



Theses and Dissertations

2006-06-08

The Use of Viewing Time of Non-erotic Visual Stimuli to Differentiate Between Frequent Pornography Users and Infrequent Users

Brian James Sneed
Brigham Young University - Provo

Follow this and additional works at: <https://scholarsarchive.byu.edu/etd>



Part of the [Counseling Psychology Commons](#), and the [Special Education and Teaching Commons](#)

BYU ScholarsArchive Citation

Sneed, Brian James, "The Use of Viewing Time of Non-erotic Visual Stimuli to Differentiate Between Frequent Pornography Users and Infrequent Users" (2006). *Theses and Dissertations*. 437.
<https://scholarsarchive.byu.edu/etd/437>

This Dissertation is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.

THE USE OF VIEWING TIME OF NON-EROTIC VISUAL STIMULI TO
DIFFERENTIATE BETWEEN FREQUENT PORNOGRAPHY USERS
AND INFREQUENT PORNOGRAPHY USERS

by

Brian J. Sneed

A dissertation submitted to the faculty of

Brigham Young University

in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Department of Counseling Psychology and Special Education

Brigham Young University

July 2005

Copyright © 2006 Brian J. Sneed

All Rights Reserved

BRIGHAM YOUNG UNIVERSITY

GRADUATE COMMITTEE APPROVAL

Of a dissertation submitted by

Brian J. Sneed

This dissertation has been read by each member of the graduate committee and by majority vote has been found to be satisfactory.

_____	_____
Date	Lane Fischer, Chair
_____	_____
Date	Melissa Heath
_____	_____
Date	Steve Smith
_____	_____
Date	Ellie Young
_____	_____
Date	Aaron Jackson
_____	_____
Date	Richard Moody

BRIGHAM YOUNG UNIVERSITY

As chair of the candidate's graduate committee, I have read the dissertation of Brian J. Sneed in its final form and have found that (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

Date

Lane Fischer
Chair, Graduate Committee

Accepted for the Department

Aaron P. Jackson
Graduate Coordinator

Accepted for the College

Barbara Culatta
Associate Dean, David O. McKay School of
Education

ABSTRACT

THE USE OF VIEWING TIME OF NON-EROTIC VISUAL STIMULI TO DIFFERENTIATE BETWEEN FREQUENT PORNOGRAPHY USERS AND INFREQUENT PORNOGRAPHY USERS

Brian J. Sneed

Department of Counseling Psychology and Special Education

Doctor of Philosophy

The purpose of this study was to determine whether a measure of viewing time that uses non-erotic visual stimuli can differentiate between frequent users and infrequent users of pornography. Thirty-six male participants were classified as infrequent pornography users and 37 as frequent users. Participants completed a questionnaire and were asked to rate a variety of images, both male and female of varying ages, on their sexual attractiveness. Individuals were timed as to how long they looked at each image. The groups were then compared based upon their viewing time of several categories. No statistically significant differences were detected. The temporal stability of the measure was also investigated. Researchers found that for the two groups, high correlations were found with juvenile females and adult females, somewhat strong correlations for small

male child and pre-juvenile female, and relatively weak correlations for adult males, small female child, juvenile male, and pre-juvenile male. Researchers also attempted to differentiate the two groups based upon their temporal stability. A statistically significant difference between the groups was found with their viewing times of pre-juvenile females; however, the researchers caution the readers about its interpretation. Researchers concluded that perhaps the viewing time measure used in this study was not sufficiently sensitive enough to differentiate on pornography use. They indicated that perhaps viewing time measures utilizing erotic visual stimuli may be more effective in detecting such a difference. The researchers also speculated that there may be differences between pornography users and non pornography users and that pornography may not be the factor responsible for causing callousness towards women, acceptance of rape myths, and a reduction in sexual and marital satisfaction. The researchers suggested that there may be another factor responsible for causing these negative effects and also predisposes an individual to heavy pornography use.

ACKNOWLEDGMENTS

I would like to thank Lane Fischer, Ph.D. for enthusiastically accepting to be the chair of my dissertation committee. I appreciated his excitement for my topic and his suggestions as to how to make the subject more powerful. Dr. Fischer, having an extremely busy schedule, would always make time to offer suggestions, review my work, and monitor my progress.

I would also like to thank the other members of my committee for their suggestions and critiques of my work and their willingness to rearrange schedules and change plans in order to allow me to defend before leaving for internship.

I also want to offer my deepest appreciation to my wife for her help in reviewing my work and my family's understanding and patience during the times I was typing through the night or the extra time I required to collect data.

TABLE OF CONTENTS

	Page
LIST OF TABLES AND FIGURES	xi
Introduction	1
Statement of Problem	3
Statement of Purpose	3
Literature Review	4
Explosion of Pornographic Material	4
Negative Effects of Pornography	6
Morality and values	6
Callousness	7
Rape myth acceptance	8
Changed perceptions and female objectification	10
Relational and sexual satisfaction with spouses and intimate partners	12
Relational issues of women with male partners who use pornography	15
Viewing Time Discriminates Sexual Interest Groups	18
Viewing Time and Pornography	21
Statement of Problem	25
Statement of Purpose	26
Definition of Pornography	26
Method	29
Participants	29
Criteria for inclusion	29
Locations of recruitment	29
Materials	30
Informed consent form	30
Sexual interest assessment	31
Demographics, personal attitudes, and sexual interest questionnaire (DPSQ) ..	36
Procedure	38
Confidentiality	38
Setting	39
Procedure	40

Results	41
Demographics	41
Potential Confounds	42
Age	42
Ethnicity	42
Year in school	43
Marital status	43
Social desirability	43
Group Differentiation Using Viewing Time	43
Group Differences: On Task Latency (OTL)	46
Average total viewing time (ATVT) on OTL	46
Average male viewing time (AMVT) on OTL	46
Average female viewing time (AFVT) on OTL	46
Average adult female (AADF) on OTL	47
Average adult male (AADM) on OTL	47
Average juvenile female (AJUF) on OTL	47
Average juvenile male (AJUM) on OTL	47
Average pre-juvenile females (APJF) on OTL	48
Average pre-juvenile males (APJM) on OTL	48
Average small child female (ASCF) on OTL	48
Average small child male (ASCM) on OTL	48
Group Differences On PTL & TTL	49
Temporal Stability	50
On task latency	50
Group Differences Using Temporal Stability	52
Discussion	55
Possibilities for Results	58
Sensitivity of the measure	58
Erotic vs. non-erotic stimuli	58
No differences in viewing patterns	59
Weaknesses of The Study	59
Relatively small N	59
Generalizability	60
Assessment of pornography use	60
Theoretical Implications	61
Sensitivity of viewing time measures	61
Pornography use has no effect	62
Concluding Statement	63

	Page
References	65
Appendix A. Informed Consent Form	75
Appendix B. Affinity 2.0	78
Prototype Line Drawings	79
Sample Images	79
Appendix C. Demographics, Personal Attitudes, and Sexual Interest Questionnaire (DPSQ)	80

LIST OF TABLES AND FIGURES

Tables

	Page
Table 1. Skewness of On Task Latency	45
Table 2. Medians and Standard Errors for Post Task Latency (Seconds Per Slide)	51
Table 3. Spearman's Rho (r_s) on OTL	51
Table 4. Spearman's Rho (r_s) of Frequent Users and Infrequent Users on OTL	52
Table 5. Pearson's Correlations and Fisher Z of Frequent Users and Infrequent Users on OTL	54

Figures

Figure 1. Median Viewing Time on Post Task Latency	49
--	----

Introduction

The use of pornography or erotic stimuli is an increasing issue in American society (Family Safe Media, 2003; Frammolino & Huffstutter, 2002; The Aurora Center for Advocacy & Education, 2001; Thornburg & Lin, 2002). According to Rosen and Beck (1988), “no other culture or time period in history can match the present for the range, diversity, and sheer volume of erotic materials available for popular consumption” (p. 189). Given such prevalence and easy access to pornography, researchers have become concerned about the potential negative effects of pornography on individuals and society.

There is evidence that long term use of pornography has several negative effects. Heavy pornography use can result in a higher acceptance of promiscuous behavior, less desire to have children, and less satisfaction with current sexual partners (Zillmann, 1994; Zillmann & Bryant, 1988). Heavy exposure has been shown to increase callousness, objectification, inappropriate and undesirable perceptions toward women and acceptance of rape myths (Allen, Emmers, Geghardt, & Geiry, 1995; Bernstein, Huang, Teng, & Lin, 1986; Mohr & Zanna, 1990; Saunders & Naus, 1993; Weaver, 1992; Zillmann, 1989). Men who use pornography heavily were less likely to convict or give harsh sentences to a rapist (Garcia, 1986). Heavy pornography use can also result in marital discord, principally, a reduction of sexual satisfaction and sexual attraction to one’s partner on the part of the pornography user (Kenrick & Gutierrez, 1989; Zillmann & Bryant). Also, spouses and partners of heavy pornography users appear to experience negative perceptions about their relationships, themselves, and their spouses or partners (Bergner & Bridges, 2002; Schneider, 2000).

Viewing Time and Pornography 2

Given the apparent connection between heavy pornography use and negative changes in attitudes, perceptions, callousness, and relationships, identification and discrimination of heavy pornography users from non-users with a non-invasive, ethical measure may be helpful in treatment efforts. Measures using viewing time as a surreptitious measure of sexual interest may show the most promise in differentiating between these two groups.

Measures of viewing time have been used to study sexual preference and interest (Leckhart, Keeling, & Bakan, 1966; Rosenweig, 1942). Viewing time has been shown to differentiate between groups of heterosexual males and females, homosexual males and heterosexual males, and homosexual females and heterosexual females (Quinsey, Ketsetzis, Earls, & Karamanoukian, 1996; Rosenweig, 1942; Wright & Adams, 1994). They have also been able to differentiate between groups of child molesters and non-sexual offending males (Harris, Rice, Quinsey, & Chaplin, 1995). The afore mentioned measures of viewing have typically utilized erotic visual stimuli. The use of erotic stimuli limits the use of the measure to adults willing to look at erotic images. Ethical issues would also tend to arise when using these measures with younger populations such as adolescents. Recently, however, two measures of viewing time utilizing non-erotic visual stimuli have been developed which have also shown to be effective as measures of sexual interest and differentiation between groups (Abel, Jordan, Hand, Holland, & Phipps, 2001; Glasgow, 2003). These measures, therefore, are able to be used with a wider population with fewer ethical concerns.

Due to the recent successes using viewing time as a factor in differentiating between groups of individuals on sexual interest and sexual offenders, it seems plausible that it may also be able to differentiate between heavy pornography users and non-users.

Statement of Problem

Research has shown that heavy use of pornography tends to have several negative effects. It fosters callousness toward women and increases the acceptance of rape myths (Allen et al., 1995; Bernstein, Huang, Teng, & Lin, 1986; Mohr & Zanna, 1990; Saunders & Naus, 1993; Weaver, 1992; Zillmann, 1989). It also appears to be linked to a reduction in sexual satisfaction, intimacy, and marital satisfaction (Kenrick & Gutierrez, 1989; Zillmann & Bryant, 1988). It may be possible to discern heavy pornography use by a surreptitious measure of viewing time. If this is the case, it might be a valuable clinical tool in predicting and ameliorating such negative outcomes. However, before using it as a predictor of callousness, marital and sexual satisfaction, or sexual identity, we must first assess its ability to discriminate between individuals involved in heavy pornography use and those who are not.

Statement of Purpose

The purpose of this study is 1) to determine whether a measure of viewing time using non-erotic visual stimuli can differentiate between heterosexual males involved in heavy pornography use and heterosexual males not involved in pornography use and 2) to investigate the temporal stability of the viewing time measure included in the Affinity 2.0 assessment of sexual interest (Glasgow 2003) used in this study to attempt to differentiate these two groups.

Literature Review

Explosion of Pornographic Material

The use of pornography or erotic stimuli is an increasing issue in American society. According to the Attorney General's Commission on Pornography (1986), sexual materials of an explicit nature have been used by a multitude of societies throughout history for both entertainment and sexual stimulation. For example, erotic painting, poetry, and statues were quite commonplace among ancient Greek and Roman societies. Eastern cultures also had their share of erotic material such as the *Kama Sutra* and *The Thousand and One Nights*. Even at the height of the Victorian era in Europe, where sexual repression was stressed as proper, works such as Frank Harris's *My Life and Loves* and *The Pearl* became quite popular (Rosen & Beck, 1988).

Just in the last twenty years, pornography viewing and availability has experienced a veritable explosion as never before seen. In 1988, Rosin and Beck stated "no other culture or time period in history can match the present for the range, diversity, and sheer volume of erotic materials available for popular consumption" (p. 189). In the 1980's the pornography industry was estimated to be a four billion dollar a year industry (Lederer, 1980). Currently, it is estimated that the pornography industry in the United States is larger than all combined revenues of all professional football, baseball and basketball franchises (Family Safe Media, 2003). Pornography revenue in the United States alone exceeds the combined revenues of ABC, CBS, and NBC (\$6.2 billion) while child pornography itself generates approximately three billion dollars annually (Family Safe Media, 2003). Over 200 million copies of Penthouse, Playboy, and Hustler are distributed

to homes in the United States every year (The Aurora Center for Advocacy & Education, 2001). Annual rentals and sales of adult videos and DVD's reached four billion dollars, and the industry is estimated to produce approximately 11,000 titles each year (Frammolino & Huffstutter, 2002). Currently, it is estimated that the pornography industry in the US generates approximately twelve billion dollars annually (Family Safe Media, 2003) with global profits estimated at \$56 billion a year (Asher, 2001).

Although the internet is relatively new as a means of providing pornographic materials to paying customers, in the year 2001 it was estimated to generate approximately 1 billion dollars with a projected five to seven billion dollar increase in the next five years (Thornburg & Lin, 2002). In 2003, pornography sites on the internet were estimated to have generated approximately 2.5 billion dollars (Family Safe Media, 2003) which was approximately a 150% increase over the previous two years.

