the justice factor and a small gender difference on the learning factor, with men scoring higher than women.

Scores on the social factor revealed that men ( $M = 21.06$ ,  $SD = 4.18$ ) and women ( $M = 20.83$ ,  $SD = 4.65$ ) tended to score about the same. The difference between these scores was extremely small ( $d = .05$ ) and non-significant,  $t(397) = .48$ ,  $p = .63$ . For a scale with six items with “3” meaning “neutral”, any mean lower than 18 indicates negative endorsement, meaning men and women tended to endorse these items slightly positive. Hypothesis 5 stated that there would be no gender differences for scores on the social scale, which is what was found.

*Gender Role as a Mediator.* Hypothesis 6 stated that gender role would mediate the relationship between biological gender and factor scores for the factors ‘gore/violence’, ‘thrill’, ‘justice’, and ‘learning’. For these analyses, the continuous variable androgyny score calculated using Orlofsky, Aslin, and Ginsburg (1977) was used instead of the categorical variable of gender role. Using Baron and Kenny’s (1986) method, the preconditions for testing mediation

were analyzed. Gender and androgyny score were strongly correlated,  $r(402) = .42, p < .001$ , indicating that higher androgyny scores, indicating femininity, were associated with women. The zero-order correlation between the Justice factor and gender was not significant,  $r(401) = -.03, p = .28$ , so this variable was dropped from meditational analyses. However, the zero-order correlation between Justice and androgyny score was small but significant,  $r(398) = .09, p = .04$ , indicating that individuals higher in femininity tended to score higher on the Justice factor. The zero-order correlation between Learning and gender was significant,  $r(403) = -.13, p = .006$ , but the zero-order correlation between Learning and androgyny score was not significant,  $r(400) = -.001, p = .49$ , so Learning was dropped from meditational analyses. Gore and Thrill both had significant zero-order correlations with gender,  $r(399) = -.40, p < .001$ , and  $r(401) = -.26, p < .001$ , respectively, and with androgyny score,  $r(396) = -.29, p < .001$ , and  $r(398) = -.16, p = .001$ , respectively, so they were both retained for meditational analysis.

The second step of testing for a mediating effect using Baron and Kenny's (1986) method was to run hierarchical regressions with the factor scores as dependent variables, entering androgyny score into the model containing gender. When androgyny score was added to the model predicting thrill scores, it did not add a significant amount of variance (0.3%) over and above gender,  $\Delta R^2 = .003, \Delta F_{(1,394)} = 1.31, p = .25$ . Androgyny score was not a significant predictor over and above biological gender and was not a mediator between gender and thrill scores. When androgyny score was added to the model predicting gore scores, it added a significant amount of variance (1.6%) over and above gender,  $\Delta R^2 = .016, \Delta F_{(1,392)} = 7.51, p = .006$ . Since both gender,  $t_{(392)} = -6.75, p < .001$ , and androgyny score,  $t_{(392)} = -2.74, p = .006$ , were significant predictors of gore scores holding the respective predictor constant, but the

standardized regression coefficient of gender decreased from -.40 to -.34, androgyny score is only a partial mediator of the relationship between gender and gore scores.

Next, the indirect effect of gender on gore scores was examined using Sobel's test (Preacher & Hays, 2004). To do this, two regressions were run; a) androgyny scores were regressed onto gender, and b) a hierarchical regression where androgyny scores were entered into a model containing gender was run. The indirect effect of gender on gore scores was significantly different from zero, indicating a significant mediation effect,  $z = -2.63, p = .008$ . Using the bootstrapping method, with 95% confidence the estimated true value for the indirect effect is located between -1.59 and -.15. Since this interval does not contain 0, it can be concluded that there is a significant mediation effect. The three methods agree that androgyny score is a mediator of the relationship between gender and gore scores, which partially supports the sixth hypothesis.

### *Personality Correlates*

Table 7 shows the correlations between factor and overall scale scores for the Enjoyment of Horror Films Inventory (EHF), scores for general interest in horror films, exposure to and enjoyment of 20 horror films, and the three personality domains and their facets. Hypothesis 7, that higher EHF scores would be associated with higher domain and facet scores of neuroticism, did not have much support. Only the facet Immoderation was positively correlated with scores on the social,  $r(396) = .12, p = .008$ , and learning,  $r(399) = .10, p = .03$ , factors. Any other significant correlations between the two scales were in the opposite direction from the hypothesized direction.

Table 7. Correlations of all Personality Variables with Factor Scores, Interest in the Horror Genre, and Exposure to and Enjoyment of Horror Films

Variables	EHF							
	Gore	Justice	Social	Learn	Thrill	GenInt	Exp	Enj
Neuroticism	-0.06	-0.03	-0.03	0.01	-0.14**	-0.06	-0.05	-0.07
Anxiety	-0.23**	-0.03	-0.04	-0.06	-0.25**	-0.17**	-0.11*	-0.18**
Anger	-0.01	-0.06	-0.05	-0.03	-0.10*	-0.02	-0.00	-0.07
Depression	-0.04	-0.10*	-0.09*	-0.01	-0.14**	-0.08	-0.07	-0.05
Self-Consciousness	-0.04	0.03	-0.03	0.06	-0.12*	-0.08	-0.09*	-0.03
Immoderation	0.07	-0.01	0.12*	0.10*	0.04	0.07	0.09*	0.10*
Vulnerability	-0.03	0.03	-0.00	0.01	-0.09*	0.01	-0.02	-0.05
Extraversion	-0.03	0.16**	0.27**	0.00	0.16**	0.09*	0.13**	0.09*
Friendliness	-0.08*	0.14**	0.18**	-0.05	0.09*	0.02	0.05	0.02
Gregariousness	-0.08*	0.17**	0.26**	-0.05	0.12**	0.09*	0.12**	0.06
Assertiveness	0.01	0.04	0.18**	0.01	0.09*	0.05	0.13**	0.09*
Activity Level	-0.10*	0.04	0.03	-0.06	-0.01	-0.02	0.07	-0.05
Excitement Seeking	0.19**	0.14**	0.28**	0.12**	0.27**	0.22**	0.19**	0.21**
Cheerfulness	-0.08	0.18**	0.24**	0.03	0.13**	0.04	0.01	0.06
Openness to Experiences	-0.14**	-0.01	0.07	0.01	-0.01	-0.10*	-0.02	0.04
Imagination	-0.07	0.02	0.12*	0.09*	0.01	-0.06	-0.05	0.04
Artistic Interests	-0.25**	0.03	0.06	-0.03	-0.11*	-0.17**	0.01	-0.10*
Emotionality	-0.22**	0.03	0.05	-0.04	-0.10*	-0.14**	-0.07	-0.04
Adventurousness	-0.03	0.04	0.08	-0.06	0.11*	0.04	0.02	0.10*
Intellect	-0.03	-0.04	-0.00	0.04	0.02	-0.04	-0.01	0.04
Liberalism	0.04	-0.10*	0.00	0.03	0.05	0.01	0.03	0.11*

Note:  $N = 379-402$ . EHF = Enjoyment of Horror Films. GenInt = General Interest in Horror Films.

