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# Creating an Expected Profile for Affinity 2.5 from a Sample of Non-Pedophilic, Exclusively Heterosexual, College-Age Females

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CREATING AN EXPECTED PROFILE FOR AFFINITY 2.5 FROM A SAMPLE  
OF NON-PEDOPHILIC, EXCLUSIVELY HETEROSEXUAL,  
COLLEGE-AGE FEMALES

by

Marie Worsham

A dissertation submitted to the faculty of

Brigham Young University

In partial fulfillment of the requirements for the degree of

Doctor of Philosophy

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## **Abstract**

Creating an Expected Profile for Affinity 2.5 from a Sample of  
Non-pedophilic, Exclusively Heterosexual,  
College-age Females

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Doctor of Philosophy

The Affinity, an instrument designed to measure sexual interest using viewing time, has recently been upgraded from version 2.0 to version 2.5. The Affinity presents slides depicting non-pornographic images of people varying by age and gender. The expected Chi square weights established for Affinity 2.0 for non-pedophilic, exclusively heterosexual females may have been impacted by Affinity 2.5's 42.9% increase in the number of slides. There were two purposes to this study. The first was to establish new expected Chi square weights for non-pedophilic, exclusively heterosexual females using Affinity 2.5. The second purpose was to employ a Chi-square procedure (in place of traditional correlational methods) to re-examine the temporal stability of the Affinity 2.0. Data from 63 participants, who were administered the Affinity 2.5, were analyzed. Results of the analyses revealed notable similarity between the expected Chi-square weights created for Affinity 2.5 and those for Affinity 2.0. The re-examination of Affinity 2.0 temporal stability using Chi-square procedures suggested that 86% of subjects were consistent in their responses from time 1 to time 2.

Keywords: Affinity, Assessment of Sexual Interest, Viewing time, Fischer's Chi Square method

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## **A Study of Affinity 2.5**

The prevalence of sexual offending demands increased attention. In a 1995 national survey, Finkelhor, Ormrod, Turner, and Hamby (2005) reported that 1 in 12 children and youth (ages 2 to 17 years) have been sexually victimized. According to the 2008 Federal Bureau of Investigation *Crime in the United States* report there were 89,000 forcible rape offenses reported in 2006 (FBI, retrieved 12/29/09). The United States Department of Justice *Juvenile Offenders and Victims: 2006 National Report* indicated that juveniles are the victims in 70% of sexual assaults. Additionally, of all juvenile victims of violent crime 3 in 4 females and 1 in 4 males were victims of sexual assault (USDOJ, retrieved 12/29/09). While the majority of sexual offenses are perpetrated by males (Snyder, 2002), those committed by females seem to be on the rise. Snyder and Sickmund (2006) reported significant increases in female-perpetrated sex offenses from 1997 to 2002. Additionally, Schwartz and Cellini (1995) suggested that sex offenses by females are underreported in criminal systems. They indicated that when individuals are surveyed about their experiences of victimization they disclose more incidences of female-perpetrated sex offenses than official statistics suggest. In the National Criminal Victimization Survey, the Bureau of Justice indicated that female offenders perpetrate up to 6% of sexual offenses committed by an individual acting alone, and up to 40% of sex crimes involving multiple offenders (BJS, 2006). Sexual offenses continue to greatly impact adults, adolescents, and children in many ways. More research and greater understanding of sex offenders is necessary to ameliorate this problem.

Various approaches to this concern have been developed, but the problem of sex offenders is serious and must be addressed in an ethical and efficacious way. Intervention and treatment programs are available, but accurate and reliable assessment of these offenders is a



crucial precursor to any clinical intervention (Wright & Adams, 1994). There are various methods of assessment and, despite their strengths, each one has inherent limitations in its accuracy and reliability when used within a given population of offenders.

### **Measures of Sexual Interest**

Self-report measures and clinical interviews are subjective measures that serve an important role in information gathering but present various problems as measures of sexual interest or deviance with both men and women (Gress, 2005; Groth & Lored, 1981; Meston, Heiman, Trapnell, & Paulhus, 1998; Wincze, Hoon, & Hoon, 1978; Wright & Adams, 1994).