There are approximately 100,000 subscription adult pornography sites in the US and Canada and approximately 400,000 world wide (Thornburg & Lin, 2002). It is estimated that 200 new sex related websites are added each day (Carnes et al., 2001). The United States of America is the world leading producer of online pornography (73%), with Europe producing approximately 13%, and Asia producing close to 5% of online pornography (MacKay, 2001). It is estimated that approximately 70 million individuals a year visit adult pornography sites and 20 million of these individuals access sites that are based in the US and Canada (Thornburg & Lin) with approximately 78% of the individuals accessing these being male (Elias, 2002). Approximately 25 million Americans visit cybersex sites between one to ten hours per week (Enough is Enough, 2003). About 74%

of adult pornography sites offer free “teaser” pornography images on their homepages (Thornburg and Lin, 2002). From February to July of 2001 there was a reported 345% increase in child pornography (Enough is Enough, 2003).

Negative Effects of Pornography

Because pornography is so prevalent in society and appears to be growing in popularity and usage, researchers have shown increasing interest in the effects of exposure. In light of these research studies there appears to be evidence that heavy pornography use can be linked to several negative effects (Zillmann & Bryant, 1988). Heavy pornography use has been shown to result in changed attitudes and perceptions about relationships and the opposite sex (Zillmann, 1994). Men who are exposed to prolonged and heavy amounts of pornography are more likely to be callous and have undesirable perceptions toward women (Weaver, 1992; Zillmann, 1989). In addition to callousness, males who use pornography are more likely to objectify women (Bernstein, Huang, Teng, & Lin, 1986; Mohr & Zanna, 1990) and be more accepting of rape myths (Allen et al., 1995). There also seems to be evidence that pornography use can lead to marital dissatisfaction, a loss of sexual satisfaction, and a loss of attraction toward the pornography user’s spouse or sex partner (Kenrick & Gutierrez, 1989; Oddone-Paulucci, Genius & Violato, 2000; Zillmann & Bryant, 1988). Wives of husbands that are considered heavy pornography users also report feelings of betrayal and a loss of love and respect for their spouse (Bergner & Bridges 2002).

Morality and values. Zillmann (1994) investigated the effects of long term pornography exposure on men and women’s attitudes and perceptions. Both male and

female participants were exposed to either non-violent pornographic material or to innocuous entertainment fare in hourly sessions for a period of six weeks. Both students and non students were represented in this study. One week after exposure to either pornography or non-pornographic material, participants were brought in again to fill out some, thought to be, unrelated questionnaires. In reality these questionnaires were designed to evaluate the participants' perception of faithfulness and promiscuity, their attitudes about faithfulness, beliefs about the institution of marriage and divorce and their desire for progeny.

Both the men and the women of the experimental group (prolonged pornography use) tended to show higher acceptance of promiscuous behavior than the control group (non pornography use). The experimental group of both males and females saw sexual promiscuity as more natural and more acceptable than the control group. Individuals in the experimental group tended to endorse more items pertaining to sexual engagements prior to marriage and with partners outside of marriage than the control group. Results from this study also showed that the experimental group tended to be more accepting of the myth of health risks from sexual repression. This indicates that prolonged exposure results in individuals' beliefs that free unrestrained sexuality is wholesome and sexual repression can be detrimental to one's overall health. Individuals exposed to prolonged use of pornography also showed significantly less desire to have children than non-pornography exposed controls.

Callousness. As early as 1970 The commission on Obscenity and Pornography showed that prolonged use of pornography “develop[s] a calloused and manipulative

orientation toward women” (p. 239). Their studies show that prolonged use of pornography can indeed change perceptions toward women.

Compelling research has been performed which shows that prolonged exposure to pornography contributes to the formation and sometimes reinforcement of inappropriate or undesirable perceptions of women (Weaver, 1992; Zillmann, 1994). Buchman (1989) conducted a study which indicated that prolonged use of pornography resulted in an increase of callous perceptions of suffering experienced by victims of childhood sexual abuse and sexual abuse of women. Buchman reported that results showed that men who viewed pornography for extended periods of time tended to trivialize the sexual abuse of women, regardless of the women’s age, as a criminal transgression.

In a study by Zillmann and Bryant (1988b), 160 male and female participants were assigned to one of four conditions: heavy exposure to pornography, moderate exposure to pornography, no exposure to pornography, and a no exposure control group. After the three week exposure period, participants were assessed on habituation effects, perceptions of sexuality, and dispositions concerning sex and gender. Results indicate that participants in the heavy exposure group after the three week exposure period showed a reduction in reported compassion toward women as rape victims and toward women in general.

Rape myth acceptance. There have been several studies investigating men’s attitudes toward rape and sexual assault against women. Results tend to indicate that men exposed to pornography for extended periods of time tend to be more accepting of what is called the “rape myth” (Buchman, 1989). The term “rape myth” was initially created and used by Burt (1980). The term refers to beliefs and attitudes one has about the act of

rape, rapists, and the victims of rape. In general, proponents of the rape myth see the victim as more responsible for the crime than the rapist (Allen, Emmers, Geghardt, & Geiry, 1995).

Garcia (1986) looked at the relationship between exposure to pornography and attitudes toward rape. One hundred-fifty male university students were assessed on their overall exposure to pornography, time viewing pornography, and level of explicitness of the pornography used. All individuals were then given two questionnaires assessing attitudes toward women in general and women as rape victims. Results indicated that the more exposure participants had to coercive sexual materials, the more traditional their attitudes toward women were (e. g. women should have less independence, less equality, consume less alcohol, and use less profanity). Results also indicated that the more exposure participants had to coercive pornography, the more likely they were to see women as more responsible for preventing their own rape, to see rapists as more normal in their behavior, to have the attitude that convicted rapists should not be severely punished, and to believe that women should not resist a rape.

Similar findings were reported in a meta-analysis. A total of 16 experimental studies from 1973 to 1993 with an N of 2,248 participants and 8 non-experimental studies from 1971 to 1989 with an N of 2,021 participants were used to determine if exposure to pornography increases the acceptance of rape myths (Allen et al., 1995). Results indicated that of the non-experimental studies there appeared to be no effect between exposure to pornography and the acceptance of rape myths. However, an investigation into the experimental studies performed demonstrated a significant effect in two areas. First they

were able to show that individuals who used violent pornography for prolonged periods of time were more accepting of rape myths. They also found a significant effect, to a lesser extent, between prolonged use of non-violent pornography users and rape myth acceptance, indicating that users of non-violent pornography were also more likely to accept the ideas of the rape myth.

Changed perceptions and female objectification. Mohr and Zanna (1990) took male college students and placed them into either an exposure to pornography condition where they viewed pornographic videos or a non-exposure to pornography control condition where the participants watched a non-pornographic video. Control and experimental participants were then given an interview assessing information about their transition from high school to college. The interview was given by a female research assistant and did not include any questions of a sexual nature.

The female, who was blind to the experimental conditions, recorded information about the participants' apparent sexual interest in her (time spent looking at her body, sexual motivation, etc.). Results indicated that the female research assistant could readily distinguish between the pornographic primed participants and the control participants. One observation of particular notice was that almost all pornography primed males sat closer to the interviewer than the participants of the control group. The final portion of this study included a free recall test about the interview. The pornography primed participants stood out by recalling physical features of the female assistant giving the interview than the control group who, according to the researchers, focused on the more substantial portions of the interview.

The researchers concluded that sexually primed individuals tend to focus on salient sexual features and behaviors of women and may even fantasize about engaging in precoital activities with these women. The combination of all phases of this study shows an attitudinal change from seeing a woman as a person to seeing her more as a “sexual object.” (Mohr & Zanna, 1990)

Bernstein, Huang, Teng, and Lin (1986), showed that extended pornography viewing can in fact change men’s perceptions of women. In their study, three groups were classified as pro-pornography males, anti-pornography males, and indifferent males. The participants viewed several large nude photographs of females taken from magazines such as Penthouse and Playboy. In all of the photos the face of the nude female was “obliterated” or blurred to the extent that no facial features were recognizable. The participants then rated the photographs based upon appeal.

Results indicated that facial obliteration of the nude photograph greatly diminished the appeal of women for the indifferent and anti-pornography participants; however, the facial obliteration did not seem to diminish the appeal for the pro-pornography participants. The researchers argued that consumption of pornography fostered libidinal preoccupation with women which prompted selective attention to their sexually salient features. This resulted in attention to the female’s faces being uninformative and unimportant; thereby reaffirming that extended pornography use may indeed foster seeing women as objects rather than people.

Zillmann and Bryant’s study (1988a) also demonstrated changed perceptions about women’s sexuality and promiscuity. Male participants were separated into experimental

and control groups. Participants in the experimental group were then exposed to pornography for a six week period while the control group looked at innocuous material for the same time. Statistically significant results from this study demonstrated that the participants who viewed pornography for the six weeks perceived women as more sexually permissive and promiscuous than the control group.

Relational and sexual satisfaction with spouses and intimate partners. Kenrick, Gutierrez, and Goldberg (1989) demonstrated that exposure to soft-core erotica, such as nude centerfolds in Playboy and Penthouse magazines, could have a significant effect on an individual's judgments about strangers and mates. In their first experiment, the researchers divided the male and female participants into three groups. The first group viewed 16 slides of attractive nude females. The second group was exposed to 16 slides of abstract art, while the third group looked at 16 slides of average-looking nude females. Participants were then asked to participate in another seemingly unrelated experiment in which they were to rate a photograph of a nude average attractive female on her attractiveness. Results indicated that participants that were exposed to attractive nude females rated the photograph of the average attractive nude female as less sexually attractive than the other two groups.

Given the findings of the first experiment, the researchers questioned if judgments about the participant's sexual partner would be similarly affected. Males and females were divided into two groups. In the first group, male and female participants viewed 16 slides of nude centerfold models of the opposite sex. Males and females of the second group viewed 16 images of abstract art. Participants were then, in a seemingly unrelated

experiment, asked questions about their relationship with their spouse or significant other. Several of the questions centered around sexual attraction and love. Male participants who were exposed to nude centerfolds rated their sexual partners as less attractive than the control group's partner ratings. In addition, males exposed to erotic images also reported feeling less love toward their sexual partner than the control group. No differences were detected between the female experimental and control group.

Zillmann and Bryant (1988b), showed that individuals exposed to heavy amounts of pornography can experience a change in sexual satisfaction with their sexual partner. Both male and female students and non-students were placed in one of two groups. In one group, the participants were exposed videotapes featuring non-violent pornography. The other group watched videotapes of situational comedies taken from prime-time television broadcasts. Each group watched a total of six hours of these programs over a six week period.

After the six week period, the participants engaged in a seemingly unrelated task in which they filled out a questionnaire regarding their happiness and satisfaction outside the social realm and their sexual satisfaction with their spouse or sexual partner. Results indicated no difference between the non-pornography exposure group and the pornography exposure group on happiness and satisfaction outside of the sexual realm. This was consistent across gender and all ages. However, results did show that participants in the pornography exposure group reported less satisfaction with their sexual partner than the non-pornography exposure group. These participants reported less satisfaction with their partner's affection, sexual performance, physical appearance, and

sexual curiosity. Participants exposed to pornography also assigned increased importance to sex without emotional involvement than the group not exposed to pornography. These results were reported to be uniform across gender and populations.

In 1994, Zillmann performed a similar study based on his previous research (Zillmann & Bryant, 1988a) in which he investigated how exposure to pornography might influence an individual's values and beliefs about familial relationships. Similar results were found in his 1994 study. The study was performed in a similar fashion; however the questionnaire involved additional question assessing additional areas: perception of faithfulness and promiscuity, attitudes about faithfulness, beliefs about the institution of marriage and divorce, and desire for progeny. Results about sexual satisfaction with sexual partners indicated that both men and women exposed to pornography reported less sexual satisfaction, less caring, and less trust in their current intimate partner than the group not exposed to pornography.

Perhaps the most compelling argument for pornography exposure resulting in sexual dissatisfaction was a recently conducted meta-analysis designed to assess the effects of prolonged use of pornography (Oddone-Paolucci, Genuis, & Violato 2000). Their study included a total of 46 published studies ranging from 1962 to 1995 consisting of approximately 12,323 participants. The study was performed to determine if the exposure to pornographic stimuli over the life span has any significant effect on sexual offending, sexual deviancy, intimate relationships and attitudes regarding the rape myth. In this study, nine potential moderators (gender of user, social economic status, age of exposure, number of exposure incidents, relation of person who introduced pornography to the

participant, the degree of explicitness, participant, medium, and definition of pornography) were examined. Effect sizes were computed for sexual deviancy, sexual perpetration, intimate relationships, and the rape myth. Oddone-Paolucci et al. concluded that there was clear evidence of a link between increased risk for negative development when exposed to extended periods of pornography. They reported with confidence that “exposure to pornographic material puts one at increased risk for developing sexually deviant tendencies, committing sexual offenses, experiencing difficulties in one’s intimate relationships, and accepting the rape myth” (Oddone-Paolucci, Genuis & Violato, 2000, p. 52-53).

Relational issues of women with male partners who use pornography. Although there is very little research in this area, there also appears to be a compelling argument that women with husbands or male partners who view pornography for extended periods of time often experience negative feelings, marital discord, and a loss of respect for their pornography using spouse. Schneider (2000) discovered that spouses or partners of sexually addicted males experienced changes in their perceptions of themselves and their relationships. In this study she examined husbands or male partners involved in both inactive (viewing only) and active (e-mails, chat rooms, sexually explicit letters) forms of pornography use. Wives or female partners reported feelings of unattractiveness, betrayal, devastation, mistrust, diminished self-esteem, fear, anger, and degradation as a result of their partner’s sexual addiction. Many reported feeling a reduction of sexual intimacy with their partner primarily due to feeling objectified or perceiving a lack of their partner’s involvement in lovemaking. Many indicated they were unable to compete with the women

displayed in their partner's pornography. This led them to feel confused and to question their own physical desirability, further reducing their feelings of intimacy. The one short coming of this study, however, is that Schneider failed to make a distinction between participants whose partners were engaged solely in non-interactive viewing of pornography and those whose partners were involved in more active forms such as e-mails, chat rooms, phone sex lines, and meeting others in person.