Exp = Exposure Score for 20 Horror Films. Enj = Enjoyment Score for 20 Horror Films.

\*. Correlation is significant at 0.05 level (one-tailed).

\*\*. Correlation is significant at the 0.01 level (one-tailed).

Hypothesis 8, that higher EHF scores, especially on the social factor, would be associated with higher domain and factor scores for extraversion, was supported. Scores on the social scale were positive correlated with overall extraversion,  $r(396) = .27, p < .001$ , friendliness,  $r(397) = .18, p < .001$ , gregariousness,  $r(396) = .26, p < .001$ , assertiveness,  $r(396) = .18, p < .001$ , excitement-seeking,  $r(396) = .28, p < .001$ , and cheerfulness,  $r(396) = .24, p < .001$ . The only facet it did not significantly correlate with was activity level,  $r(396) = .03, p = .26$ . Scores on the gore and learning factors only correlated positively with excitement-seeking,  $r(395) = .19, p < .001$ , and  $r(399) = .12, p = .008$ , respectively. Scores on the justice factor correlated positively with extraversion,  $r(397) = .16, p < .001$ , friendliness,  $r(397) = .14, p = .003$ , gregariousness,  $r(397) = .17, p < .001$ , excitement-seeking,  $r(397) = .14, p = .003$ , and cheerfulness,  $r(397) = .18,$

$p < .001$ . Finally, scores on the thrill factor correlated positively with extraversion,  $r(397) = .16$ ,  $p = .001$ , friendliness,  $r(397) = .09$ ,  $p = .04$ , gregariousness,  $r(397) = .12$ ,  $p = .008$ , assertiveness,  $r(397) = .09$ ,  $p = .03$ , excitement-seeking,  $r(397) = .27$ ,  $p < .001$ , and cheerfulness,  $r(397) = .13$ ,  $p = .005$ .

Hypothesis 9, that higher EHF scores would be associated with higher domain and facet scores for openness to experience, did not have much support. Imagination was positively associated with the social,  $r(396) = .12$ ,  $p = .01$ , and learning,  $r(399) = .09$ ,  $p = .04$ , factors. Adventurousness correlated positively with the thrill factor,  $r(397) = .11$ ,  $p = .02$ . All other significant correlations between the EHF and openness to experience scores were in the opposite direction from the one hypothesized.

Hypothesis 10, that higher neuroticism scores would be associated with higher exposure scores for the horror genre, did not have much support. Only the facet immoderation was positively related to exposure to horror films,  $r(402) = .09$ ,  $p = .03$ . Hypothesis 11, that higher extraversion and openness to experience scores would be associated with higher liking scores for the horror genre had some support. Liking scores were positively associated with extraversion,  $r(398) = .09$ ,  $p = .03$ , assertiveness,  $r(398) = .09$ ,  $p = .04$ , excitement-seeking,  $r(398) = .21$ ,  $p < .001$ , adventurousness,  $r(398) = .10$ ,  $p = .02$ , and liberalism,  $r(398) = .11$ ,  $p = .01$ . The only significant negative correlation was between enjoyment scores and artistic interests,  $r(398) = -.10$ ,  $p = .02$ .

### Exploratory Analyses

In order to try to present a profile of the horror fan beyond the research hypotheses, a series of exploratory analyses were performed. Scores on the four-item inventory of general interest in horror films were also correlated to the personality measures (Table 7). Of the

neuroticism scales, anxiety was found to be negatively associated with general interest in horror films,  $r(396) = -.17, p < .001$ . General interest in horror films had significant positive associations with extraversion,  $r(396) = .09, p = .03$ , gregariousness,  $r(396) = .09, p = .04$ , and excitement-seeking,  $r(396) = .22, p < .001$ . Finally, general interest in horror films was negatively associated with openness to experiences,  $r(396) = -.10, p = .03$ , artistic interests,  $r(396) = -.17, p < .001$ , and emotionality,  $r(396) = -.14, p = .003$ .

Looking at the relationship between exposure to horror films and other personality variables, it was found that while neuroticism was not positively associated with horror film exposure, many facets of extraversion were. In particular, exposure to horror films was positively associated with overall extraversion,  $r(402) = .13, p = .005$ , gregariousness,  $r(402) = .12, p = .009$ , assertiveness,  $r(402) = .13, p = .005$ , and excitement-seeking,  $r(402) = .19, p < .001$ . None of the openness to experiences facets were significantly associated with exposure to horror films.

The enjoyment of horror film factors were correlated to the scores for exposure and enjoyment of romantic comedies and action adventure films in order to determine if fans of these two genres scored higher on any of the various facets (Table 4). Scores on the gore factor were negatively associated with exposure to,  $r(405) = -.13, p = .007$ , and enjoyment of,  $r(405) = -.20, p < .001$ , romantic comedies, but was positively associated with exposure to,  $r(405) = .27, p < .001$ , and enjoyment of,  $r(404) = .10, p = .04$ , action adventure films. Scores on the justice factor were positively associated with exposure to romantic comedies,  $r(407) = .11, p = .03$ , and enjoyment of romantic comedies,  $r(407) = .10, p = .04$ , and action adventure films,  $r(406) = .15, p = .002$ . Exposure to romantic comedies and enjoyment scores for either genre were not significantly associated with the other three factors. Exposure to action adventure films was also

positively associated with scores on the learning,  $r(409) = .12$ ,  $p = .02$ , and thrill,  $r(407) = .22$ ,  $p < .001$ , factors.

Finally, scores on the enjoyment of horror film factors were correlated to several of the demographic variables (Table 8). Age was negatively related to scores on gore/violence (-.13), justice (-.17), social (-.20), and learning (-.16) factors, and to overall scale scores (-.17), indicating that younger individuals scored higher on these factors. Education, which was measured as a grouped variable with larger values indicating more time spent receiving formal education, was negatively related to scores on the justice (-.13), social (-.19), and learning (-.11) factors, and to overall scale scores (-.13), indicating that the more years of formal education a person had, the less likely they were to prefer horror films for those three reasons. Participants were asked whether or not they enjoyed recreational hunting and these responses related negatively to scores on the gore/violence (-.19), learning (-.12), and thrill (-.14) factors as well as overall scale scores (-.19), indicating that individuals who enjoyed recreational hunting more strongly endorsed items on these scales than individuals who did not enjoy recreational hunting. Whether or not an individual was employed or studying to be employed in a medical profession did not significantly correlate to any of the factor scores. Finally, individuals were asked to indicate their agreement to the statement, "I can't stand the sight of blood". Responses on this item were negatively correlated to scores on the gore/violence (-.38), learning (-.12), and thrill (-.35) factors, as well as overall scale scores (-.31).