Assessment of genital response, including penile and vaginal plethysmography, has been employed for many years as a measure of sexual arousal and interest (Freund & Costell, 1970; Hoon, 1984). Now widely used, plethysmography grew out of the need to have an alternative to self-report measures of sexual arousal and preference (Kaemingk, et al., 1995). An abundance of research has been done testing the utility, ethicality, and appropriateness of penile plethysmography (PPG) for males; however similar research regarding the use of vaginal plethysmography with females is less common. Genital response in women, in addition to being more difficult to measure accurately than genital response in men, also seems to be difficult to interpret and represents an area of confusion in the field. Many of the researchers examining female genital response as an indicator of sexual interest and arousal report inconsistencies between the subjective and physiological experiences of women (Heiman, 1980; Hoon, 1984; Wincze, Hoon, & Hoon, 1978). However, other researchers suggest that these seeming inconsistencies can be accounted for by the use of methodologies and statistical analyses that don't accurately measure or portray the relationship between subjective and physiological sexual arousal in women (Rellini, McCall, Randall, & Meston, 2005). The limitations inherent in the

current methods of assessment of female sexual interest and arousal seem to warrant the exploration and implementation of new methods that may improve the measurement and interpretation of related data.

Other findings suggest that despite limitations, genital response is a valid measure of sexual arousal (Howes, 2003; Letourneau, 2002), but not necessarily of sexual preference or risk of offending. The existing research suggests that the concerns about the inadequacy of assessments of genital response demand another, more adequate or supplementary measure of sexual interest (Gress, 2005; Fischer, 2000; Marshall, 1996).

A measure of sexual interest that is becoming increasingly accepted and empirically validated is viewing time. Measures of viewing time determine how long an individual looks at a certain object. Viewing time has unique appeal because it resolves many of the concerns that prevent accurate and reliable assessment of offenders. Research, beginning as early as 1942, has examined and established the validity and reliability of viewing time as a measure of sexual interest. Appetitive gazing and social cognition are the two most prominent theories used to explain how viewing time may serve as a measure of sexual interest (Glasgow, 2006; Glasgow & Croxen, 2003; Singer, 1984). Appetitive gazing suggests that individuals tend to look longer at something to which they are attracted because it is pleasing to view. According to a social cognitive theory of sexual interest, viewing time increases when the object of interest most closely fits the individual's ideal of attractiveness because it takes more cognitive processing time to categorically define the object. To date, there are two viewing-time instruments used to assess sexual interest in sex offenders. One is the Abel Assessment for Sexual Interest and the other is the Affinity.

**Abel Assessment for Sexual Interest.** The Abel Assessment for Sexual Interest (AASI), the most popular viewing time measure, consists of two parts: a questionnaire and slide-sets of children, adolescents, and adults presented on a computer (Abel, Lawry, Karlstrom, Osborn, & Gillespie, 1994). Following the completion of the questionnaire, the sex offender views the slides and reports his or her interest on each slide, while viewing time is covertly measured (Abel, 1996). Objective results of the AASI, reported in z-score format (Abel, 1996), are ipsative measures which allow only for intra-individual comparison (Fischer, 2000).

The AASI provides many advantages over plethysmography and other measures of sexual interest. Assessment via viewing time requires no measurement of genital response, therefore it can readily be used with males and females of all ages, is less intrusive, and does not present nude slides (Abel, 1996; Abel, Huffman, Warberg, & Holland, 1998; Kaufman, Rogers, & Daleiden, 1998; Smith & Fischer, 1999). The AASI successfully employs standardized administration procedures, slide-sets, and testing format (Abel, Huffman, Warberg, & Holland, 1998; Kaufman, Rogers, & Daleiden, 1998; Smith & Fischer, 1999). Despite the improvement in sex-offender assessment afforded by this instrument, many suggest the need for its further development and refinement (Fischer & Smith, 1999; Smith & Fischer, 1999).

Numerous studies critique the adequacy of the AASI and underscore many of the problems that still exist, despite the great progress that has been made. A recent court case ruled that the AASI did not meet the standards for admissibility of scientific evidence and results were thus excluded from the case (Ewing, 2006). The AASI is still widely used but current research demonstrates the need for adaptation and improvement of current assessment instruments and methods.