Therefore, Bergner and Bridges (2002), developed a qualitative study that looked specifically at how husbands' or male partners' use of non-interactive forms of pornography may have resulted in changed perceptions about their partner. In this study, Bergner and Bridges were indeed able to show that women with male sexual partners who were involved heavily in non-interactive pornography use tended to experience changes in their view of their relationships, themselves, and their partners. In this qualitative study, the researchers collected and analyzed 100 letters posted to internet message boards by wives, fiancées, and girlfriends of men perceived to be involved with non-interactive forms of pornography (viewing of pornographic images only). All of the women who wrote the letters had discovered their partner's pornography use. As a result they all reported being distraught, and admitted seeking emotional support and writing to seek solutions from others who were experiencing similar experiences.

After inspecting these letters, the researchers detected several themes centering around changed views of the relationship, themselves, and their partner. Of the themes centered around the relationship, women in the study reported feeling betrayed by their partner's pornography use. They used words such as "cheating," "betrayal," and "affair"

to describe their relationship. They felt less like a beloved partner and more like an object meant for their partner's sexual gratification. They reported experiencing a drop in emotional intimacy, and felt that their partners were no longer truly invested in them.

Women in this study also reported a change in their view of themselves as a result of their partner's pornography use. They reported a dichotomous struggle with their partner's pornography and their own personal worth and value. On one hand, the women of this study felt that their partner's use of pornography was not about them. They reported that it had no bearing upon their personal worth, value, or desirability as a woman. On the other hand, the sentiment that seemed to prevail was that these women actually did feel that their partner's pornography viewing was about them. These women reported feeling sexually undesirable, unattractive, worthless, and inadequate as a partner and as a woman. They also seemed to feel weak and stupid for not taking a stronger stand against their partner's pornography use.

In addition to changed views about their relationship and self worth, these women also tended to experience a change in their perception of their partner's character and personal worth. They reported feeling less respect and less love toward their partner. They saw them as sexually degraded (e.g. a sex addict, pervert, sexual degenerate), a sexual exploiter of women, an objectifier, an untrustworthy liar, selfish, and an inadequate father, husband, or partner. Many of the women indicated seeing their sexual partner as mentally disturbed or an evil person.

One limitation of both of these qualitative studies was that all women in these samples reported feeling distressed about their partner's pornography use or sexual

addiction which constituted a very limited sample of women in general. Bridges et al. (2002), therefore, developed a survey which was designed to examine a broader spectrum of women with husbands who viewed pornography, touching on the themes that were discovered by Bergner and Bridges' previously mentioned qualitative study. Surprisingly, results from this study indicated that women, in general, did not report such highly negative and distressing attitudes toward their partner's pornography use as the women in the previous qualitative study (Bergner & Bridges, 2002). However, there are certain themes that are worth mentioning from this study. Wives of husbands who used pornography reported significantly more distress than women who were merely dating these men. Also, women who reported the highest level of pornography use by their partners, as indicated by frequency and duration, were also the most distressed.

Since heavy pornography use has been linked to such negative effects as changes in morals and values, callousness, negative perceptions about women, sexual dissatisfaction, dissatisfaction with one's spouse, lack of attraction for one's spouse, and marital discord, the next question seems to be one of assessment and identification of heavy pornography use. One technique that has been developed to assess normal and deviant sexual interest may be a technique that is adaptable to the identification of frequent pornography use. This technique is known as viewing time (sustained visual attention).

Viewing Time Discriminates Sexual Interest Groups

Viewing time is a measure that has been used to identify normal and deviant sexual interest. Rosenweig (1942) discovered that hospitalized psychiatric patients who were rated as interested in sexual topics looked at sexual stimuli longer than males who were

rated less interested in sexual topics. Before a predictive measure can be developed to identify sexual interest and preference, it must first be able to show evidence of measuring interest and preference.

Zamansky (1956) was able to use viewing time of non-erotic stimuli to differentiate between groups of homosexuals and non-homosexuals. Twenty male participants previously identified as homosexual and 20 male participants identified as heterosexual were asked to look at a series of pictures. The pictures included either fully clothed male and female models or neutral scenery. The pictures were presented in pairs: Male/Female, Male/Neutral, Female/Neutral, and Neutral/Neutral. Participants were asked to look carefully at each picture and judge which one covered more area (all pictures of male or female models were the same size while the sizes of the neutral pictures varied. Participants were scored by the number of seconds each participant spent looking at each picture in the pair. Results showed that homosexual males did spend more time looking at pictures of males than they did looking at females while non-homosexual males spent more time looking at pictures of females than males.

Wright and Adams (1994) were able to differentiate groups of homosexual males and females from heterosexual males and females through the use of viewing time. A total of 80 participants were involved in this study. Twenty individuals were assigned to one of four groups based upon their sexual orientation (homosexual males, homosexual females, heterosexual males, and heterosexual females). Each participant was shown 20 slides for each of three categories (nude males, nude females, and neutral scenes). Each slide had a white dot placed in different locations. The participants were to find the white dot as

quickly as possible and indicate it by pressing a button. Results indicated that sexual orientation did interfere with cognitive processing in this particular task. Researchers found that participants tended to take more time locating the white dot on the preferred sex slides. Heterosexual males spent more time with nude female slides, homosexual males spent more time with nude male slides, homosexual females with female nude slides, and heterosexual females with nude male slides. Therefore, the researchers were able to differentiate the four groups based upon their sexual interest.

Harris, Rice, Quinsey, and Chaplin (1996) used viewing time to discriminate between child molesters and normal heterosexual males. Participants were asked to look at a total of 70 photographic slides consisting of seven categories: neutral landscapes, female children between 5 and 8, male children between 5 and 8, female pubescents, male pubescents, female adults, and male adults. Twenty of the slides were used as practice data and warm up which depicted the participants in each of the categories fully clothed. All non-neutral slides depicted one nude person with the genitals visible. Results indicated that viewing time did indeed discriminate between child molesters and non-child molesters. Harris et al. concluded that viewing time showed promise as an unobtrusive measure of sexual interest that could differentiate between child molesters and non-child molesters.

Quinsey et al. (1996) discovered differences between male and female sexual interests using viewing time. The stimuli in this study consisted of nude photos of both males and females at varying ages from pre-pubescence to young adulthood. In their investigation, they tested four hypotheses: 1) Males and females should look at pictures of young adults of the opposite sex longer than adults of the same sex regardless of age.

They should spend the least amount of time viewing photos of prepubescent individuals.

2) The correlation between viewing time and sexual attractiveness should be shorter for female participants. 3) Females should look at photographs of prepubescent males for less time than males looking at prepubescent females. 4) Males should look longer at adult females than female participants look at adult males. The first three hypotheses were confirmed by their study. The fourth analysis was in the direction of the prediction, but did not achieve statistical significance. Quinsey et al. concluded that viewing time could reflect sexual interest and that variations in previous studies may have clouded the picture (1996).

A surreptitious measure of viewing time seems to be effective in differentiating groups of individuals based upon sexual interest. It has been shown to differentiate between groups of child molesters and non-child molesters (Harris et al., 1996) and homosexual males and females from heterosexual males and females (Wright & Adams, 1994; Zamansky, 1956). There has been no attempt, as of yet, to use a technique designed to differentiate between frequent pornography users and non-users. It appears, however, that an assessment of sexual interest using viewing time might be capable of making such a distinction.

Viewing Time and Pornography

In 1967 United States congress appointed the Commission on Obscenity and Pornography. Along with this appointment came an increase of research in the area of viewing time and pornography (Amoroso, Brown, Prueasse, Ware, & Pilkey, 1970; Brown, Amoroso, Ware, Pruesse, & Pilkey, 1973; Love, Sloan, & Schmidt, 1976). One

of the findings in this commission related to viewing time was that individuals spent less time rating pornographic photographs in “inhibitory” situations than they did in “permissive” situations (United States Commission on Obscenity and Pornography, 1970). From these studies, researchers speculated that an increase in sexual explicitness would result in a positive linear relationship to viewing time.

In 1970, Amoroso et al. tested this hypothesis and showed a positive linear relationship between sexual explicitness and viewing time. Given these results, Amoroso et al. hypothesized that increased anxiety in viewing highly explicit (obscene) pornography would result in a reduction of viewing time.

Brown et al. (1973) decided to test Amoroso’s hypothesis. The hypothesis was that as sexual material became more and more explicit, viewing time would increase in a linear fashion; however, there would be a point in which the sexual material would become so explicit that anxiety would increase resulting in a decrease in viewing time. Therefore, he proposed a curvilinear relationship between viewing time and sexual explicitness. The results, however, did not support the hypothesis. Only the positive linear relationship, which had been previously shown by Amoroso et al. (1970), was detected. In Brown’s study, participants looked at more explicit photos for more time than the less explicit photographs. Brown et al. speculated that the results obtained were probably due to the material being insufficiently explicit to show the curvilinear relationship that was hypothesized.

Love et al. (1976) published a research article along the same lines. Love also hypothesized that a curvilinear relationship existed between viewing time and explicitness

of pornographic material. However, he believed that in order to see such a relationship, one must include sex guilt as a factor. He hypothesized that if the curvilinear relationship did indeed exist, it would be found within participants experiencing high sex guilt. To do this study, Love et al. classified participants as low, medium, or high in sex guilt using the Forced-Choice Guilt Inventory (Mosher, 1966). Participants were then timed on how long they looked at photos that varied in level of sexual explicitness. Love et al. did find a curvilinear relationship between viewing time and explicitness of pornography; however, it was not found within the high sex guilt group as previously hypothesized. Love et al. discovered that the high sex-guilt group showed no change in viewing time when explicitness increased or when photos became increasingly more obscene. Average viewing time for high sex-guilt participants was significantly lower than the moderate and low sex guilt participants' average viewing time with the exception of the least sexually explicit photograph. The curvilinear relationship was found with the moderate sex group. Results indicated that viewing time tended to increase with explicitness in a linear fashion; however, photos rated as highly obscene were viewed for less time. The participants in the low sex guilt group tended to increase their viewing time as content became more sexually obscene with no decrease in viewing time of the highly explicit photos.

Three years after Love's publication and findings, Brown (1979) revised his original study from 1973 (Brown et al.) to try and find the curvilinear relationship between viewing time and explicitness of pornographic material. Although hopeful by the findings of Love et al. (1976), Brown believed that he could find similar results without including sex guilt as a factor in his study. He maintained that he failed to get the results he wanted

simply because the sexual material used was not sufficiently explicit. The pictures ranged from soft core pornography to homosexual pornography. Homosexual pictures were rated as the most obscene by participants. In addition, Brown also decided to use female participants in this study to determine if a curvilinear relationship could be detected for both genders. This time Brown (1979) was able to show the curvilinear relationship between viewing time and level of explicitness for males. As previously shown, as sexual explicitness of the photographs increased males tended to look at them for longer periods of time; however, as the explicitness of the photos became more obscene, viewing time decreased. Brown's findings for women, however, were not the same. Viewing time for women did not show a curvilinear relationship. As explicitness increased, viewing time tended to increase, even with the more obscene photos. Brown concluded that when photos entered into the realm of obscenity, avoidance reactions occurred in men resulting in reduced viewing time, regardless of sex guilt. He concluded for the women that the problem occurring in the original study occurred in this study because the women rated almost all of the photographs as less obscene than the men. Brown believed that the photos were not obscene enough for women to show a curvilinear relationship between sexual explicitness and viewing time.

Viewing time seemed to hold promise as a form of measurement that could detect sexual interest. It was considered to be unobtrusive and applicable to a wide range of participants. However, this technique had limitations. First, erotic stimuli were used making it somewhat unethical. Viewing time as a measure of sexual interest would have to be modified so that it could be used ethically. The most important modification would

be to use clothed models. With this modification, a surreptitious measure of viewing time to identify sexual interest would be even less obtrusive and could be used with a wider population.

Currently there are two sexual interest measures that use non-erotic visual stimuli. The Able Assessment of Sexual Interest (AASI) and the Affinity 2.0 (Abel, Sawry, Karlstrom, Osborn, & Gillespie, 1994; Glasgow, 2003). Using the Affinity 2.0, Glasgow, Croxen, and Osborne (2003) demonstrated similar viewing time patterns for normal heterosexual males as previous viewing time measures utilizing erotic stimuli (Harris et al., 1995; Quinsey et al., 1996). In addition, the AASI was recently shown to be able to differentiate between adolescent male child molesters and adolescent male non-offenders (Able, Jordan, Rouleau, Emerick, Barboze-Whitehead, & Osborn, 2004). The AASI was also reported to have been able to discriminate between non-offending adult males and adult child molesters, as well as, non-offending adult males and a group believed to be concealing or denying having molested children (Abel et al., 2001). Results from these measures seem to indicate that similar results could be obtained using viewing time measures that include non-erotic visual stimuli to measures using erotic visual stimuli, providing access to a wider population with fewer ethical concerns.

Statement of Problem

Research has shown that heavy use of pornography tends to have several negative effects. It fosters callousness toward women and increases the acceptance of rape myths. In addition, it also appears to be linked to a reduction in sexual satisfaction with one's sexual partner and a reduction in intimacy and marital satisfaction. It may be possible to

discern heavy pornography use by a surreptitious measure of viewing time. If this is the case, it might be a valuable clinical tool in predicting and ameliorating such negative outcomes. However, before using it as a predictor of callousness, marital and sexual satisfaction, or sexual identity, we must first assess its ability to discriminate between individuals involved in heavy pornography use and non-pornography users.

Statement of Purpose

The purpose of this study is to 1) determine whether a measure of viewing time can differentiate between heterosexual males involved in heavy pornography use and heterosexual males not involved in pornography use and 2) to investigate the internal stability of the viewing time measure included in the Affinity 2.0 assessment of sexual interest.

Definition of Pornography

Before continuing, it is important, at this time, to discuss and operationalize the term pornography for the purposes of this study. As pornography increases in its availability and usage, researchers have shown increasing interest in pornography as a research topic. Given the extensive research done on this topic, researchers have yet been able to agree upon a definition of pornography. The word pornography comes from the Greek word “pornographos” which means “writing of harlots.” It is defined as “the depiction of erotic behavior (as in pictures or writing) intended to cause sexual excitement [or] material (as in books or a photograph) that depicts erotic behavior and is intended to cause sexual excitement.” (Woolf, 1979). According to Title 76 chapter 10 section 12 paragraph 1 of the Utah Criminal Code, pornography is defined as such if:

- (a) The average person, applying contemporary community standards, finds that, taken as a whole, it appeals to prurient interest in sex;
- (b) It is patently offensive in the description or depiction of nudity, sexual conduct, sexual excitement, sadomasochistic abuse, or excretion; and
- (c) Taken as a whole it does not have serious literary, artistic, political or scientific value” (Utah Legislature, 2002).