Table 8. *Correlations of Demographic Variables to Enjoyment of Horror Films.*

Variables	Gore/Violence	Justice	Social	Learning	Thrill	Total Enjoyment
Gender	-0.40**	-0.03	-0.02	-0.13*	-0.26**	-0.28**
Age	-0.13*	-0.17**	-0.20**	-0.16**	-0.05	-0.17**
Education	-0.08	-0.13*	-0.19**	-0.11*	-0.03	-0.13**
Hunting	0.19**	0.03	0.08	0.12*	0.14**	0.19**
Med_Emp	0.04	-0.03	-0.02	-0.00	0.03	0.01
Med_Stu	-0.00	0.04	-0.05	0.00	0.02	-0.02
Blood	-0.38**	-0.03	-0.06	-0.12*	-0.35**	-0.31**

*Note:* *N* ranges from 379-402. Gender: 1 = Male, 2 = Female. Hunting; recreational hunting, 1 = No, 2 = Yes. Med\_Emp; Employed in medical profession, 1 = No, 2 = Yes. Med\_Student; Studying to be medical professional, 1 = No, 2 = Yes. Blood; "I can't stand the sight of blood", scale of 1 to 5.

\*. Correlation is significant at the 0.05 level (two-tailed).

\*\*. Correlation is significant at the 0.01 level (two-tailed).

## CHAPTER IV

### DISCUSSION

The purpose of the present study was to develop and validate a multi-dimensional scale to measure the enjoyment of horror films which would reflect factors which previous research had identified as important elements for the film-viewing experience of both men and women. After this scale was validated, scores were explored for gender differences and personality correlates. On the whole, nearly all of the hypotheses were at least partially supported. Hypothesis 4, that women would score higher than men on the justice and learning factors, was the only hypothesis to have no support. Scores on the Enjoyment of Horror Films Inventory (EHF) were positively correlated to average response latency in naming horror films, exposure to horror films, and average enjoyment of horror films. Additionally, men scored higher than women on the gore/violence and thrill factors, while men and women scored equally on the social factor. Gender role was found to partially mediate the relationship between gender and scores on the gore/violence factor. Finally, all three personality variables were positively related to some of the factor scores as well as to overall exposure and enjoyment of horror films. In the following sections, the following information will be discussed in greater detail. First, issues concerning the development and validation of the EHF are discussed. Second, major strengths of the current study are highlighted. Third and finally, study limitations and recommendations for future research are given.

#### Issues in Scale Development and Psychometric Validation

While starting to research interest in horror films and also violent entertainment in general, it quickly became obvious that most scholarly research focused solely on the outcomes of viewing these types of media, not on the factors that contributed to the decision to become a

consumer of the same. When studies did look at factors which predicted interest in horror films, samples often consisted of primarily men (especially in studies of the outcomes of watching violent entertainment) or focused on facets of horror movies men tend to be more interested in. To remedy this situation, the researcher set about creating a scale which would better measure women's interest in the media while still maintaining the ability to measure men's interest. In some ways this was successful, but women did not score as highly on the created scale as the research initially thought they would. Some of the factors which could have contributed to the relatively low scores of women on the scale will be discussed.

First, a major issue which was not considered was what the definition of a horror film actually was. As was discussed earlier in this paper, the horror genre has gone through many transformations since the first horror film was released in 1910 (Sapolsky & Molitor, 1996). The first horror films featured monsters that killed with little to no gore or bloodshed. The monsters in these films, such as Dracula, were marketed in such a way as to entice women as they were already large consumers of horror fiction (Cherry, 1999). Science fiction horror films, such as *The Thing from Another World*, introduced horror in a new medium which included many vivid scenes of blood and gore aimed at an adolescent, male audience. The "slasher" film emerged in the next decade, increasing the scenes of blood and gore and appealing more to the young and often male audience. While there are many other types of horror films, the slasher film seems to be the type of film most associated with the genre as a whole.

When the author was discussing horror films with others in order to develop scale items for this project, most individuals would immediately begin to talk about what they did or did not like about slasher films before they would discuss any other kind of horror film. Without having provided a working definition of what a horror movie could be, it is possible that many people

who then participated in this study responded to the items while thinking about slasher films only. However, since no definition of what makes a horror film was provided and study participants were not asked to define what a horror movie was to them, it is impossible to know. This could have led to the lower scores of women on the scale measures as previous research has indicated that women prefer horror movies featuring vampires, occult or supernatural themes, as well as psychological thrillers more than they prefer slasher and serial killer films (Cherry, 1999).

In addition to the problem of not adequately defining what a horror movie was for participants, the scale the researcher created did not encompass all factors which have been indicated as important to horror movie fans. The five factors that were included, gore/violence, justice, social, learning, and thrill, seemed to be important based on prior research, but this list does not even begin to encompass all the reasons individuals have given for their interest in the genre. Studies have indicated that the characters in a film are an important factor in how liked a particular film is. Cherry (1999) found that female fans of the genre stated that the relationships between characters in the film was their primary marker of a film's quality. Johnston (1995) found that identification with the film's killer was a strong predictor of gore watching, or watching a horror film due to a desire to see scenes of blood and gore, while identification with the film's victims was a strong predictor of independence and problem solving motivations. Fischhoff and colleagues (2005) found that women were more likely to prefer a movie monster due to its positive psycho-social characteristics, such as the monster having a sensitive side or showing compassion to a victim, rather than preferring the monster for its tendency to act violently towards victims as did men. The tendency to identify with either the killer or the

victims in a horror film was not measured in the current study. It is possible that if these measures were included women would have scored highly on them.

Definitional issues aside, there were also issues concerning the development of the final 28-item scale from the initial 50 items all participants responded to. The gore/violence and thrill factors had already been established in previous research (Sparks, 1986) and reliability analyses of these scales did not reveal anything odd or unexpected. The learning factor, while a novel scale in this research, also produced anticipated results during initial reliability analyses. However, there were some complications with the justice and social scales which will be discussed below.

When the items comprising the justice scale were submitted to initial reliability analyses, four of the items had negative corrected item-total correlations. This indicated that responses to items which had been created specifically for this scale were not answered in the same way as other items which had been created for this scale. Further examination of these items revealed that these items had ambiguous wording. For example, item 33 states “I enjoy watching the victims in horror movies get what they deserve”. The intention of this item was to get at the fact that in horror films, the characters who die early on are often portrayed as bad people. These individuals spend what little screen time they have drinking and doing drugs, having indiscriminate sex, yelling and swearing at the other characters, or engaging in other self-destructive and anger-evoking behavior. The intention of the filmmaker seems to be to create a character that evokes very little sympathy in order to include a gory and bloody scene of death without alienating the audience. However, the complexity of this item most likely did not come out in translation. After the items with negative correlations to the scale were removed, item statistics for this scale did not reveal any other unexpected relationships.