**The Affinity.** Another instrument, the Affinity, overcomes some of the drawbacks of the AASI. Glasgow, Osborn, and Croxen (2003) describe the Affinity as a computer-based assessment that creates individual profiles of relative sexual interest by age and gender. This profile is generated as the participant completes ranking and rating tasks. Viewing time is surreptitiously measured during the rating task. The Affinity reports all raw scores for each task, allowing them to be compared to other participants. The Affinity is superior to plethysmography in its use of non-pornographic images, less intrusive techniques, and brevity of assessment. It, like the AASI, presents ipsative data, but the Affinity improves upon the AASI in its reporting of raw scores. Use of viewing time has advanced our understanding of sexual interest and the assessment of sex offenders. Despite the benefits of the Affinity over other assessment tools, the use of ipsative data, instead of normative measures, remains an obstacle to be overcome.

### **The Problem of Ipsatives**

Ipsative scores convert raw data into intra-individual scores that sum to a constant (Closs, 1996; Cornwell & Dunlap, 1994). These scores create an individual profile for each participant, but do not reveal the absolute value of scale positions (Baron, 1996). The use of ipsative data precludes comparison between individuals (Cornwell & Dunlap, 1994). Closs (1996) maintains that using ipsative scores to compare individuals is harmful and lacks validity. Additionally, ipsative scores approximate ordinal data and do not meet the criteria for standard inferential psychometric analysis (Baron, 1996; Closs, 1996; Cornwell & Dunlap, 1994).

The current measures of viewing time for assessment of sexual interest utilize ipsative scores because of the lack of normative data. It is difficult to interpret, predict, or diagnose based on measures that reveal only what is considered to be deviant within a particular individual. Norm-referenced decision-making is the basis of screening, diagnosis, and prognosis. Suggesting

that someone is deviant and in what way he or she is deviant presupposes knowledge of what is normal. Without norm-referencing clinicians are limited in their ability to identify and diagnose deviance because they have no standard against which to compare the sex offenders' results.

Researchers at Brigham Young University are working to resolve the problem of norm-referenced decision making using the Affinity. Current research efforts focus on establishing a norm-referenced measure of Affinity results employing Fischer's Chi-square method, a new approach to screening and diagnosis (Fischer, 2004; Fischer & Morgan, 2006; Glasgow & Fischer, 2006a; Glasgow & Fischer, 2006b). This method compares the individual's observed pattern to the normative expected pattern of scores. In this way a clinician can decide if the individual's pattern significantly deviates from the norm (screening) and in what way it is different (diagnosis). This new approach is being applied to data from various studies to determine if it can successfully identify and diagnose known sex offenders.

Typical response patterns of exclusively heterosexual, non-pedophilic males and females have been attained using Affinity 2.0 (Crosby, 2007; Harmon, 2006). These studies promise to advance the utility and efficacy of sex offender assessment. However, the creator of the Affinity recently updated this assessment tool. Affinity 2.5 is the newest and most improved version of this measure of sexual interest. The update added more slides to each category and represents a 42.9% increase in the number of stimuli, which seems to be a significant increase.

### **Statement of Problem**

While an expected reference group pattern and Chi-square weights for exclusively heterosexual, non-pedophilic adult female responses to Affinity 2.0 are known (Harmon, 2006), we lack similar data collected using the most recently updated version of this measure, Affinity 2.5.

Additionally, the original reference group data was collected using Affinity 2.0. A more thorough analysis of the temporal stability of the exclusively heterosexual, non-pedophilic adult female responses to Affinity 2.0 is required to increase the researcher's understanding of and confidence in the temporal stability of similar responses on Affinity 2.5.

### **Statement of Purpose**

The first purpose of this study is to establish an expected reference group pattern and Chi-square weights for exclusively heterosexual, non-pedophilic adult females using Affinity 2.5. The second purpose is to use a new Chi-square approach to re-examine the temporal stability of the exclusively heterosexual, non-pedophilic adult female reference group data collected using Affinity 2.0.

## **Review of Literature**

“Our goal as professionals should be to serve the needs of the client and society by practising at our highest level of competency, ability and ethical appropriateness, via research and applied means” (Gress, 2005, p.119). This goal, or standard of practice, should permeate every professional field. A variety of theories and measures have been developed and employed in the assessment of sex offenders. Understanding these measures, their strengths and limitations, as well as their use and development throughout the history of sex offender assessment provides insight that may allow us to refine our practice with female sex offenders.