There have sometimes been a distinction made between the words pornography and erotica. Erotica refers to sexually explicit material that depicts both adult males and females involved in consensual, pleasurable, nonviolent, non-degrading sexual interactions (Fisher & Barak, 1989; Seto, Maric, & Barbaree, 2001). Pornography is described as material depicting sexual situations in which one of the individuals is objectified, shown as non-consenting, or powerless (Marshall & Barrett, 1990; Seto, Maric, & Barbaree). This term can further be divided into two sub-categories: Violent pornography and degrading pornography. Violent pornography is referred to as sexually explicit depicting sexual aggression, which is typically portrayed by men doing harm to women (Seto, Maric, & Barbaree; Fisher & Barak, 1991). Degrading pornography is referred to as “sexually explicit material that depicts people (usually women) as submissive or hyper-sexual beings who experience sexual pleasure despite being in degrading or humiliating circumstances” (Seto, Maric, & Barbaree, p. 37). Both degrading and violent pornography depict sexual relationships that are impersonal, void of affection, and portray the actors more as objects rather than individuals (Marshall & Barrett).

For the purposes of this study, however, we did not make the distinction between erotica, violent, or degrading pornography. All instances were included in this particular study. Perhaps in later research endeavors distinctions will be made. Therefore, for the purposes of this study, the term pornography was operationalized as any sexual stimuli that depicts individuals engaged in sexual or erotic activities (e.g. intercourse, posing, foreplay) regardless of being portrayed in a neutral, degrading, or violent manner.

Method

Participants

Criteria for inclusion. A total of 146 males participated in the study. To participate in the study, participants needed to be male and at least 18 years of age. One criteria for inclusion in the study was that the participants identified themselves as exclusively heterosexual based upon scores on an adaptation of the Kinsey Heterosexual-Homosexual Scale (Kinsey, Pomeroy, & Martin, 1998). Participants' exposure to pornography was also assessed for inclusion. For the purpose of this study, we defined pornography as any sexual stimuli that depicts individuals engaged in sexual or erotic activities (e.g. intercourse, posing, foreplay) regardless of being portrayed in a neutral, degrading, or violent manner. Individuals who reported viewing pornography more than once a week over the past year "frequent" or less than once a month throughout their lives "infrequent" were included in this study. All individuals that did not meet these criteria were excluded from the study.

Locations of recruitment. Participants selected for this study were taken from two locations. The first group consisted of cluster sampling from large population undergraduate psychology classes at Brigham Young University. Individuals attending psychology classes at Brigham Young University were asked to participate via a short presentation by a researcher. The researcher explained that the purpose of this study was to test a new device that purports to measure sexual interest. Potential participants were informed that they would complete a short questionnaire and look at several still images of fully clothed models depicted in every-day life situations and rate these images on their

sexual attractiveness or unattractiveness. They were also instructed that they would repeat the process a second time two to four weeks later. Compensation for full participation consisted of two free movie tickets. Participants from this pool were expected to provide the infrequent pornography use group as well as some individuals classified as frequent pornography users.

The majority of the frequent pornography users group were found through the second location, the Counseling and Career Center (CCC) located at Brigham Young University. The CCC provides a full array of counseling services offered to currently enrolled students of the university. The Counseling and Career Center also provides group counseling for individuals with sexual concerns. A great majority of these individuals deal with issues related to frequent pornography use. Group leaders were asked to give a short presentation of the study (the same presentation given to the clustered sample) and request volunteers to participate. Group leaders were also given the option of having one of the researchers come to the group meeting and give the same invitation that was given to the psychology classes.

Materials

Informed consent form. Each potential participant was asked to sign an informed consent document (See Appendix A). This document provided a description of the study, disclosure of what the participant would be asked to do in the study, information concerning confidentiality and privacy, and contact information. No one was allowed to participate in the study without first signing the informed consent document.

Sexual interest assessment. There are currently two devices designed to measure sexual interest that use fully clothed models. The first is the Abel Assessment for Sexual Interest (AASI) (Abel, Sawry, Karlstrom, Osborn, & Gillespie, 1994) and the second is the Affinity 2.0 (Glasgow, 2003). The AASI was developed in 1994 and introduced as a non-intrusive measure of sexual interest that utilized viewing time as its primary measure. The AASI consists of a questionnaire and a device designed to measure viewing time. The questionnaire involves a self report of sexual behavior (Fischer, 2000). The apparatus that measures viewing time consists of a slide carousel attached to a viewing screen connected to a lap-top computer. The slides consist of 160 fully clothed individuals in non-sexual positions of varying ages, gender, and ethnicity. There are also six slides of fully clothed individuals depicting images of six different paraphilias: sadomasochism against females and males, exhibitionism, voyeurism, froterism, and fetishism (Fischer, 2000). The AASI, if proven to be valid, would be able to be used as a large scale screening device for sexual offenders. Overcoming limitations of penile plethysmography (a more invasive method of identifying sexual interest through measuring penile tumescence), it could be used with women, men, and adolescents.

Currently, however, the AASI, appears only to show promise. Able reported an internal consistency of .84 to .90 using Chronbach's Alpha for his assessment (Krueger, Bradford, & Grahm, 1998). In 1998, Abel, Huffman, Wargerg, & Holland showed that the reliability and validity evidence of the scores obtained from the Abel Assessment were convincing and comparable to penile plethysmography in groups of individuals with sexual interest in children of various ages and genders. In 1999, however, Fischer and Smith

questioned the methods by which such a high internal consistency was achieved and proposed several validity issues. They also showed that the reliability and validity evidence from the scores obtained from the instrument was highly questionable when used with adolescent sex offenders (Smith & Fischer, 1999). Several other researchers have also called into question the validity and reliability evidence of the Abel Assessment as a screening device for sex offenders (Kaufman, Rogers, & Daleiden, 1998; Fischer 2000; Gray, 1999). Regardless of the studies questioning the validity of the AASI, it was reportedly being used in two countries, 36 states, 8 states' judicial systems, and by approximately 300 therapists (Fischer & Smith, 1999). Fischer and Smith warned that there are dangers in using a non-validated instrument because judicial decisions based upon the assessment would be open to appeal and reversal. Treatment decisions based upon the measure could be compromised (Fischer & Smith, 1999).

Another major weakness of the AASI is in the interpretation of the data collected. According to Fischer and Smith (1999), ipsative scores can detect intraindividual variation and rank-order comparisons between individuals. Interpretation of intraindividual variation is enhanced if the underlying mean and standard deviation from which the ipsative score was created is reported. The AASI currently presents the data collected as ipsative z-scores for viewing time and does not report the underlying raw score category means or the standard deviation of category means for each individual. In addition, no reference is made to other participants' rank order patterns of responses. If such information is missing, ipsative scales become analogous to ordinal scales. This limits the researcher's statements about the data. He or she may indicate that a participant

possesses one attribute more than another; however, it would be impossible to indicate how much more or less of one attribute that the participant possesses than the other without access to the raw data. Able, however, refuses to release the raw data to any user of the instrument (Fischer & Smith, 1999). For this study, we plan to make norm referenced comparisons between groups of frequent pornography users and infrequent users. Because there is no access to the raw data and the data is only reported in ipsative z-scores with no reporting of the underlying means and standard deviations, the AASI was not the appropriate assessment to be used in this study.

The Affinity 2.0 is a computer program developed to help investigate sexual interest (Glasgow, 2003). The assessment was created by David Glasgow and is currently in its second revision. The original version was specifically designed as an assessment of sexual interest capable of assessing males with learning disabilities. The current version is licensed to be used as a clinical assessment tool with learning disabled adult male offenders and non-learning disabled adult male offenders. Glasgow (2003) has also approved the Affinity 2.0 to be used for research and evaluation purposes with adult male non-offenders, juvenile male offenders, and female offenders.

The Affinity consists of 10 main parts: 1) The main screen identifies the professional user of the instrument. 2) The stimulus management screen allows the user to determine which available images will be used as practice items and in what order. 3) The clicker screen consists of a simple activity designed to assess simple motor skills that may intrude on accurate reporting of the data. 4) The assessment screen is where basic information about a proposed assessment is entered. 5) The ranking screen provides a

simple prototype line drawings (see Appendix B1) of males and females of different ages.

6) The rating screen is where the participant views a number of images on the computer screen. The fully clothed models depicted in non-sexually explicit poses have been carefully selected to fall within the following groups (adult males, adult females, pubescent males, pubescent females, pre-pubescent males, pre-pubescent females, and male and female children. Each of these categories also corresponds with the prototype drawings in part 5. The participant is asked to rate each image for sexual attractiveness/unattractiveness. During this procedure, two measures of viewing time are recorded: On Task Latency (OTL) and Post Task Latency (PTL). 7) The results screen displays a table of the assessments undertaken with the option for viewing all the data gathered on any one of them. 8) The raw data chart screen displays the raw data derived from any individual assessment in the form of a table or a bar chart. 9) The mean ranks screen shows the data (converted to ordinal data) from results screen using shared axes. 10) The data management screen exports data from any number of assessments for further statistical analysis (Glasgow, 2003).

The participant begins by viewing and ranking several prototype images (see Appendix B image 1). These prototype images are simple line drawings that depict a character from each of the 8 categories (male and female adult, male and female pubescent, male and female prepubescent, and male and female child). The participant begins by rating the line drawings by attractiveness. As the participant reaches a point where none of the remaining prototype line drawings are attractive to him, the participant then begins rating the remaining drawings on their level of unattractiveness. The purpose

of the prototype ranking procedure is (given an honest response style) to predict the order of each category when these are ranked either by viewing times or the ratings of attractiveness pertaining to the individual images present in the subsequent rating procedure. This initial ranking procedure will help to identify honesty of self reports (Glasgow, 2003).

The rating procedure consists of showing the participant a total of 56 test images and several practice images (See Appendix B2). There are a total of seven images in each of the eight prototype categories represented in the ranking procedure. The participant is instructed to view the picture and then rate the image's sexual attractiveness by using a continuous sliding scale going from "attractive" to "unattractive." During this procedure two separate viewing times are covertly recorded. The first is Viewing Time on Task or On Task Latency (OTL) which is the time of first presentation of the image to the time the participant rates the image. The second viewing time recorded is the Post Task Latency (PTL) which is from when the individual rates the image to the time the change the image. For the purposes of this research study, an additional viewing time category will be used as a dependent variable: Total Time Latency (TTL) is created by summing the two viewing times (OTL + PTL). All raw scores of viewing time measurements are reported in seconds (Glasgow, 2003).

Based on the Affinity 2.0's program option of reporting all scores in their raw data form rather than only in ipsative z-scores as with the AASI (Fischer & Smith, 1999), the viewing time measure included in the Affinity 2.0 appeared to be a better measure for this particular study. With the raw data available, group comparisons could be made between

the infrequent pornography exposure group and the frequent pornography exposure group. Therefore, the viewing time measure included in the Affinity 2.0 was the measure that best suited the purposes of this study.

Demographics, personal attitudes, and sexual interest questionnaire (DPSQ).

Participants were given a brief questionnaire called The Demographics, Personal Attitudes, and Sexual Interest Questionnaire (DPSQ) specifically designed for the purposes of this study (See Appendix C). The questionnaire consisted of three sections. The first section assessed demographics (age, gender, year in school, marital status) which allowed an examination of possible confounds to the study. The second section included a social desirability scale named the M-C 2(10) developed by Strahn and Gerbasi (1972) which was a shortened version of the Marlowe-Crowne Social Desirability Scale (M-C 33) (Crowne & Marlowe, 1960). Strahan and Gebrassi developed two shorter versions of the M-C 33 called the M-C 1(10) and the M-C 2(10); however, pilot testing of the two measures showed that the M-C 2(10) was more clearly worded and less offensive (Mandell, n.d.). The purpose of using such a scale in this study was to determine if social desirability might have had an effect on a participant's viewing habits.

The third section consists of questions designed to determine the participant's sexual preference, and pornography viewing habits. The sexual preference inventory used an adaptation of the Kinsey Heterosexual-Homosexual Scale (Kinsey et al., 1998). All participants that did not choose "exclusively heterosexual with no homosexual interest" were excluded from this study. The second and third question of the sexual interest section of the questionnaire was used to determine the amount of greatest exposure to

pornography during a one year period and the participant's current exposure to pornography. On both questions of pornography exposure the individuals were able to select either "at least once a day," "at least once a week," "at least once a month," "at least once a year," "never," or "other." Participants who marked "other" were asked to describe their pornography viewing habits in order to account for participants who may experience a different cycle of pornography exposure than the options available.

Placement of these individuals were determined on a case by case basis. Based upon the data collected, we chose a number of participants from both extremes that comprised the frequent pornography users and the infrequent pornography users groups. Participants who fell between these two extremes were excluded from the study. The purpose of gathering data of both current exposure to pornography and greatest exposure to pornography over any one year period was to determine if corruption of viewing time patterns were fluid and dependent upon current exposure. If this is not the case, then viewing patterns would remain static even if an individual refrained from looking at pornography over a one year period. Due to the results of the analysis based upon pornography use during the current year, we decided that the data obtained from exposure to pornography over any given year was both irrelevant and insufficient to make a proper analysis. Consequently, all statistical analyses for group differentiation used in this study were based upon infrequent users (individuals that were exposed to pornography less than once a month throughout their lives) and frequent users (individuals exposed to pornography more than once a week over the past year). All participants were given the opportunity to participate fully in the experiment and receive their token benefit of two

free movie tickets regardless of whether their data was used in the study. The final question of this section was used to assess what kind of pornography to which the participant was most often exposed. This question allowed us to assess whether the type of pornography experienced was visually based or some other type of exposure (e.g. literary, auditory).