The social scale gave the researcher a moderate amount of difficulty during initial scale derivation. Initially, one of the items correlated negatively to the scale overall, indicating that responses to this item followed a different pattern than responses to the other items. After this and three other items were removed from the scale for reasons which are outlined in the results section above, the remaining items were put through reliability analyses again. The item “I enjoy watching horror movies by myself” went from having a low, but positive item-total correlation of .18, to a negative item-total correlation of -.03. Once this item was removed and reliability analyses were run for a third time, all of the items correlated positively with the overall scale.

### Study Strengths

#### *Construct Validity*

The Enjoyment of Horror Films Inventory exhibited good evidence that it did measure the intended construct. The strongest evidence for this came from the relationships between scale scores and score of exposure to and enjoyment of films from the three different genres, though the response latency data did offer some support of the construct validity. In the current research, exposure to 20 horror films was found to correlate positively with scores on gore/violence, justice, social, learning, and thrill. These correlations were also larger than the correlations between the factor scores and participant’s scores on exposure to lists of 20 romantic comedies and 20 action adventure films. Similarly, participant’s average enjoyment of these 20 films was found to correlate positively with scores on gore/violence, justice, social, learning, and thrill. These values were much higher than the correlations between scale scores and average enjoyment scores for the 20 romantic comedies and 20 action adventure films. In previous research, Sparks (1986) used a similar measure for construct validity and found that scores were

highly correlated with exposure (women:  $r = .40$ ; men:  $r = .34$ ) to a list of 35 horror films. Additionally, he found that scores were highly correlated to percentage of horror films seen in the past year (women:  $r = .49$ ; men:  $r = .41$ ) and enjoyment of four specific horror films (women:  $r = .64$ ; men:  $r = .44$ ). The replication of previous validity findings provides strong evidence for construct validity.

Response latency data did not work out as cleanly as was expected, but there were still some strength to the findings. While previous research in response latency has found that repeated exposure to a particular stimulus leads to positive feelings of familiarity which then facilitate responses (Garcia-Marques, Mackie, Claypool, & Garcia-Marques, 2010), this type of measure has never been reported as being used in this kind of research before. As such, there was no precedence to help determine if it would be a good measure of construct validity. It had been thought that for each film title given by the participant, horror movie fans would be able to respond faster. The expectation was that higher scores on the various factors would be associated with lower scores for response latency, especially for film titles given near the end of the measure. However, the relationships between scale scores and the response latency for each of the ten possible film titles were mostly non-significant and failed to even show trends in the data replicating the expected relationship.

Two additional measures were created from the response latency data which exhibited clearer relationships with the scale scores. First, a measure of the total number of films named was created, with scores ranging from 1 to 10. Since participants had the ability to opt out of naming films at any time, it is likely that individuals who would have taken longer to come up with film titles later on chose to move on with the survey rather than try to think of additional film titles. For example, an individual who is not very familiar with horror films may have been

able to name two (e.g. *Saw* and *Scream*), but could not think of a third film immediately, so chose to move on rather than stay on the page and try to think of a third title. Differences we could have expected to find in the data might not be there due to participants selecting themselves out before they reach the point where thinking of film titles in a lengthier process. The score for number of films named by participants was strongly and positively associated with all factor scores. Second, the average time it took participants to name those films was computed. This score was only significantly associated with scores on the gore/violence and thrill, but the non-significant relationships between average time and the other three factors were all negative. While this measure did not provide evidence of construct validity as strongly as the measures of exposure and enjoyment of horror films, it did provide some important information.

### *Gender Differences*

The current study replicated previous findings which showed men scoring higher than women on measures of interest in horror films (Johnston, 1995; Sparks, 1986; Tamborini & Stiff, 1987). These gender differences were very strong on both the gore/violence and thrill factors, as was expected given previous research in this area. Additionally, the finding that gender role was a partial mediator of the relationship between gender and scores on the gore/violence factor revealed some interesting, new information about horror movie fans. The relationship between biological sex, gender role, and enjoyment of gore/violence has not been examined in previous research, though, so it is unclear if this is an anomalous finding.

Unfortunately, the expected gender differences on the justice and learning scales were not found. Tamborini and Stiff (1987) had found the only significant factor predicting women's like of frightening films was their desire to see a just ending. However, in the current sample, there were no significant gender differences found on this factor. Vicary and Fraley (2010) found that

women tended to prefer true crime books which featured descriptions of how victims escaped a serial killer, psychological profiles of the serial killer, and female victims. Men showed similar preferences, though they were not as strong as those of the female participants. However, in the current sample, men were found to score higher than women on average.

The difference in instruction of test administration between the current study and the study completed by Vicary and Fraley could be the reason for this difference. Vicary and Fraley did not explicitly ask participants if they would prefer a book which contained a detailed description of a victim's escape from a serial killer. Participants were provided with two book descriptions, one of which included the information of interest, and asked to indicate which book they would prefer to read without having to give a reason for their preference. Of their sample, 71% of women and 66% of men preferred the book which contained the information about the escape. In the current study, participants were explicitly asked to indicate if they liked horror films because they teach you how to avoid real-life violence or identify actual killers. Perhaps these factors influence a person's ultimate enjoyment of a horror film, but are not factors which they would identify if asked about it afterwards. As no previous research explicitly asked participants about these particular motivations for watching horror movies, it is difficult to determine based solely on the current data.

On the final factor, there was no gender difference found, as was expected based on previous research. Additionally, both men and women tended to score positively on this factor. Lawrence and Palmgreen (1996) determined that the typical horror fan tended to attend movies in groups, to use the audience at a horror film to facilitate their enjoyment, and to attend films in order to have something to do socially. Additionally, Cherry (1999) found that female horror fans tended to view films in small groups of other fans. The current study seems to replicate

these previous findings by showing that both men and women score somewhat highly on a measure of enjoyment of horror films for social reasons. This scale, while experiencing some difficulties when combined with the other four factors, exhibits properties which were anticipated based on prior research. This provides good evidence that there is a social component to horror film enjoyment which seems to be ignored by most fields outside of market research.

### *Personality Correlates*

Much of the prior research looking at personality correlates of horror movie fans focused on sensation seeking as the primary personality trait (e.g. Sparks & Sparks, 2001; Tamborini & Stiff, 1987; Tamborini, Stiff, & Zillmann, 1987). Sensation-seeking is closely related to the extraversion subscale, excitement-seeking, where high scores indicate individuals who crave excitement and stimulation. All five facets, general interest in horror films, and exposure/enjoyment of 20 horror films were strongly and positively correlated to scores on this scale. These results are consistent with previous research, which again serves to provide good evidence that the current scale is a good measure of enjoyment of horror films.