### **Self-report Measures and Clinical Interviews**

Self-report measures and clinical interviews serve an important role in information gathering but present various problems as measures of sexual interest or deviance. This type of assessment is susceptible to deception and distortion based on attempts to appear socially acceptable and desirable (Gress, 2005; Groth & Lored, 1981; Meston, Heiman, Trapnell, & Paulhus, 1998; Wincze, Hoon, & Hoon, 1978; Wright & Adams, 1994). Lack of descriptive vocabulary, defensiveness, ambiguity, and demand characteristics are other factors that must be accounted for in order to avoid misinterpretation (Gress, 2005; Quinsey et al., 1993). Despite the utility of these measures, the possibility of misinterpretation due to dissimulation is high (Abel, Mittelman, & Becker, 1985; Marshall, 1996). Additionally, Harris et al. (1996) found that self-report ratings of sexual attractiveness could not discriminate a group of child molesters from a group of non-pedophilic men. Gress (2005) suggests the combination of these subjective measures with more objective ones in order to overcome the above limitations.

### **Plethysmography**

Notwithstanding its widespread and long-term use, plethysmography is beset with many

problems. It is unquestionably an intrusive, expensive, and lengthy procedure (Fischer, 2000; Gray, 1999; Gress, 2005; Harris, et al., 1996; Kaufman et al., 1998; Laws & Gress, 2004), and has a high potential for dissimulation (Gray, 1999; Quinsey, 2003). Use of pornography to stimulate sexual arousal leads to many questions of ethicality in its use (Fischer, 2000; Gress, 2005; Kaufman, 1998).

Heiman (1977) noted the need for normative data regarding the sexual arousal patterns of males and females using genital response measures. She indicates that much of the research has been focused on atypical sexual preferences instead of normative ones. Also, difficulties surrounding the lack of standardization and guidelines for administration, scoring, and interpretation (Gress, 2005; Hoon, 1984; Howes, 2003; Laws & Gress, 2004; Rellini, McCall, Randall, & Meston, 2005; Wincze, Hoon, & Hoon, 1978) hinder meaningful use of plethysmography with men and women. Various psychometric limitations also exist (Fischer, 2000; Laws & Gress, 2004). Researchers have recently acknowledged the need for standardization of this instrument and have made moves toward standardizing the administration of the Monarch PPG (Cloyd, 2006). In light of current research and present concerns about plethysmography, its shortcomings clearly necessitate another, more adequate or supplementary measure of sexual interest (Gress, 2005; Fischer, 2000; Marshall, 1996).

### **Viewing Time**

In recent years viewing time has increasingly been utilized as a measure of sexual interest. Currently, there are two possible theories recognized as explanations for this phenomenon. The first is Singer's (1984) theory of sexual arousal and attraction, also known as appetitive gazing. He identified three stages of sexual attraction. The first stage, the aesthetic response, is characterized by visual attention to an object of interest. The second stage, the



approach response, involves movement toward and desire for contact with that object. The final stage, the genital response, refers to the array of physiological changes that take place when an individual is sexually aroused. In the past, sexual arousal and attraction were assessed primarily in this third stage. The introduction of viewing time, as a measure of sexual interest, represents an attempt to measure sexual attraction at Singer's first stage. Singer affirms that these three responses can be experienced independently of one another and that the aesthetic response may occur several times each day. This response includes gazing, visually following, or any efforts made to keep the object in view. Additionally, Singer stated that the aesthetic response is less susceptible to the effects of classic conditioning than the approach or genital responses. This may improve the reliability of measures based on this stage of arousal. Furthermore, he warned that "operationalizing sexual arousal primarily in genital terms may not only be dehumanizing, but misleading" (p.234).

The second theory is a social cognition theory. Macrae and Bodenhausen (2000) suggested that our thinking about others tends to be categorical. They said, "In attempting to make sense of other people, we regularly construct and use categorical representations to simplify and streamline the person perception process" (p. 96). Glasgow and Croxen (2003) suggested that sexual attraction may be considered a special case of social cognition. Just as we have categories into which we place people based on things such as race, gender, age, etc., we may also maintain categories related to preferred sexual partners.