Procedure

Confidentiality. Because the Affinity 2.0 and the questionnaire were designed to assess a participant's sexual interest, it could have been considered somewhat intrusive. Participants, therefore, could have been somewhat inhibited to respond honestly in this study unless certain measures were taken. Because Brigham Young University is a religious institution, all students of the university are required to commit to an honor code agreement with the university. Part of this honor code agreement stipulates that students of the university must refrain from viewing pornographic materials while enrolled in the university. Violation of this can result in university sanctions, possible dismissal from the university, and even prosecution (BYU, n.d.). Given that every student must sign an honor code agreement to attend the university, heavy pornography users and even infrequent users might be reluctant to respond honestly to the questionnaire or the Affinity 2.0. The informed consent document that each potential participant read and signed informed them as to the purpose and expectations of the study. There is also a section in the informed consent document that discusses the confidentiality of the identity of the potential participant. This section assures that all information pertaining to the participant will be kept confidential and no names will be used in the study nor reported to the Honor

Code Office at Brigham Young University. This signed informed consent agreement was designed to protect the individual, lessen his inhibitions about participating, and allow him to perform honestly on both the Affinity 2.0 and the questionnaire.

Setting. Another area that potentially could impeded or resulted in a more inhibited response to the Affinity 2.0 sexual interest measurement was the actual setting. Martin (1964) showed that individuals asked to rate sexually explicit photos spent much less time looking at those photos in the presence of other raters than if they were alone. Brown et al. (1973) looked at the factors affecting viewing time of pornography. They were interested in looking for a change in viewing time as the explicitness of the sexual stimuli increased. Male participants were asked to rate a total of 15 slides that varied in sexual explicitness. Participants were informed that they could look at the images as long as they liked. Participants were either alone or observed by three graduate students that reported being interested in the study. Results indicated that the participants spent significantly less time looking at the sexually explicit slides in the presence of others than when they were alone.

The previous two studies differ from this study in that participants were asked to rate sexually explicit photos while the images used in the Affinity 2.0 were of fully clothed models. However, the participants also knew through the informed consent document that their sexual interest would be assessed. This knowledge could have resulted in the participant reducing his viewing time in the presence of other individuals. Therefore, we decided to assess each participant individually rather than in groups to minimize the risk of inhibited responses to the Affinity 2.0.

Procedure. After having read and signed the informed consent documentation, a participant was led to a private room equipped with a single computer on which the Affinity 2.0 program was installed. The researcher instructed the participant on how to start the program, helped the participant complete the primary prototype ranking procedure, and supervised the completion of the rating of two or three sample images as per the instructions given by the Affinity 2.0 manual (Glasgow, 2003). The researcher then left the room and allowed the participant to view and rate the remainder of the sample and test images. The researcher instructed the participant that he or she would wait outside to make sure that no one disturbed him. This setting assured the participant's privacy which should have reduced inhibitions and promoted honest reactions and more accurate viewing times. Once completed, the participant knocked on the door and the researcher presented the participant with the DSPQ to complete. The participant then exited the room once again to allow the client to fill out the questionnaire privately. Once completed, the participant exited the room and the researcher answered any additional questions and scheduled a second visit within two to four weeks. Finally the researcher entered the room, made sure that the data had been recorded, and prepared the program for the next participant. Once the participant returned to be re-tested, he followed the same procedure with the exception of filling out the questionnaire. After completing the Affinity 2.0 program for the second time, the participant was presented with two single admittance movie tickets to a local movie theater as a reward participating. Every participant that volunteered followed this same procedure.

Results

Demographics

Of the 146 males, 73 participants met the criteria for inclusion in the study. The mean age of the selected participants was 23.01 with the youngest being 18 and the oldest being 33. Of the 73 participants, 24.7% were Freshmen, 19.2% were Sophomores, 17.8% were Juniors, 30.1% were Seniors, and 8.2% were Graduate students. 90.4% of the participants identified themselves as Caucasian, 4.1% as Hispanic, and 4.1% of the participants identified themselves as some other ethnicity. One individual declined to identify his ethnicity. Of the 73 participants, 71.2% identified themselves as married while 28.8% identified themselves as single.

The 73 participants were divided into two groups based upon their exposure to pornography. The 36 participants that reported viewing pornography less than once a month throughout their lives were identified as Infrequent Users while the 37 individuals that reported viewing pornography more than once a week were identified as Frequent Users. The mean age for infrequent users was 23.14 ($sd = 3.279$) years with a range of 18 to 33 years. The mean age for frequent users was 22.89 ($sd = 2.525$) with a range of 18 to 29 years.

Of the infrequent users group, 33 (91%) participants reported their ethnicity as Caucasian, 1(2.8%) as Hispanic, and 1(2.8%) as other. One individual from the infrequent users group failed to report his ethnicity. Of the frequent users group, 33 (89.2%) participants reported their ethnicity as Caucasian, 2 (5.4%) as Hispanic, and 2 (5.4%) as other.

Of the 36 participants in the infrequent users group, 12 (33.3%) were Freshmen, 6 (16.7%) were Sophomores, 7 (19.4%) were Juniors, 9 (25%) were Seniors, and 2 (5.6%) were graduate students. Of the 37 individuals in the frequent users group, 6 (16.2%) were Freshmen, 8 (21.6%) were Sophomores, 6 (16.2%) were Juniors, 13 (35%) were Seniors, and 4 (10.8%) were graduate students.

Twenty-two (61.1%) of the participants in the infrequent users group were not married, while 14 (38.9%) reported being married. Of the frequent users group, 30 (81.1%) reported being single and 7 (18.9%) reported being married.

Potential Confounds

Group differences in age, ethnicity, marital status, year in school, and social desirability were all seen as possible confounds. Any group differences in these areas might have been a contributing factor in any group differences on viewing time and, therefore, might need to be accounted for statistically in the final analysis if such differences were detected.

Age. The mean age for infrequent users was 23.14 ($sd = 3.279$) years with a range of 18 to 33 years. The mean age for frequent users was 22.89 ($sd = 2.525$) with a range of 18 to 29. An independent samples t test was performed to compare the mean age of infrequent users to the mean age of frequent users. There was no significant difference on age between the two groups ($t(71) = .348, p > .05$).

Ethnicity. A chi-square test of independence was calculated comparing the ethnicity of the two groups. No significant relationship was found ($\text{chi-square}(2) = .612, p > .05$).

Year in school. A chi-square test of independence was calculated comparing the year in school of the two groups. No significant relationship was found (chi-square(4) = 3.744, $p > .05$).

Marital status. A chi-square test of independence was performed to determine any relationships between the two groups of frequent and infrequent pornography users on marital status. No significant relationship was found (chi-square(1) = 3.551, $p > .05$.)

Social desirability. Using the MC-2(10) (Mandell, n.d.), participants in the infrequent users group obtained a mean social desirability score of 4.61 ($sd = 2.046$) and the frequent users group obtained a mean social desirability score of 3.68 ($sd = 2.161$). Data appear to show a normal distribution ($skewness = .261$) and met the criteria for parametric testing. An independent samples *t*-test was performed to determine differences between the groups on social desirability. No significant differences between the two groups were detected ($t(71) = 1.898, p > .05$)

Group Differentiation Using Viewing Time

The Affinity 2.0 was designed to measure viewing time for each individual on eight categories: adult female (ADF), adult male (ADM), juvenile female (JUF), juvenile male (JUM), pre-juvenile female (PJF), pre-juvenile male (PJM), small child female (SCF), and small child male (SCM). The instrument takes two measures of viewing time on all slides within all categories: on-task latency (OTL) and post task latency (PTL). OTL measures the amount of time from when a participant first sees the image to when the participant rates the image. PTL measures the amount of time from when a participant rates the image to when he clicks the "Next Picture" button. The purpose of the PTL is to

investigate whether an individual might linger in their viewing of an image after rating that image and before moving on to the next image. We decided to create an additional viewing time category in which OTL and PTL were summed to create a third category and dependent variable called total time latency TTL.

In addition to the eight individual viewing time categories used by the Affinity 2.0, three additional viewing time categories were created in order to detect group differences. The first additional category was created by taking the average viewing time across all categories and calling it “average total viewing time” (ATVT). The two other categories were created by taking the average viewing times of all male categories and labeling it “average male viewing time” (AMVT) and taking the average viewing time of all female categories and labeling it “average female viewing time” (AFVT). The goal was then to use statistical analysis to detect differences between infrequent pornography users and frequent pornography users on the following independent variables: ATVT, AFVT, AMVT. The averages of the eight individual categories used by the Affinity 2.0 were also included as independent variables and labeled: AADF, AADM, AJUF, AJUM, APJF, APJM, ASCF, and ASCM. These analyses were executed using OTL, PTL, and TTL as dependent variables.

As the data of the eight individuals categories were examined for OTL, we discovered that each category was skewed. In all cases, it appeared that the data was skewed more than twice its standard error. Two categories showed a skewness of almost six times its standard error. When analyzing the combined categories ATVT, AFVT, and

AMVT we discovered that the data for AMVT was also skewed but that ATVT and AFVT were not (See Table 1).

Table 1

Skewness of On Task Latency

Category	Mean	Std. Deviation	Skewness	Std. Error
ATVT	2.6732	.66039	.310	.281
AMVT	2.1052	.71477	1.066	.281
AFVT	3.2412	.82217	.393	.281
AADF	4.3391	.37577	1.184	.281
AADM	2.3762	.22428	1.665	.281
AJUF	4.0614	.26085	.576	.281
AJUM	2.1483	.82172	1.130	.281
APJF	2.2841	.97477	1.543	.281
APJM	2.0380	.78247	1.528	.281
ASCF	2.2804	.98173	1.474	.281
ASCM	1.8583	.70383	1.665	.281

Note. N=73.

We decided that since the data was significantly skewed for all the categories with the exception of ATVT and AFVT that non-parametric analyses should be utilized as a means of differentiation between groups of frequent and infrequent pornography users. Although

parametric testing is known to be more sensitive than non-parametric measures, it appears more prudent to be cautious in the assessments in order to avoid Type I errors and remain consistent in the analyses that were used.

Group Differences: On Task Latency (OTL)

Average total viewing time (ATVT) on OTL. Participants in the infrequent pornography use group looked at all the images for a median time of 2.61 seconds per slide. Participants in the frequent pornography use group looked at all the images for a median time of 2.56 seconds per slide. A Mann-Whitney U test was performed to determine any differences between the groups on ATVT. No statistically significant differences could be determined ($U(1) = 662.5, p > .05$).

Average male viewing time (AMVT) on OTL. Participants in the infrequent pornography use group looked at male images for a median time of 1.84 seconds per slide. Participants in the frequent pornography use group looked at male images for a median time of 1.98 seconds per slide. A Mann-Whitney U test was performed to determine any differences between the groups on AMVT. No statistically significant differences could be determined ($U(1) = 620.5, p > .05$).

Average female viewing time (AFVT) on OTL. Participants in the infrequent pornography use group looked at female images for a median time of 3.18 seconds per slide. Participants in the frequent pornography use group looked at female images for a median time of 3.11 seconds per slide. A Mann-Whitney U test was performed to determine any differences between the groups on AFVT. No statistically significant differences could be determined ($U(1) = 607, p > .05$).

Average adult female (AADF) on OTL. Participants in the infrequent pornography use group looked at adult female images for a median time of 4.38 seconds per slide. Participants in the frequent pornography use group looked at adult female images for a median time of 3.99 seconds per slide. A Mann-Whitney U test was performed to determine any differences between the groups on AADF. No statistically significant differences could be determined ($U(1) = 497.5, p > .05$).

Average adult male (AADM) on OTL. Participants in the infrequent pornography use group looked at adult male images for a median time of 1.82 seconds per slide. Participants in the frequent pornography use group looked at adult male images for a median time of 1.96 seconds per slide. A Mann-Whitney U test was performed to determine any differences between the groups on AADM. No statistically significant differences could be determined ($U(1) = 583, p > .05$).

Average juvenile female (AJUF) on OTL. Participants in the infrequent pornography use group looked at juvenile female images for a median time of 4.13 seconds per slide. Participants in the frequent pornography use group looked at juvenile female images for a median time of 3.82 seconds per slide. A Mann-Whitney U test was performed to determine any differences between the groups on AJUF. No statistically significant differences could be determined ($U(1) = 603, p > .05$).

Average juvenile male (AJUM) on OTL. Participants in the infrequent pornography use group looked at juvenile male images for a median time of 1.92 seconds per slide. Participants in the frequent pornography use group looked at juvenile male images for a median time of 2.00 seconds per slide. A Mann-Whitney U test was

performed to determine any differences between the groups on AJUM. No statistically significant differences could be determined ($U(1) = 625.5, p > .05$).

Average pre-juvenile females (APJF) on OTL. Participants in the infrequent pornography use group looked at pre-juvenile female images for a median time of 1.86 seconds per slide. Participants in the frequent pornography use group looked at pre-juvenile female images for a median time of 2.18 seconds per slide. A Mann-Whitney U test was performed to determine any differences between the groups on APJF. No statistically significant differences could be determined ($U(1) = 580.00, p > .05$).

Average pre-juvenile males (APJM) on OTL. Participants in the infrequent pornography use group looked at pre-juvenile male images for a median time of 1.81 seconds per slide. Participants in the frequent pornography use group looked at pre-juvenile male images for a median time of 1.80 seconds per slide. A Mann-Whitney U test was performed to determine any differences between the groups on APJM. No statistically significant differences could be determined ($U(1) = 634.5, p > .05$).

Average small child female (ASCF) on OTL. Participants in the infrequent pornography use group looked at images of small female children for a median time of 2.00 seconds per slide. Participants in the frequent pornography use group looked at images of small female children for a median time of 2.00 seconds per slide. A Mann-Whitney U test was performed to determine any differences between the groups on ASCF. No statistically significant differences could be determined ($U(1) = 606.5, p > .05$).

Average small child male (ASCM) on OTL. Participants in the infrequent pornography use group looked at images of small male children for a median time of 1.62

seconds per slide. Participants in the frequent pornography use group looked at images of small male children for a median time of 1.60 seconds per slide. A Mann-Whitney *U* test was performed to determine any differences between the groups on ASCM. No statistically significant differences could be determined ($U(1) = 567.00, p > .05$).