Of the remaining five facets of extraversion, only activity level, or the need to keep busy, was unrelated to any of the five factors. The justice, social, and thrill factors were associated with friendliness (the tendency to be affectionate and friendly towards others), gregariousness (the preference for the company of other people), and cheerfulness (the tendency to experience positive emotions). Assertiveness, or the tendency to be dominant, forceful, and socially ascendant, was related to scores on the social and thrill factors. Finally, overall extraversion scores were related to scores on the justice, social, and thrill factors. The relationship between the social factor and the facets of extraversion was expected as they are measuring a similar concept. Krmar and Kean (2005) found that excitement-seeking and assertiveness were

associated with liking violent media. In the current study, average enjoyment of the 20 horror films was also found to be related to excitement-seeking and assertiveness scores.

The relationship between justice scores and extraversion has never been studied before, but might make some sense when viewed from an evolutionary perspective. Social relationships are based on trust between individuals to behave in a just manner towards each other (Ridley, 1996). Those individuals who are interested in building social relationships may be more sensitive to violations of these norms and may have a stronger desire to see these norms satisfied, leading to a stronger preference for horror films which feature a satisfying resolution of justice.

Neuroticism was expected to be positively associated with exposure to horror films. Of the six facets, only immoderation, or the inability to control cravings or urges, was positively related to scores on the social and learning factors. Lawrence and Palmgreen (1995) found that horror movie fans were more impulsive in their decisions to attend movies, so perhaps this relationship is not so surprising. Bryant, Carveth, and Brown (1981) found that individuals who were high in trait anxiety who watched violent television shows with a clear resolution of justice experienced a decrease in their anxiety, suggesting that anxiety-prone individuals would benefit from viewing violent entertainment which provided clear-cut justice resolution. However, in the current study, anxiety scores were negatively related to all five of the factors, indicating that more anxious individuals tended to enjoy horror films less. Additionally, there was a negative relationship between exposure to horror films and enjoyment of those horror films. Taken together, there does not seem to be any support for the idea that anxious individuals seek out horror films. The previously discovered relationship between anxiety and exposure to horror films was not replicated in the current study (Krcmar & Kean, 2005).

Openness was also expected to be positively associated with exposure and enjoyment of horror films. Of the six facets, most relationships to the scale scores were negative or non-significant. Imagination, or the tendency to have a vivid imagination and active fantasy life, was positively associated with social and learning factors. Perhaps individuals who have an active fantasy life are better able or more interested in taking information from horror films and thinking about how it would play out in a real-world violent situation. This was not explicitly studied here, but is an interesting relationship. Adventurousness, or the willingness to try different activities, go new places, or eat unusual foods, was positively associated with the thrill factor and enjoyment of the 20 horror films. Finally, liberalism, or the readiness to reexamine social, political, and religious values, was positively associated with enjoyment of the 20 horror films. As this was only the second study to look at the relationships between these personality traits and enjoyment of violent films, these relationships add to a more comprehensive understanding of the profile of the horror movie fan.

#### Limitations and Future Studies

The current study adds to the literature regarding why individuals enjoy horror films and what a “typical” horror fan looks like. There were, however, some limitations to the study. First, as was discussed earlier in this section, the five factors chosen to represent the overall construct of enjoyment of horror films are by no means exhaustive. In future research, it might be useful to look at some of these factors in greater detail. For example, Cherry (1999) has indicated that women cite relationships between the characters in a horror film as a primary reason they enjoy the film. In future research, it would be useful to measure the degree to which identifying with the victims and the killer(s) in a horror movie is an important factor in how much that film is enjoyed. Secondly, the term horror film refers to a broad collection of films spanning over 100

years and falling into many different sub-categories. Popular horror films in the current decade are different from the horror films in the decade before it, and so on. This study collapsed all horror films into a single category and attempted to measure general interest in the genre as a whole. However, it is possible that interest in horror films is more for specific types of films and less for all horror movies as a group. Breaking down the genre into more specific categories, such as science-fiction horror, psychological thriller, occult/supernatural, and slasher/serial killer, might reveal interesting patterns of preference. It is likely that individuals who enjoy science fiction horror do so for different reasons than individuals who enjoy psychological thrillers.

While the current sample is largely limited to a college population, 10% of the sample was recruited by appealing to horror movie fans over the internet. While the use of a college sample in a small Midwestern town does limit the generalizability of the findings, it is also the case that fans of horror films tend to be in their late teens to early twenties. As such, the current sample should be able to at least create a profile of the average young horror movie fan. The results of the current study are unlikely to be generalizable to horror movie fans above the age of 25. Unfortunately, fans from this age group are probably the least studied. Several field studies have managed to get a snapshot of the older horror movie fan (e.g. Boyanowsky, Newton, & Walster, 1974; Tamborini & Stiff, 1987), more systematic studies are few and far between. Cherry (1999) was able to obtain responses from female horror fans, over half of whom were over the age of 25. Additional research should try to focus on older audiences as it seems likely they would prefer horror movies for different reasons than younger audiences.

It would also be interesting to determine what factors lead to an individual remaining a fan of horror films past the early 20s and if these individuals differed from other horror movie

fans when they were younger. Of particular interest to this researcher in this difference is the social factor. It seems likely that social forces would affect decisions more when an individual was younger and less so over time as the enjoyment came under control of more individual factors as is seen with other behaviors. For example, social smoking and smoking for reasons of social confidence were found to peak during adolescence and decrease as controlling factors for smoking into adulthood, while no age differences were found for nervous irritation, relaxation, smoking alone, activity accompaniment, and food substitution (McKenna, 1970).

Non-social factors continued to influence the behavior at similar levels regardless of age while social factors were only influential in adolescence. It seems possible that a similar relationship would be found in regards to enjoyment of horror films, with social factors playing a larger role in younger fans and a smaller role in older fans. This sample found a negative relationship between scores on the social scale and age ( $r = -.20$ ), but the sample only included 14 individuals over the age of 25, 23 individuals between the ages of 23 and 25, and 370 individuals between 18 and 22. With so few older individuals, it is difficult to draw conclusions about relationships between factors scores and age. Overall, there need to be more studies investigating the profile of horror fans to determine what has made the genre so enduring.

### *Concluding Remarks*

The themes of horror have been found in art, music, literature, and film in all societies for which there is a written record (Twitchell, 1985). Despite this fact, most research has focused solely on the outcomes of viewing violence while ignoring what about it is so appealing in the first place. The current research developed a scale to measure five factors thought to influence enjoyment of horror films in particular: gore/violence, justice, social, learning, and thrill. Factor scores were found to be positively associated with an independent measure of exposure and

enjoyment of horror films as well as a short inventory of general interest in the horror genre. Men were found to score higher than women on the gore/violence, learning, and thrill factors, while no gender differences were found on the justice and social scales. Gender role was found to partially mediate the relationship between gender and gore/violence scores. Finally, scale scores were found to correlate with many facets of extraversion, with fewer relationships to facets of neuroticism and openness to experiences.