Researchers have explored category activation and cognitive processing in relation to viewing time (Glasgow, 2006; Glasgow & Croxen, 2003). They suggested that in evaluating potential sexual partners more category activation and cognitive processing lead to longer viewing times. For example, an individual is presented with an image and asked to decide if that

person/image is sexually attractive to him or her. If the person in the image does not fit the individual's category of preferred sexual partners, the decision is made and viewing stops. However, if the image does fit this individual's conception of sexual attractiveness, new categories are activated based on specific traits that make the person in the image a category exemplar or a good fit in that schema. This process of category activation requires more cognitive work and thus takes more time. The more a person/image is perceived as sexually attractive the longer viewing time will be. Therefore, based on either Singer's theory or a social cognition theory, increased attention, attraction, and arousal will lead to longer viewing time.

The use of viewing time, as an indicator of sexual interest, has developed significantly over the past 67 years. A variety of studies have attempted to employ this measure to assess sexual interest and arousal. In 1942, Rosenzweig used a device called a photoscope with male schizophrenic patients that allowed participants to freely view a variety of sexual and non-sexual photographs. The patients were categorized into two groups (a high sexual group and a low sexual group), and the time they spent viewing each photograph was measured. Rosenzweig's photoscope successfully discriminated between these two groups through the use of viewing time.

Several years later, Zamansky (1956) found that he could identify an individual's preferred sexual object by means of a tachistoscope-like device that covertly monitored the individual's pattern of visual fixations. He found that homosexual men looked longer at images of men than at images of women or any other images.

Many others studied the relationship between viewing time and ratings of sexually explicit slide sets. Ware, Brown, Amoroso, Pilkey, and Pruesse (1972) contributed to the understanding of this relationship by identifying factors that account for the variance in

pornography and viewing time. The following year, Brown, Amoroso, Ware, Pruesse, and Pilkey (1973) hypothesized that as pornography or obscenity ratings of slides increased so would viewing time, until the obscenity rating reached a certain point, at which viewing time would decline. Not this curvilinear relationship, but rather a linear one was found between pornography ratings and viewing time. They also learned that when participants were observed, viewing time decreased.

However, later Brown (1979) hypothesized further that the failure to find the previously predicted curvilinear relationship was due to the lack of hard core pornography included in the slide sets. He then produced a slide set that he described as “the most hard core yet used in such research” (p. 93). With this slide set he did, indeed, find the expected curvilinear relationship for males, but not for females. In general, longer viewing times were observed as the images became more pornographic and arousing.

Love, Sloan, and Schmidt (1976) reported similar findings as they sought to determine how viewing time varied with level of sex-guilt in research participants. Their findings supported previous studies (Brown et al., 1973; Brown, 1979), showing a positive linear correlation between viewing time and pornographic content, and particularly a positive curvilinear relationship for moderate sex-guilt participants.

Then in 1993, Quinsey, Rice, Harris, and Reid posited that sexual behavior is not always indicative of sexual preference and proposed the need for a stronger theory and more accurate measures of sexual preference. Their results, in contrast to previous studies, suggested that viewing time may not be as powerful a measure of sexual preference as was originally predicted. However, Quinsey et al. conceded that further work was necessary and that viewing time may have particular promise as a measure of sexual interest, especially in light of the ethical and

practical limitations of other popular measures. A covert objective measure, if proven reliable, could provide vital information without the discomfort and risk inherent in other forms of assessment.

The next year, Wright and Adams (1994) posited that research and clinical efforts would be insufficient without accurate measurement and assessment of sexual preference and arousal. Based on Singer's (1984) theory of sexual arousal, they administered choice reaction time (CRT) and incidental learning tasks to examine viewing time of sexual and non-sexual slides. They hypothesized that participants would have longer latencies on the CRT task when viewing slides of their preferred sexual object, as well as better recall for those slides in the incidental learning task. Results showed successful discrimination between groups, based on sexual preference, and support for the researchers' hypotheses.

In 1996, Harris, Rice, Quinsey, and Chaplin compared male child molesters to normal male non-offenders using phallometry, ratings of sexual attractiveness, and viewing time. Penile responses and viewing times for non-offenders were consistent with their ratings of sexual attractiveness. This did not hold true for those with a history of child molestation. Their penile responses and viewing times did not correlate with their sexual attractiveness ratings. Although the child molester group spent less overall time than the non-offender group viewing the slides, when the two groups were compared those in the child molester group spent relatively more time looking at slides of children than slides of adult females. The researchers suggested that some combination of measures, similar to the one used in this study, would improve discrimination for screening. Each different type of assessment gathers a specific kind of information in a unique way. Unfortunately, each has its flaws and limitations. Thus, a combination of different types of

assessment increases the likelihood of gathering more pertinent and meaningful information about an individual.