Group Differences On PTL & TTL

Careful inspection of viewing time PTL across all categories showed a median viewing time range from .92 second to .68 seconds, only a .24 second difference (See Figure 1).

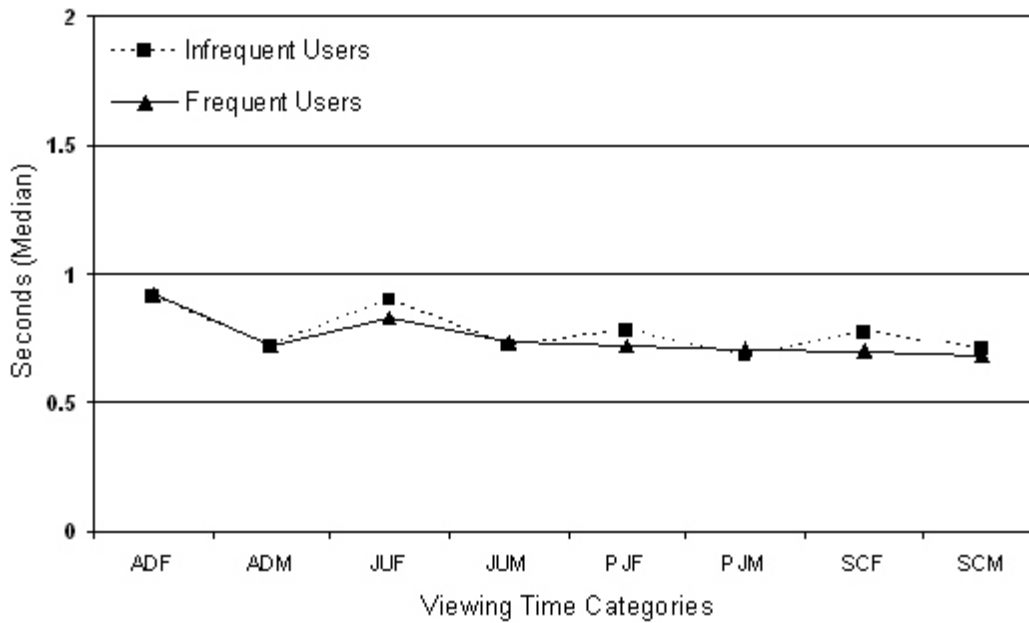


Figure 1. Median Viewing Time on Post Task Latency

Such a short amount of time indicated that participants were not lingering in viewing images once they rated the image on sexual attractiveness (OTL). It appeared that once the participants rated the image, they immediately clicked on the “next picture” button and moved on. Because the participants did not seem to be observing the images after rating them, it appears that PTL would yield no useful information for this study and may be an unnecessary measure in the Affinity 2.0. We decided not to do any statistical analyses using the ineffective PTL viewing time measure (See Table 2). TTL was created by combining OTL and PTL. Since PTL was determined to be an ineffective measure of viewing time, the TTL measure of viewing time was also determined to be irrelevant.

Temporal Stability

On task latency. In order to examine the temporal stability of the Affinity 2.0, subjects were asked to return two to four weeks after their first experience with the Affinity 2.0 and retake the test. Of the 73 participants in both the frequent and infrequent user groups, 57 returned to take the Affinity 2.0 for the second time (78%). As mentioned earlier, the data obtained from the eight individual viewing time categories (ADF, ADM, JUF, JUM, PJF, PJM, SCF, SCM) were more than twice its standard error of skewness (See Appendix D - 1). Therefore, we used a non-parametric correlation to determine the measure’s temporal stability. A Spearman’s Rho was used to calculate the reliability of OTL of the eight different categories of the Affinity 2.0 (See Table 3). The analysis showed the strongest correlations for juvenile females and adult females, somewhat strong correlations for small male child and pre-juvenile female, and relatively weak correlations for adult males, small female child, juvenile male, and pre-juvenile male.

Table 2

Medians and Standard Errors for Post Time Latency (Seconds Per Slide)

	Group	N	Median	Std. Error Mean
ADF	Infrequent	36	0.9079	.05810
	Frequent	37	0.9186	.06169
ADM	Infrequent	36	0.7214	.03620
	Frequent	37	0.7171	.04621
JUF	Infrequent	36	0.9050	.05994
	Frequent	37	0.8286	.04440
JUM	Infrequent	36	0.7228	.02602
	Frequent	37	0.7329	.02564
PJF	Infrequent	36	0.7821	.02219
	Frequent	37	0.7243	.03728
PJM	Infrequent	36	0.6800	.02995
	Frequent	37	0.7086	.03139
SCF	Infrequent	36	0.7664	.07384
	Frequent	37	0.7000	.04039
SCM	Infrequent	36	0.7128	.03355
	Frequent	37	0.6829	.03226

Table 3

Spearman's Rho (r_s) on OTL

	ADF	ADM	JUF	JUF	PJF	PJM	SCF	SCM
r_s	.609	.538	.718	.511	.577	.466	.526	.581

Note. N = 73.

Group Differences Using Temporal Stability

We decided that comparing the temporal stability of infrequent pornography users and frequent pornography users could be another method of differentiating between the two groups. The purpose of this type of analysis was to determine whether one group was more stable in their viewing patterns than the other group. Although the numbers of participants in these two groups were too small to make any definitive conclusions, it remains a plausible method of differentiation which merits further investigation in another study. A Spearman's Rho was calculated for both groups (See Table 4).

Table 4

Spearman's Rho (r_s) of Frequent Users and Infrequent Users on OTL

OTL Categories	r_s	
	Infrequent Users	Frequent Users
ADF	.677	.576
ADM	.541	.501
JUF	.749	.667
JUM	.518	.565
PJF	.624	.524
PJM	.510	.401
SCF	.478	.544
SCM	.735	.454

Observation of the data appeared to indicate that with the exception of two categories, infrequent pornography users may be more temporally stable than frequent pornography users. This may indicate that infrequent pornography users were more stable in their viewing patterns while the frequent users were less stable from time one to time two. However, there is no statistical measure that can test differences in temporal stability using a Spearman's Rho correlation. Although the data does not merit the use of parametric testing, there is a parametric analysis that would allow us to compare temporal stability between groups using the Fisher Z . This test was designed to test for differences between two independent correlations.

The procedure requires that we convert a Pearson's r to a corrected Fisher's Z to correct for any skew that may occur in the sampling distribution of r as it deviates from 0 (Smith & Fischer, 1999). For the sake of exploration and to show what results could be obtained, we decided to perform the analysis using Pearson's correlations of the data obtained from study (See Table 5). Tests of differences between independent correlations were performed on the eight categories of the Affinity 2.0 (ADF, ADM, JUF, JUM, PJF, PJM, SCF, SCM). No between group differences were detected for frequent and infrequent users on ADF ($z(51) = .9886, p > .05$). No differences between the two groups were found for ADM ($z(51) = 1.36, p > .05$). No differences were detected between groups of frequent pornography users and infrequent pornography users for JUF ($z(51) = .7566, p > .05$). No differences were detected between the two groups for JUM ($z(51) = .3747, p > .05$). There was a significant difference detected between groups of infrequent pornography users and frequent pornography users for PJF ($z(51) = 2.6481, p < .05$).

Table 5

Pearson's correlations and Fisher Z of Frequent Users and Infrequent Users on OTL

Categories	<i>r</i>		<i>Z</i>	
	Infrequent Users	Frequent Users	Infrequent Users	Frequent Users
ADF	.604	.420	.701	.448
ADM	.488	.727	.536	.918
JUF	.689	.573	.848	.655
JUM	.449	.531	.485	.590
PJF	.794	.331	1.085	.343
PJM	.371	.423	.338	.454
SCF	.630	.478	.741	.523
SCM	.604	.346	.701	.360
	N = 29	N = 28	N = 29	N = 28

This indicates that infrequent pornography users were more temporally stable than the frequent pornography use groups. These results could signify that frequent pornography users were less consistent in their viewing patterns with regards to pre-juvenile females than infrequent pornography users. For PJM there appear to be no differences between infrequent pornography users and frequent pornography users ($z(51) = .2355, p > .05$). There were also no differences between the groups for both SCF ($z(51) = .7780, p > .05$) and SCM ($z(51) = 1.2170, p > .05$). Although a comparison of temporal stability to differentiate between groups of frequent and infrequent pornography users appears to be very applicable and informative, this parametric test is operating on skewed data and should be interpreted with caution.

Discussion

The main focus of this study was to detect group differences between frequent pornography and infrequent pornography users using a measure of viewing time utilizing non-erotic visual stimuli. Although viewing pornography is not necessarily considered to be a deviant sexual behavior, research has shown that extended viewing of pornographic material by men has been linked to decreased sexual satisfaction with one's partner (Zillmann, 1994), decreased marital satisfaction (Kenrick & Gutierrez, 1989), objectification of women (Mohr & Zanna, 1990), increased acceptance of rape myths (Buchman, 1989), and increased callousness toward women (Allen et al., 1995).

It may be possible to discern heavy pornography use by a surreptitious measure of viewing time. If a viewing time measure could detect differences between groups of frequent and infrequent pornography users, it might be a valuable clinical tool in predicting and ameliorating such negative outcomes. However, before using it as a predictor of callousness, marital and sexual satisfaction, or sexual identity, we must first assess its ability to discriminate between individuals involved in frequent and infrequent pornography use.

We preferred to use a measure of sexual interest utilizing viewing time rather than other measures, such as penile plethysmography, because of its decreased invasiveness and its increased versatility being able to be used by both men and women. We also decided to use a viewing time measure of sexual interest that utilized non-erotic images because of its ability to reach a wider population of individuals with less ethical concerns. Of the two

available viewing time measures that used non-erotic visual stimuli, the Affinity 2.0 was selected because it allowed access to the raw viewing time data where the AASI did not.

Results of this study and one other study utilizing the Affinity 2.0 both demonstrate that viewing patterns of adult males are very similar to viewing time patterns reported in previous viewing time measures and penile plethysmography measures which utilized nude images (Freund, 1963; Brown, 1976; Quinsey et al., 1996). Male participants in all of these studies showed the most interest in adult females with adolescent females as a close second. Males then showed significantly less interest in younger children and men of all ages. Given the similarity of results, it appears that the Affinity 2.0 is measuring the same construct (sexual interest) as the other measures, adding to its construct validity.

No differences were detected between the two groups when comparing the average viewing time OTL across all eight categories (ATVT). There were also no differences between infrequent and frequent pornography users when comparing their average viewing time OTL with images of males (AMVT) and females (AFVT). We also attempted to detect differences between the two groups of participants with the eight separate categories (AADF, AADM, AJUF, AJUM, APJF, APJM, ASCF, ASCM). Although there did seem to be a tendency for infrequent pornography users to look at adult female images for more time than frequent pornography users, there was no statistical evidence of a difference between the two groups on OTL. Perhaps with a larger sample size, a detectable difference would appear. As with the AADF category, there were no statistical differences between the two groups on OTL.

All of the assessments performed utilized the first viewing time measure OTL as the dependent variable. The second viewing time measure, PTL, did not appear to be a useful measure of viewing time and was not used in this study. This also excluded the third viewing time measure, TTL, which was the sum of OTL and PTL.

Because no differences between groups were detected using current frequent users, we also felt that testing whether corruption of viewing patterns was static or fluid would be both impractical and irrelevant. It was even less likely that a distinction could be made between infrequent pornography users and past frequent users who changed to infrequent users over the past year if no differentiation could be made between current frequent users and infrequent users. Therefore, this particular analysis was not performed.

Although temporal stability is not necessarily an attribute of a test, it is indeed an artifact of the total context of testing. It is our belief that all relevant research should include assessments of temporal stability. Although it is impractical to comment on the temporal stability of the measure as a whole, some useful information pertaining to these two groups of participants can be gained. Non parametric correlations were utilized to examine temporal stability. Results indicated the strongest correlations for juvenile females and adult females, somewhat strong correlations for small male child and pre-juvenile female, and relatively weak correlations for adult males, small female child, juvenile male, and pre-juvenile male.

The assessment of temporal stability motivated us to use it as a differentiating characteristic between the two groups. Using the method of comparing differences between two independent correlations, it was discovered that infrequent pornography

users were more temporally stable in their viewing patterns of pre-juvenile females than frequent users. An interpretation of these results could indicate that infrequent pornography users are more stable in their viewing patterns of pre-juvenile females while frequent pornography users may be more sporadic. All other comparisons of temporal stability did not yield statistically significant differences.

Although parametric testing of this sort is robust and could possibly handle some skew, the reader is reminded of the small N and that the underlying data of this study was skewed; therefore, interpretation of these comparisons of temporal stability should be done with caution. Nevertheless, we felt it important to show how this procedure is performed and that it is a viable approach in differentiating groups of frequent and infrequent pornography users.

Possibilities for Results

Sensitivity of the measure. There are several possibilities for not finding any differences between groups. It is possible that the Affinity 2.0 is not sufficiently sensitive of a measure to differentiate pornography users from non users. The measure was originally designed as an ipsative measure of sexual interest to be used in the detection of paraphilias. Perhaps the Affinity 2.0 is more effective in detecting differences in sexual interest between more divergent groups such as males and females, homosexuality and heterosexuality, or sexual offenders and non-offenders.

Erotic vs. non-erotic stimuli. The Affinity 2.0 is one of two measures of sexual interest that does not use erotic visual stimuli. Other viewing time measures use nude images in their assessment. Although no differences between groups could be detected

using statical analyses, infrequent pornography users did tend to look at images of adult females longer than frequent pornography users. Perhaps if the stimuli were more erotic in nature (nude models rather than fully clothed models) a more discernible difference could be obtained.

No differences in viewing patterns. Finally, there is the possibility that frequent pornography users experience no corruption of viewing patterns and therefore can not be differentiated from infrequent pornography users. Perhaps the corruption in viewing patterns only occur with more extreme sexual interests as detected by other viewing time measures. (Brown, 1976; Quinsey et al., 1996; Brown et al., 1973; Harris et al., 1995). Perhaps there are no identifiable differences between heavy pornography users and non-users or, perchance, a difference could be made by means other than viewing time.