## APPENDICES

## APPENDIX A

### CONSTRUCT VALIDITY: INSTRUCTIONS FOR RATERS

Dear \_\_\_\_\_,

I am writing as you indicated willingness to conduct some ratings of scale items that I have created for my Master's thesis. The items you will see on the next pages are from the measure "interest in horror films". I would like you to sort each item into a facet (subscale) and rate how well each item represents the selected facet. Please take a moment to study the facets and their definitions.

FACET	DEFINITION <i>"The interest in horror films is primarily due to..."</i>
1. <b>GORE/VIOLENCE</b>	<ul style="list-style-type: none"> <li>• The enjoyment of watching scenes of extreme violence and gore</li> <li>• The enjoyment of watching others suffer in a fictional environment</li> <li>• Finding acts of violence complex, novel, and interesting</li> </ul>
2. <b>JUSTICE</b>	<ul style="list-style-type: none"> <li>• The desire to see conflict resolved in an expected way</li> <li>• The desire to see good conquer evil, even if only temporarily</li> </ul>
3. <b>SOCIAL</b>	<ul style="list-style-type: none"> <li>• Wanting to see the same films other people are watching</li> <li>• The chance to bond with other people over watching the film</li> <li>• The desire to bond with other fans of the horror genre</li> <li>• To allow for the safe expression of fear within a peer group</li> </ul>
4. <b>LEARNING</b>	<ul style="list-style-type: none"> <li>• To learn how to avoid real-life violence</li> <li>• To learn why people would commit murder</li> <li>• To learn how to identify potential killers in real-life</li> </ul>
5. <b>THRILL</b>	<ul style="list-style-type: none"> <li>• The enjoyment of the physiological thrill (e.g. heart racing, skin tingling, breathlessness) watching horror films provides</li> <li>• The desire and enjoyment of feeling fear</li> </ul>

Please endorse an X for both facet belongingness and construct relatedness for every item (Example 1). If the item does not seem to belong to any of the five facets, you can simply indicate "poor relatedness" and move on (Example 2). Some items have been created with the intention of being reverse-coded. These are not marked so as to not influence your belongingness ratings. Just remember that each facet may have items which relate to it positively and negatively.

#### FACET

#### REPRESENTATIVENESS

Item content	1. GORE	2. JUSTICE	3. SOCIAL	4. LEARN	5. THRILL	WELL	SOMEWHAT	POOR
Blood and gore is what makes a horror movie enjoyable.	<b>X</b>					<b>X</b>		
I like pizza.								<b>X</b>

EX: 1

EX: 2

When you have completed the ratings, please simply put the copy in my mailbox. If you prefer an electronic version of the rating form, please let me know (cmpfaff@gmail.com). Thank you for your time and help!

--Christina

## APPENDIX B

### RESPONSE LATENCY: INSTRUCTIONS FOR PARTICIPANTS

Directions for this measure are as follows:

*In the following pages, **please type the titles of as many horror films as you can think of as quickly as possible.** You will enter each title on a separate page. For series and franchise films, please only name one film from the franchise. (Ex: both American Pie and Band Camp are from the same franchise, so only one should be entered). **Please enter each film name as quickly as possible and move on to the next page when you are done.***

## APPENDIX C

### INSTRUMENT TO MEASURE ENJOYMENT OF HORROR FILMS

Participants rated the items on a 5-point Likert scale from (1) *strongly disagree* to (5) *strongly agree*. Items which are reverse coded are marked with the following symbol: ( R ). Items numbers correspond to their number on the scale given to participants which is how they are referenced in the paper. Items preceded by an asterix (\*) are the items retained for the final version of the instrument. Directions for this measure are as follows:

*The following items refer to various reasons an individual may or may not enjoy viewing horror films. Please read each statement carefully and rate your level of agreement with it on a scale of (1) strongly disagree to (5) strongly agree. These items only refer to your personal experience with horror films, not reasons given to you by anyone else. Please think carefully about each item before responding.*

#### **Gore/Violence**

- \*3. I like horror movies because they let me see people die in extremely violent and interesting ways.
- 8. For me, blood and gore is what makes a horror movie enjoyable.
- \*11. I like horror movies more when the killer is extremely violent like Jason Voorhees and Jigsaw.
- \*19. I enjoy watching horror movies which feature many gory scenes.
- 22. I like horror movies because over the top, unrealistic gore is fun to watch.
- \*28. I like horror movies because they are so bloody.
- \*34. I don't like horror movies due to their excessive violence. ( R )
- 38. I like horror movies more when the killer is not very violent like Norman Bates in *Psycho*.  
(R)
- \*40. Horror movies have too much blood and guts for my taste. ( R )
- 44. I don't enjoy horror movies because the violence is largely gratuitous( R )
- \*49. I would like a horror movie more if violent scenes were added.

## **Justice**

- \*2. I enjoy horror movies as I get to see the monster die in the end.
- 18. I don't enjoy horror movies because bad things happen to good people. ( R )
- \*20. I like to watch horror movies because I enjoy rooting for the underdog.
- 23. I don't enjoy horror movies as I sometimes find myself rooting for the monster to win(R)
- \*25. I enjoy horror movies because good always triumphs over evil.
- 29. I dislike horror movies because the monster could get away at the end.
- 33. I enjoy watching the victims in horror movies get what they deserve
- \*45. I enjoy discovering how the main characters will ultimately defeat the monster.
- 48. I like horror movies regardless of whether the monster is punished. ( R )

## **Social**

- 6. I enjoy myself more when watching horror movies in large groups.
- \*10. I like horror movies more when the audience participates (e.g. yelling at the screen).
- \*14. I don't enjoy watching horror movies in large groups. ( R )
- 17. I only like watching horror movies everybody talks about.
- 24. I enjoy watching horror movies by myself ( R )
- \*30. For me, watching horror movies is a great date activity.
- \*32. I like horror movies since they give me an excuse to cuddle with people I find attractive.
- 35. I enjoy watching horror movies without my friends around ( R )
- 39. I don't enjoy special showings of horror movies for fans, such as 'Grindhouse Presents'( R )
- \*42. I would like to attend a midnight showing of my favorite horror movie with a large group of people.
- \*47. I like horror movies as my friends and I can watch them together.