Weaknesses of The Study

Relatively small N. With almost a year and a half of collecting data, we were able to obtain approximately 146 participants; however, only half of the participants met the criteria for inclusion in this study. This meant that there were two groups of 36 and 37 participants. Although we originally planned to do the analyses with 35 to 40 participants in each group, they also realize that, like with any other study, a larger N is always desired. A larger N would have added strength and robustness to this study. In addition, as mentioned earlier, we were very close to detecting a difference between groups for adult female images on OTL. If a larger N were obtained, perhaps that difference could have been detected by statistical analysis. Also, a larger N might have provided a less skewed distribution which would have allowed for parametric analyses. Parametric testing

may have provided greater robustness and increased sensitivity. Parametric testing would also have allowed us to utilize statistical analyses that might have detected differences in temporal stability between the two groups.

Generalizability. All participants of this study were college aged students from Brigham Young University (BYU). Because the university is a religious and predominantly LDS institution, non-religious and individuals of different religious denominations were not represented in this study. This being the case, it becomes very difficult to generalize the results to college aged individuals having differing religious views. An examination of the demographics also revealed that the sample population was also predominantly Caucasian and that almost all other ethnicities were not represented. Although this sample seems to be representative of the demographics of BYU, it does limit one's ability to generalize the results to individuals of other ethnicities. Because this sample consisted of college aged students, there are limitations as to what can be generalized to different age groups. We do feel, however, that this question is worth further investigation and that it would be prudent to replicate this study at other universities and institutions, as well as with individuals of differing ages, such as adolescents, in order to increase its generalizability.

Assessment of pornography use. In order to assess a participant's exposure, we relied on self report methods. Self report assessments are known to be questionable at best. BYU is a religious university which requires its students to agree to hold high moral standards. The university, on occasion, has even brought disciplinary action to students who were caught in the act of viewing pornography on school property and reserves the

right to suspend or even expel any student that is caught looking at pornographic materials. Because of this high standard against pornography use, it is possible that some non-users may have been untruthful in the report of exposure to pornography. Several steps were taken to provide each participant a certain amount of privacy, hoping to ensure honest reporting of their pornography use. Participants were assured in the informed consent form that no information gained from this study would be reported to BYU's honor code office and that, other than their signature on the signed consent form (kept separate from the questionnaire), they would only be identified by an ID number. We also compared social desirability scores of both frequent users, who were mostly admitted pornography users selected from the sexual concerns groups, with reported infrequent users collected mostly from cluster sampling in psychology courses and found no significant differences. Although there were many steps taken to promote honest responding, there still remains the fact that self report measures are sometimes questionable.

Theoretical Implications

Sensitivity of viewing time measures. Given the results of this study, it appears that viewing time assessments of sexual interest using non-erotic visual stimuli may not be able to identify heavy pornography use. Perhaps these types of assessments are limited to identifying sexual interest and differentiating between more deviant populations and normal populations. It is possible, however, that viewing time assessments utilizing more erotic visual stimuli could possess the sensitivity necessary to detect a difference between groups of frequent and infrequent pornography users. Although sexual interest

assessments utilizing erotic-visual stimuli are more invasive and are limited to adult populations who are willing to looking at erotic images, its use of pornography to assess the possibility of heavy pornography use may be a necessary component in differentiating between groups of pornography users and non-users.

Pornography use has no effect. There is also the possibility that there are no detectable differences between frequent and infrequent pornography users because there are no differences. Perhaps pornography use has no adverse effects on individuals. If this is the case, then the possibility exists that it is not pornography use that contributes to marital and sexual dissatisfaction, acceptance of rape myths, female objectification, callousness, and all other negative consequences that were mentioned in the literature review of this study. In addition, this could also mean that heavy pornography use does not actually lead to increased sexual offending and aggression which is a very popular and hotly debated idea (Seto, Maric. & Barabee, 2001; Allen, Alessio, & Brezgel, 1995). This idea may introduce the possibility that there is another characteristic, trait, or experience that is in operation which is actually responsible for the afore mentioned negative consequences and which can also predispose an individual to engage in frequent pornography use. Perhaps, pornography use is only a symptom of the actual problem that we have yet to identify. If this is the case, it seems necessary to extensively explore other factors that contribute to pornography use in order to identify what the underlying problem is. Identification of this characteristic, trait, or experience could allow for the development of treatment approaches that may ameliorate sexual and marital

dissatisfaction, callousness toward and objectification of women, acceptance of rape myths, sexual offending, as well as addiction to pornography.

Concluding Statement

Much of the research done on the effects of pornography use seems to be very powerful and rather convincing. Bernstein, Huang, Teng, and Lin (1986), had participants rate images taken from Playboy and Penthouse magazines in which the model's face was either obliterated or blurred beyond recognition. Their results indicated that participants from both the neutral and anti-pornography groups rated the blurred images as much less appealing than did the heavy pornography users group. This research seems to indicate that there may actually be differences between heavy pornography users and non-users. Perhaps the viewing patterns of heavy pornography users have been corrupted to such an extent that they could be differentiated from the viewing patterns of non-pornography users. If this is the case, perhaps there is some sort of measure that could identify pornography use and be more accurate than self report.

The purpose of this study was to differentiate frequent pornography users from infrequent pornography users according to their viewing time. We utilized a newly developed measure of viewing time using non-erotic visual stimuli (Affinity 2.0). The reason for using non-erotic stimuli was to reduce invasiveness, expand its applicability to wider populations, and decrease ethical concerns. We, however, were unable to differentiate the two groups based on viewing time. It is possible that a measure may indeed exist or could be created that is capable of differentiating frequent pornography users and infrequent users and that the Affinity 2.0 merely lacks the needed sensitivity to

differentiate these two groups. The results also may lead to the idea that viewing time is not corrupted by pornography use and that no differences between frequent and infrequent pornography users exist. If this is the case, there may be another factor other than pornography use that is responsible for the aforementioned negative effects which also predisposes an individual to become a frequent pornography user. Identification of pornography use by means other than self report remains relatively unexplored and, therefore, merits further scrutiny.

References

- Abel, G. G., Huffman, J., Wargerg, B., & Holland, C. L. (1998, April). Visual reaction time and plethysmography as measures of sexual interest in child molesters. *Sex Abuse: Journal of Research and Treatment, 10*(2), 81-95.
- Abel, G. G., Jordan, A., Hand, C. G., Holland, L. A., & Phipps, A. (2001, May). Classification models of child molesters utilizing the Abel Assessment for Sexual Interest. *Child Abuse and Neglect, 25*(5), 703-718.
- Able, G. G., Jordan, A., Rouleau, J. A., Emerick, R., Barbosa-Whitehead, S., & Osborn, C. (2004, July). Use of visual reaction time to assess male adolescents who molest children. *Sexual Abuse: Journal of Research and Treatment, 16*(3), 255-265.
- Abel, G. G., Sawry, S. S., Karlstrom, E., Osborn, C., & Gillespie, C. F. (1994). Screening tests for pedophilia. *Criminal Justice and Behavior, 21*, 115-131.
- Allen, M., Alessio, D. D., & Brezgel, K. (1995, December). A meta-analysis summarizing the effects of pornography II: Aggression after exposure. *Human Communication Research, 22*(2), 258-283.
- Allen, M., Emmers, T., Geghardt, L., & Geiry, M.A. (1995). Exposure to pornography and acceptance of rape myths. *Journal of Communications, 45*(1), 5-26.
- Amoroso, D. M., Brown, M., Prueasse, M., Ware, E. E., & Pilkey, E. W. (1970). An investigation of behavioral, psychological and physiological reactions to pornographic stimuli. *Technical reports of the Commission on Obscenity and Pornography (Vol 8)*, Washington, D.C.: U.S. Government Printing Office.

- Asher, G. (2001). *E-pornography offers opportunities for research*. Retrieved November 6, 2003, from Indiana University, School of Library and Information Science Web site: http://www.slis.indiana.edu/news/printable.php?story_id=360
- Attorney General's Commission on Pornography. (1986). *Final report*. Washington, DC: U.S. Department of Justice.
- Bergner, R. M., & Bridges, A. J. (2002). The significance of heavy pornography involvement for romantic partners: Research and clinical implications. *Journal of Sex & Marital Therapy, 28*, 193-206.
- Bernstein, I. H., Huang, M., Teng, G., and Lin, T. (1986, April). Effects of attitudes toward pornography upon male judgments of female attractiveness. *Perception and Psychophysics, 39*(4), 287-293.
- Bridges, A. J., Bergner, R. M., & Hesson-Mcinnis, M. H. (2002). Romantic partners' use of pornography: Its significance for women. *Journal of Sex & Marital Therapy, 29*, 1-14.
- Brigham Young University, (n.d.). Church educational system honor code. Retrieved November 16, 2003 from <http://campuslife.byu.edu/HONORCODE/chaste.htm>.
- Brown, M. (1979). Viewing time of pornography. *The Journal of Psychology, 102*, 83-95.
- Brown, M., Amoroso, D. M., Ware, E. E., Pruesse, M., & Pilkey, D. W. (1973). Factors affecting viewing time of pornography. *The Journal of Social Psychology, 90*, 125-135.
- Buchman, J. G. (1990). Effects of repeated exposure to nonviolent erotica on attitudes

about sexual child abuse (Doctoral Dissertation, Indiana University, 1989)

Dissertation Abstracts International, 50(7-a), 1839.

Burt, M. R. (1980, February). Cultural myths and support for rape. *Journal of Personality and Social Psychology*, 38(2), 217-230.

Carnes, P., Delmonico, D. L., Griffen, E., & Moriarity, J. M. (2001). *In the shadows of the net: Breaking free of compulsive online sexual behavior*. Center City, Minnesota: Hezelden.

Christensen, F. M. (1990). *Pornography: The other side*. New York: Praeger.

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24, 349-354.

Elias, M. (February 26, 2002). Cybersex follows Mars Venus patterns. *USA Today*, D.09.

Enough is Enough. (2003). *Alarming facts about the cybersex industry*. Retrieved on October 28, 2003, from <http://www.enough.org/alarmingfacts.htm>.

Family Safe Media (2003). *Pornography statistics 2003*. Retrieved on October 29, 2003, from http://www.familysafemedia.com/pornography_statistics.html

Fischer, L. (2000). The Abel Screen: A non-intrusive alternative? In D.R. Laws, S.M. Hudson & T. Ward (Eds.), *Remaking relapse prevention with sex offenders: A sourcebook*, Thousand Oaks, CA: Sage Publications.

Fischer, L., & Smith, G. (1999). Statistical adequacy of the Abel Assessment for interest in paraphilias. *Sexual Abuse: A Journal of Research and Treatment*, 11(3), 195-205.

- Fisher, W. A., & Barak, A. (1989). Sex education as a corrective: Immunizing against possible effects of pornography. D. Zillmann & J. Bryant (Eds.), *Pornography: Recent Research, Interpretations, and Policy Considerations* (pp. 289-320). Hillsdale, NJ: Erlbaum.
- Fisher, W. A., & Barak, A. (1991). Pornography, erotica and behavior. More questions than answers. *International Journal of Law and Psychiatry*, 14, 65-83.
- Fisher, W. A., & Grenier, G. (1994). Violent pornography, antiwoman thoughts, and antiwoman acts: In search of reliable effects. *Journal of Sex Research*, 31(1), 23-38.
- Ford, M. A., & Linney, J. A. (1995). Comparative analysis of juvenile sexual offenders, violent non-sexual offenders, and status offenders. *Journal of Interpersonal Violence*, 10, 56-70.
- Frammolino, R., & Huffstutter, P.J. (2002, January 6). Actress, the producer and their porn revolution. *Los Angeles Times Magazine*.
- Freund, K. (1963). A laboratory method for diagnosing predominance of homo-hetero-erotic interest in the male. *Behavioral Research Therapy*, 1, 85-93.
- Garcia, L. T. (1986). Exposures to pornography and attitude about women and rape: A correlative study. *Journal of Sex Research*, 22, 378-385.
- Glasgow, D. (2003). *Affinity 2.0*. [Software and Instruction Manual], David Glasgo: Database Right.
- Glasgow, D. V., Croxen, J., and Osborne, A. (2003). An assessment tool for investigating pedophile sexual interest using viewing time: An application of single

case methodology. *British Journal of Learning Disability*, 31, 96-102.

- Gray, S. (1999, September). Outcomes of the Abel assessment and the penile plethysmograph in a sample of sex offenders in outpatient treatment. In S. Johnson (Chair), *Current research comparing plethysmography with the Abel Assessment for Sexual Interest*. Symposium conducted at the annual meeting of the Association for the Treatment of Sexual Abusers, Orlando, FL.
- Harris, G., T., Rice, M. E., Quinsey, V. L., & Chaplin, T. C. (1995). Viewing time as a measure of sexual interest among child molesters and normal heterosexual men. *Behaviour Research and Therapy*, 34(4), 389-394.
- Hassebrauck, M. (1998). The visual process method: A new method to study physical attractiveness. *Evolution and Human Behavior*, 19(2), pp. 111-123.
- Howitt, D. (1989). Pornography: The recent debate. In G. Cumberbatch & D. Howitt (Eds.), *A measure of uncertainty: The effects of mass media* (pp. 61-80). London: Libbey.
- Kaufman, K. S., Rogers, D., & Daleiden, E. (1998, October). *Sexual interest in incarcerated adolescent offenders: A test-retest analysis*. Poster session presented at the annual meeting of the Association for the Treatment of Sexual Abusers, Vancouver, British Columbia.
- Kenrick, D. T., Gutierrez, S. E., & Goldberg, L. L. (1989). Influence of popular erotica on judgment of strangers and mates. *Journal of Experimental Social Psychology*, 25, 159-167.
- Kinsey, A. C., Pomeroy, W. B., & Martin, C. E. (1998). *Sexual behavior in the human*

- male*. Bloomington, IN: Indiana University Press.
- Krueger, R. B., Bradford, J., & Graham, D. G. (1998). Report from the committee on sex offenders: The Abel Assessment for Sexual Interest—a brief description. *The Journal of the Academy of Psychiatry and the Law*, 26(2), 277-280.
- Kutchinsky, B. (1991). Pornography and rape: Theory and practice? *International Journal of Law and Psychiatry*, 14, 47-64.
- Leckhart, B. T., Keeling, K. R., & Bakan, P. (1966). Sex differences in the duration of visual attention. *Perception and Psychophysics*, 1(11), 374-376.
- Lederer, L. (Ed.). (1980). *Take back the night: Women and pornography*. New York: William Morrow.
- Love, R. E., Sloan, L. R., & Schmidt, M. J. (1976). Viewing pornography and sex guilt: The piggish, the prudent, and the profligate. *Journal of Consulting and Clinical Psychology*, 44(4), 624-629.
- MacKay, J. (2001). Global sex: Sexuality and sexual practices around the world. *Sexual and Relationship Therapy*, 16(1), 71-82.
- Mandell, R. (N. D.). Evaluating shorter versions of the Marlowe-Crowne Social Desirability Scales. National Institutes of Health. Retrieved on December 12, 2003, from http://www1.od.nih.gov/behaviorchange/measures/PDF/MC10_scoring.pdf.
- Marshall, W. L., & Barrett, S. (1990). *Criminal neglect: Why sex offenders go free*. Toronto: Doubleday.
- Martin, B. (1964). Expression and inhibition of sex motive arousal in college males.

Journal of Abnormal and Social Psychology, 68, 307-312.

Mohr, D., & Zanna, M. P. (June, 1990). Treating women as sexual objects: Look to the (gender schematic) male who has viewed pornography. *Personality and Social Psychology Bulletin*, 16(2), 296-308.

Mosher, D. L., (1966). The development and multitrait-multimethod matrix analysis of three measures of three aspects of guilt. *Journal of Consulting Psychology*, 30, 25-29.

Mosher, D. L., & Cross, H. J. (1971). Sex guilt and premarital sexual experiences of college students. *Journal of Consulting and Clinical Psychology*, 36, 27-32.

Oddone-Paolucci, E., Genuis, M., & Violato, C. (2000). A meta-analysis of the published research on the effects of pornography. In C. Violato, E. Oddone-Paolucci, and M. Genuis (Eds.), *The changing family and child development* (pp. 48-59). Aldershot: Ashgate.

Quinsey, V. L., Chaplin, T. C., & Carrigan, W. F. (1979). Sexual preferences among incestuous and non-incestuous child molesters. *Behavior Therapy*, 7, 563-565.

Quinsey, V. L., & Earls, C. M. (1990). The modification of sexual preferences. In Marshall, W. L., Saws, D. R. And Barbarce, H. E. (Eds.) *Handbook of sexual assault: Issues, theories, and treatment of the offender*. New York: Kluwer Academic Publishers.

Quinsey, V. L., Ketsetzis, M., Earls, C., & Karamanoukian, A. (1996). Viewing time as a measure of sexual interest. *Ethology and Sociobiology*, 17(5), 341-354.

Quinsey, V. L., Steinman, C. M., Bergersen, S. G., & Holmes, T. F. (1975). Penile

- circumference, skin conductance, and ranking responses of child molesters and "normals" to sexual and nonsexual visual stimuli. *Behavior Therapy*, 6(2), 213-219.
- Rosen, R. C., & Beck, J. G. (1988). *Patterns of sexual arousal: Psychophysiological processes and clinical applications*. New York: The Guilford Press.
- Rosenweig, S. (1942). The photoscope as an objective device for evaluating sexual interest. *Psychosomatic Medicine*, 4, 150-158.
- Saunders, R.M., & Naus, P.J. (2003). The impact of social content and audience factors on responses to sexually explicit videos. *Journal of Sex Education and Therapy*, 19(2), 117-131.
- Schneider, J. (2000). Effects of cybersex addiction on the family: Results of a survey. *Sexual Addiction and Compulsivity*, 7, 31-58.
- Seto, M. C., Maric, A., & Barbaree, H. E. (2001). The role of pornography in the etiology of sexual aggression. *Aggression and Violent Behavior*, 6, 35-53.
- Smith, G., & Fischer, L. (1999). Assessment of juvenile sexual offenders: Reliability and validity of the Abel Assessment for interest in paraphilias. *Sexual Abuse: A Journal of Research and Treatment*, 1(3), 207-216.
- Sobel, M. E., (1990). Effect analysis and causation in linear structural equation models. *Psychometrika*, 55(3), 495-515.
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogeneous versions of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, 28, 191-193.
- The Aurora Center for Advocacy & Education. (2001). Pornography: Myths and facts,

University of Minnesota. Retrieved on December 9, 2003 from

<http://www1.umn.edu/aurora/pornmythsandfacts.html>

Thornburg, D, & Lin, H., (Eds.). (2002). *Youth, pornography and the internet.*

Washington D.C.: National Academy Press.

United States Commission on Obscenity and Photography. (1970). *Report of the*

Commission on Obscenity and Pornography. New York: Bantam Books.

Utah Legislature (2002). *Utah Code and Consitution* . Retrieved on October 15, 2003,

from http://www.le.state.ut.us/~code/TITLE76/htm/76_0C128.htm

Weaver, J. (1992). The perceptual and behavioural consequences of exposure to

pornography: The social science and psychological research evidence. In C. Itzan

(Ed.), *Pornography: Women, violence & civil liberties* (pp. 284-309). Oxford

University Press.

Woolf, H. B. (Ed.). (1976). *Webster's New Collegiate Dictionary.* Springfield: G. & C.

Merriam Company.

Wright, L. W., & Adams, H. E. (1994). Assessment of sexual preference using a choice

reaction time task. *Journal of Psychopathology and Behavioral Assessment,*

16(3), 221-231.

Zamansky, H. S. (1956). A technique for assessing homosexual tendencies. *Journal of*

Personality, 24, 436-438.

Zillmann, D. (1984). *Connections between sex and aggression.* Hillsdale, NJ: Lawrence

Erlbaum Associates.

Zillmann, D. (1994). Erotica and family values. In D. Zillmann, J. Bryant, & A. C.

Huston (Eds.), *Media children, and the family: Socioal scientific, psychodynamic, and clinical perspectives*. (pp. 199-213). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Zillmann, D., & Bryant, J. (1988a). Effects of prolonged consumption of pornography on family values. *Journal of Family Issues*, 9(4), pp. 518-544.

Zillmann, D. & Bryant, J. (1988b). Pornography's impact on sexual satisfaction. *Journal of Applied Social Psychology*, 18(5), 438-453.

Zillmann, D. & Bryant, J. (1989). *Pornography: Research advances & policy considerations*. Hillsdale, NJ: Lawrence Erlbaum.

Appendix A. Informed Consent

Informed Consent Form

We would like to invite you to participate in a study designed to investigate a newly developed instrument that purports to measure sexual interest. As part of the research study, you will be asked to fill out a questionnaire designed to gather simple demographic information, personal attitudes, and sexual interest. You then will be asked to rate various line drawings and images of fully clothed people of both genders and of a variety of ages based upon their sexual attractiveness and unattractiveness. No pornographic images are used in this study. The entire procedure should not take more than 30 minutes to complete. You will then be invited to repeat the rating process two to four weeks after the initial rating procedure. You will not have to complete the questionnaire a second time. Because this is simply an assessment study rather than a treatment study, there are minimal risks to you. Upon full completion of this study, you will be presented with two free movie passes as a token of appreciation for your participation. Although this study will yield no immediate personal benefits to you, it may yield long term benefits to society in the future.

Your participation in this study is completely voluntary and you are free to refuse to participate or stop at any time without penalty. Your class standing or grades will not be affected in any way if you decide to stop. All information will be number coded to insure your privacy. Only the researchers participating in this study will have access to your name which will be kept strictly confidential. Your identity will not be revealed without your written consent and no identifying information will be made available to Brigham Young University's Honor Code Office.

If you have any questions, feel free to ask a participating researcher or contact us.

Brian Sneed, M.S.
(801) 377-9407
bjs29@email.byu.edu

Lane Fischer, Ph.D.
(801) 422-3857
Lane_Fischer@byu.edu

If you have any questions or concerns that you do not feel comfortable asking the researcher, you may contact Dr. Shane Schulthies, IRB Chair, 422-5490, 120RB, shane_schulthies@byu.edu.

Please read the following paragraph, and, if you agree to participate, please sign below.

I agree to become a participant in the afore mentioned study. I understand that any information about me obtained from this research study will be kept strictly confidential.

Signature_____

Date_____

Witness_____

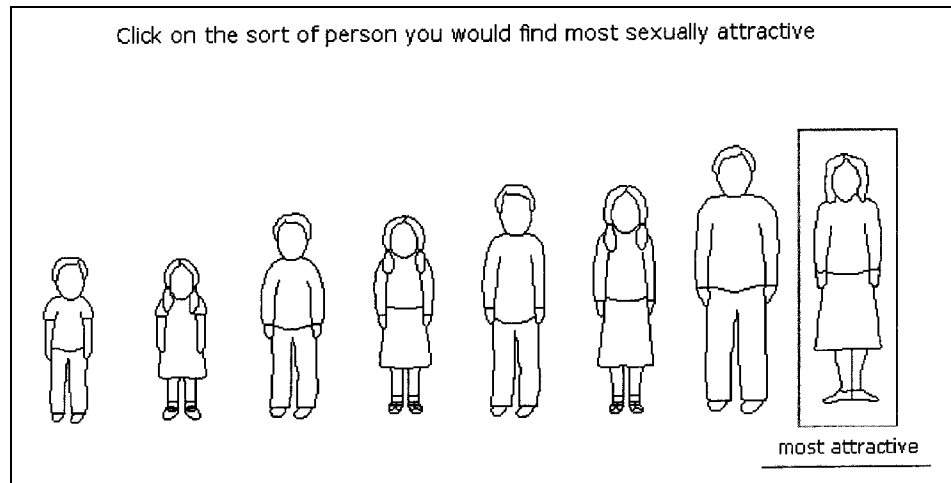
Date_____

Please place your initials here to confirm that you have received a copy of this consent form. _____

Appendix B. Affinity 2.0

Image 1

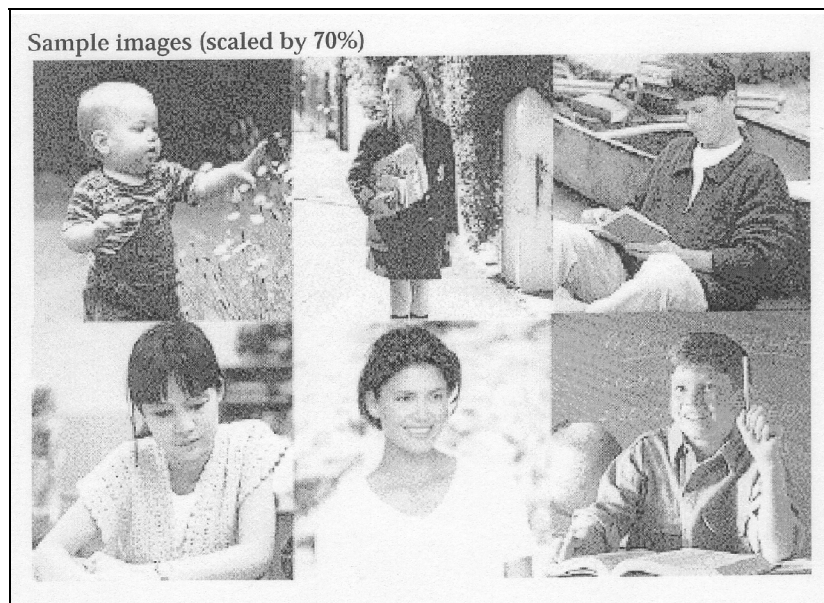
Affinity 2.0 Prototype Line Drawings



(Glasgow, 2003).

Image 2

Affinity 2.0 Sample Images



(Glasgow, 2003)

Appendix C. Demographics, Personal Attitudes, and Sexual Interest Questionnaire
(DPSQ)

Demographics, Personal Attitudes, and Sexual Interest Questionnaire

Demographics

1. Age: _____
2. Ethnicity _____
3. Year in School (place an X next to the one that applies)
 Freshman Sophomore
 Junior Senior
 Graduate Student
4. Marital Status
 Single Married
 Divorced Widowed
5. Did you hear about this research study through a psychology class?
 Yes No

Personal Attitudes

6. Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.
 I never hesitate to go out of my way to help someone in trouble.
 I have never intensely disliked anyone.
 There have been times when I was quite jealous of the good fortune of others.
 I would never think of letting someone else be punished for my wrong doings.
 I sometimes feel resentful when I don't get my way.
 There have been times when I felt like rebelling against people in authority even though I knew they were right.
 I am always courteous, even to people who are disagreeable.
 When I don't know something I don't at all mind admitting it.
 I can remember "playing sick" to get out of something.
 I am sometimes irritated by people who ask favors of me.

Sexual Interest

7. I would describe my sexual preference as (please mark one):

- Exclusively heterosexual with no homosexual
- Predominantly heterosexual with incidentally homosexual
- Predominantly heterosexual with more than incidentally homosexual
- Equally heterosexual and homosexual
- Predominantly homosexual with more than incidentally heterosexual
- Predominantly homosexual with only incidentally heterosexual
- Exclusively homosexual with no heterosexual

With the definition of pornography being any visual or auditory stimuli that depicts individuals engaged in sexual or erotic activities (intercourse, posing, foreplay) regardless of being portrayed in a degrading, violent, or neutral manner, please answer the following questions.

8. In any given year, what has been the **MOST** exposure you have had to pornography?

- At least once a day
- At least once a week
- At least once a month
- At least once a year
- Never
- Other

If other, please describe below your viewing habits during your year of **most** exposure to pornography.

9. In the past year, what has been the **MOST** exposure you have had to pornography?

- At least once a day
- At least once a week
- At least once a month
- At least once a year
- Never
- Other

If other, please describe below your viewing habits of pornography for the past year.

10. Which forms of pornography do you access the most? (If you answered “never” to questions 8 and 9, disregard this question.)

- Nude images
- Nude images depicting foreplay
- Images depicting sexual intercourse
- chat rooms
- Violent images of rape, degradation, sexual aggression, or sadism
- Phone sex
- Audio stimuli
- Other

If other, please explain.