## **Learning**

- 5. I don't like horror movies because the violence is too unrealistic to teach me anything about real life violence. ( R )
- 9. I like horror movies because they teach me to never trust people in power (e.g. the military or government)
- \*12. I like horror movies because I feel better prepared to escape real-life violence after watching them.
- \*15. I like horror movies as they provide me with an explanation for why an individual would kill.
- 26. I like horror movies because I find them educational.
- \*37. I like horror movies as they teach me how to identify killers in real life.
- \*43. I am not interested in trying to identify the killer's motives while watching a horror movie. (R)

## Thrill

1. I like horror movies as they let me feel fear in a safe environment.
4. I don't enjoy watching horror movies as they make it difficult for me to breathe. ( R )
7. I don't enjoy the way watching horror movies makes me physically feel. ( R )
- \*13. I enjoy the way horror movies seem to take my breath away.
- \*16. I don't like watching horror movies because I don't like feeling afraid. ( R )
- \*21. I don't like horror movies as they make me feel nauseated. ( R )
27. I enjoy horror movies because it's fun to be afraid.
- \*31. I don't like the way my heart races when I watch horror movies. ( R )
36. I love the physical rush watching horror movies gives me.
- \*41. The more scared a horror movie makes me, the more I enjoy it.
- \*46. I don't like watching horror movies because they give me nightmares. ( R )
- \*50. I like watching horror movies as I can feel my adrenalin rush.

## APPENDIX D

### LIST OF FILMS FOR SELF-REPORT CONSTRUCT VALIDITY MEASURES BY GENRE

Directions for this measure are as follows:

*For each film in the following list, indicate if you have ever seen it. For each film you have seen, please indicate how much you enjoyed the film on a scale of (1) did not like it at all to (5) liked it a great deal.*

**Horror.** Mean box office gross (in millions) was 111.2 (range: 72.6-260).

Jaws	Se7en
Hannibal	The Others
What Lies Beneath	The Haunting
The Blair Witch Project	Saw II
The Ring	Freddy vs. Jason
Basic Instinct	The Texas Chainsaw Massacre (2003)
The Grudge	Poltergeist
Paranormal Activity	The Exorcism of Emily Rose
Scream	Deep Blue Sea
Sleepy Hollow	I Know What You Did Last Summer

**Romantic Comedy.** Mean box office gross (in millions) was 148.7 (range: 116-241.4).

My Big Fat Greek Wedding	Bringing Down the House
What Women Want	Coming to America
Hitch	Sweet Home Alabama
Pretty Woman	My Best Friend's Wedding
There's Something About Mary	Sleepless in Seattle
The Proposal	Mr. Deeds
Sex and the City	Something's Gotta Give
Runaway Bride	50 First Dates
Knocked Up	The Break Up
As Good as it Gets	Notting Hill

**Action/Adventure.** Mean box office gross (in millions) was 178.8 (range: 101.6-423.3).

Pirates of the Caribbean: Dead Man's Chest  
Indiana Jones and the Kingdom of the Crystal Skull  
The Matrix Reloaded  
Rush Hour 2  
King Kong (2005)  
Mission: Impossible II  
Terminator 2: Judgment Day  
The Mummy Returns  
Robin Hood: Prince of Thieves  
Lethal Weapon 2

Bad Boys II  
Lara Croft: Tomb Raider  
Crouching Tiger, Hidden Dragon  
Charlie's Angels  
The Karate Kid, Part II  
Wild Wild West  
The Last Samurai  
Dick Tracy  
The Italian Job  
Gone in 60 Seconds

## APPENDIX E

### IPIP REPRESENTATION OF COSTA AND MCCRAE'S (1992) NEO FACET SCALES

Participants rated the items on a 5-point Likert scale from (1) *very inaccurate* to (5) *very accurate*. Items are grouped by facets they represent. When an IPIP facet name differs from the NEO facet name, the NEO facet name is included in parenthesis. For each facet, items which are reverse scored will be marked with a (R). Directions for the scale are as follows:

*Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Indicate how accurately each statement describes you on a scale of (1) very inaccurate to (5) very accurate.*

#### **Domain: Neuroticism**

*Anxiety ( $\alpha = .83$ )*

1. I worry about things.
2. I fear for the worst.
3. I am afraid of many things.
4. I get stressed out easily.
5. I get caught up in my problems.
6. I am not easily bothered by things (R).
7. I am relaxed most of the time (R).
8. I am not easily disturbed by events (R).
9. I don't worry about things that have already happened (R).
10. I adapt easily to new situations.

*Anger (Angry Hostility;  $\alpha = .88$ )*

1. I get angry easily.
2. I get irritated easily.
3. I get upset easily.
4. I am often in a bad mood.
5. I lose my temper.
6. I rarely get irritated (R).
7. I seldom get mad (R).
8. I am not easily annoyed (R).
9. I keep my cool (R).
10. I rarely complain (R).

*Depression* ( $\alpha = .88$ )

1. I often feel blue.
2. I dislike myself.
3. I am often down in the dumps.
4. I have a low opinion of myself.
5. I have frequent mood swings.
6. I feel desperate.
7. I feel that my life lacks direction.
8. I seldom feel blue (R).
9. I feel comfortable with myself (R).
10. I am very pleased with myself (R).

*Self-Consciousness* ( $\alpha = .80$ )

1. I am easily intimidated.
2. I am afraid that I will do the wrong thing.
3. I find it difficult to approach others.
4. I am afraid to draw attention to myself.
5. I only feel comfortable with friends.
6. I stumble over my words.
7. I am not embarrassed easily (R).
8. I am comfortable in unfamiliar situations (R).
9. I am not bothered by difficult social situations (R).
10. I am able to stand up for myself (R).

*Immoderation (Impulsiveness)*;  $\alpha = .77$ )

1. I often eat too much.
2. I don't know why I do some of the things I do.
3. I do things I later regret.
4. I go on binges.
5. I love to eat.
6. I rarely overindulge (R).
7. I easily resist temptations (R).
8. I am able to control my cravings (R).
9. I never spend more than I can afford (R).
10. I never splurge (R).

*Vulnerability* ( $\alpha = .82$ )

1. I panic easily.
2. I become overwhelmed by events.
3. I feel that I'm unable to deal with things.
4. I can't make up my mind.
5. I get overwhelmed by emotions.
6. I remain calm under pressure (R).
7. I can handle complex problems (R).
8. I know how to cope (R).
9. I readily overcome setbacks (R).
10. I am calm even in tense situations (R).

**Domain: Extraversion**

*Friendliness (Warmth)*;  $\alpha = .87$ )

1. I make friends easily.
2. I warm up quickly to others.
3. I feel comfortable around people.
4. I act comfortably with others.
5. I cheer people up.
6. I am hard to get to know (R).
7. I often feel uncomfortable around others (R).
8. I avoid contacts with others (R).
9. I am not really interested in others (R).
10. I keep others at a distance (R).

*Gregariousness* ( $\alpha = .79$ )

1. I love large parties.
2. I talk to a lot of different people at parties.
3. I enjoy being part of a group.
4. I involve others in what I am doing.
5. I love surprise parties.
6. I prefer to be alone (R).
7. I want to be left alone (R).
8. I don't like crowded events (R).
9. I avoid crowds (R).
10. I seek quiet (R).

*Assertiveness* ( $\alpha = .84$ )

1. I take charge.
2. I try to lead others.
3. I can talk others into doing things.
4. I seek to influence others.
5. I take control of things.
6. I wait for others to lead the way (R).
7. I keep in the background (R).
8. I have little to say (R).
9. I don't like to draw attention to myself (R).
10. I hold back my opinions (R).

*Activity Level* (Activity;  $\alpha = .71$ )

1. I am always busy.
2. I am always on the go.
3. I do a lot in my spare time.
4. I can manage many things at the same time.
5. I react quickly.
6. I like to take it easy (R).
7. I like to take my time (R).
8. I like a leisurely lifestyle (R).
9. I let things proceed at their own pace (R).
10. I react slowly (R).

*Excitement-Seeking* ( $\alpha = .78$ )

1. I love excitement.
2. I seek adventure.
3. I love action.
4. I enjoy being part of a loud crowd.
5. I enjoy being reckless.
6. I act wild and crazy.
7. I am willing to try anything once.
8. I seek danger.
9. I would never go hang gliding or bungee jumping (R).
10. I dislike loud music (R).

*Cheerfulness* (Positive Emotions;  $\alpha = .81$ )

1. I radiate joy.
2. I have a lot of fun.
3. I express childlike joy.
4. I laugh my way through life.
5. I love life.
6. I look at the bright side of life.
7. I laugh aloud.
8. I amuse my friends.
9. I am not easily amused (R).
10. I seldom joke around (R).

**Domain: Openness to Experience**

*Imagination* (Fantasy;  $\alpha = .83$ )

1. I have a vivid imagination.
2. I enjoy wild flights of fancy.
3. I love to daydream.
4. I like to get lost in thought.
5. I indulge in my fantasies.
6. I spend time reflecting on things.
7. I seldom daydream (R).
8. I do not have a good imagination (R).
9. I seldom get lost in thought (R).
10. I have difficulty imagining things (R).

*Artistic Interests* (Aesthetics;  $\alpha = .84$ )

1. I believe in the importance of art.
2. I like music.
3. I see beauty in things that others might not notice.
4. I love flowers.
5. I enjoy the beauty of nature.
6. I do not like art (R).
7. I do not like poetry (R).
8. I do not enjoy going to art museums (R).
9. I do not like concerts (R).
10. I do not enjoy watching dance performances (R).

*Emotionality (Feelings;  $\alpha = .81$ )*

1. I experience my emotions intensely.
2. I feel others' emotions.
3. I am passionate about causes.
4. I enjoy examining myself and my life.
5. I try to understand myself.
6. I seldom get emotional (R).
7. I am not easily affected by my emotions (R).
8. I rarely notice my emotional reactions (R).
9. I experience very few emotional highs and lows (R).
10. I don't understand people who get emotional (R).

*Adventurousness (Actions;  $\alpha = .77$ )*

1. I prefer variety to routine.
2. I like to visit new places.
3. I am interested in many things.
4. I like to begin new things.
5. I prefer to stick with things that I know (R).
6. I dislike changes (R).
7. I don't like the idea of change (R).
8. I am a creature of habit (R).
9. I dislike new foods (R).
10. I am attached to conventional ways (R).

*Intellect (Ideas;  $\alpha = .86$ )*

1. I like to solve complex problems.
2. I love to read challenging material.
3. I have a rich vocabulary.
4. I can handle a lot of information.
5. I enjoy thinking about things.
6. I am not interested in abstract ideas (R).
7. I avoid philosophical discussions (R).
8. I have difficulty understanding abstract ideas (R).
9. I am not interested in theoretical discussions (R).
10. I avoid difficult reading material (R).

*Liberalism (Values;  $\alpha = .86$ )*

1. I tend to vote for liberal political candidates.
2. I believe that there is no absolute right or wrong.
3. I believe that criminals should receive help rather than punishment.
4. I believe in one true religion (R).
5. I tend to vote for conservative political candidates (R).
6. I believe that too much tax money goes to support artists (R).
7. I believe laws should be strictly enforced (R).
8. I believe that we coddle criminals too much (R).
9. I believe that we should be tough on crime (R).
10. I like to stand during the national anthem (R).

## APPENDIX F

### BEM SEX-ROLE INVENTORY

Participants rated the items on a 7-point Likert scale from (1) *never or almost never true* to (7) *almost always true*. Items which are scored as masculine or feminine are listed below. An additional 20-items not included are used as neutral filler items. Directions for the scale are as follows:

*Rate yourself on each item, on a scale from (1) never or almost never true to (7) almost always true.*

#### **Masculinity:**

1. Self reliant
2. Defends own beliefs
3. Independent
4. Athletic
5. Assertive
6. Strong personality
7. Forceful
8. Analytical
9. Leadership ability
10. Willing to take risks
11. Makes decisions easily
12. Self-sufficient
13. Dominant
14. Masculine
15. Willing to take a stand
16. Aggressive
17. Acts as a leader
18. Individualistic
19. Competitive
20. Ambitious

#### **Femininity:**

1. Yielding
2. Cheerful
3. Shy
4. Affectionate
5. Flatterable
6. Loyal
7. Feminine
8. Sympathetic
9. Sensitive to other's needs
10. Understanding
11. Compassionate
12. Eager to soothe hurt feelings
13. Soft spoken
14. Warm
15. Tender
16. Gullible
17. Childlike
18. Does not use harsh language
19. Loves children
20. Gentle

APPENDIX G

DEMOGRPAHICS QUESTIONNAIRE

1. What is your gender? Male Female

2. What is your age? \_\_\_\_\_

3. What is your race?

White/Caucasian African American Hispanic Asian  
Native American Pacific Islander Other Prefer not to Answer

4. What is the highest level of education you have completed?

Less than High School High School/GED Some College 2-Year College Degree  
4-Year College Degree Master's Degree Doctoral Degree Professional Degree  
Prefer not to Answer

5. What do you consider your political affiliation?

Democratic Republican Independent Green  
Libertarian Other None/Apathetic Prefer not to Answer

6. What do you consider your religious denomination?

Christian, Catholic Christian, Protestant Christian, Other Jewish  
Muslim Buddhist Hindu Pagan  
Agnostic Atheist Nonreligious/Secular Other  
Prefer not to Answer

7. Do you enjoy recreational hunting? Yes No

8. Are you employed in a medical profession (e.g. doctor, nurse, lab technician, orderly, etc.)?  
Yes No

9. Are you studying with the intention of being employed in a medical profession (e.g. doctor, nurse, lab technician, orderly, etc.)?  
Yes No

10. Using the scale of (1) *strongly disagree* to (5) *strongly agree*, please rate the following five statements.
- a. I can't stand the sight of blood
  - b. I like watching horror films
  - c. I watch a lot of horror films
  - d. Horror films are too scary for me (R)
  - e. I would consider horror one of my favorite genres of film
11. Where did you access the link to this survey?
- CMU's SONA system    Facebook    Online Forum    Other

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