That same year, Quinsey, Ketsetzis, Earls, and Karamanoukian (1996) conducted two studies employing sexual attractiveness ratings, viewing time, and phallometric measures as indicators of sexual interest. They tested several hypotheses, four of which emerged from Symons' (1979) evolutionary theory of human mating preferences. Support was found for all but one of their hypotheses. Results evidenced a positive correlation between viewing time, sexual attractiveness ratings, and phallometric results. Additionally, the study found that viewing time was the longest for young adults of the preferred sex, and that a higher correlation between viewing times and sexual attractiveness ratings existed for males than for females. In contrast, the data did not support the prediction that males would view slides of adult females longer than females would view slides of adult males. The authors concluded that although viewing time, as a measure of sexual preference, lacks specificity and sensitivity, it has advantages over PPG and rating methods and may prove useful in the study of sexual preference in children and adolescents.

More recently, a study conducted by Gress (2005) emphasized the need for adaptation that best serves the client and society. Although there are various methods of assessment for sex offenders, Gress maintained that "other possible measures of sexual interest should be designed and evaluated" (p. 119). In this study she compared results on a sexual deviance card sort with viewing time results on the basis of past sexual behavior. Founded on prior research, the card sort was used in place of PPG because it was found to have similar results. Thus, Gress concluded, in concordance with obtained data, that classifying sexual interest based on viewing time is comparable to results obtained by use of PPG. Viewing time may be a viable method of

overcoming the limitations inherent in PPG. Currently two instruments, the Abel Assessment for Sexual Interest and the Affinity, employ viewing time as a measure of sexual attraction.

**Abel Assessment for Sexual Interest.** The AASI consists of a paper-pencil questionnaire and computer slide show (Abel, Lawry, Karlstrom, Osborn, & Gillespie, 1994). The viewing time of each individual is surreptitiously calculated as he or she reviews each slide to report his sexual interest (Abel, 1996). The objective results (amount of viewing time) of the AASI are reported in ipsative form as z-scores (Abel, 1996; Fischer, 2000). While the advantages of AASI over PPG are clear, research points out its limitations and the need for further development of this measure.

Kaufman, Rogers, and Daleiden (1998) presented a study that examined the test-retest reliability of the AASI with incarcerated juvenile sex offenders. Their findings did not demonstrate high test-retest reliability. They suggested the need for more research regarding the validity and reliability of the AASI, as well as its use with adolescents.

Gray (1999) examined the effect of dissimulation on AASI results when identifying confirmed pedophiles. He found that among a group of dissimulators, the AASI was only able to identify 36% of the pedophiles. He emphasized the need to re-evaluate how the AASI is used and to more fully take dissimulation into account when interpreting results.

Companion articles, Fischer and Smith (1999) and Smith and Fischer (1999), questioned the psychometric adequacy of the AASI and its use with adolescents. Fischer and Smith reported various concerns about the reliability and validity of this measure. They also expressed concern regarding the presentation and interpretation of AASI data. The data are ipsative, meaning that they represent intra-individual, not inter-individual, variations. AASI data are presented as ipsative z-scores which tend to create the illusion of normative reference. Additionally, no raw

scores are reported. Fischer and Smith (1999) explained that “without knowing the specific raw score means and standard deviation of means for any given participant, it is tenuous to interpret any category other than the highest and the lowest scores” (p. 197). Thus, the information available and the generalizability are stifled because the data are ipsative. The logic often applied to interpret AASI data is susceptible to mistakes.

Smith and Fischer (1999) reported limitations of the AASI for use with adolescents, and argued that there is not enough research to support its use with this population. They conducted a study to assess the reliability and validity of the AASI when used with adolescents. They reported that test-retest data did not support the use of AASI for adolescents and that the ability of the instrument to “discriminate adolescent offenders from non-offenders was not significantly better than chance” (p. 214).

Letourneau (2002) compared the AASI to the PPG by administering both tests to a sample of incarcerated sex offenders. She reported both untrimmed and trimmed data (with or without outliers), although the AASI typically reports only the trimmed data to users of the instrument. Abel’s method of trimming the data disallows computation of coefficient alphas in order to evaluate internal consistency. Her data highlighted the strengths and weaknesses of each of these assessments; however, she reported that both instruments need improvement.

These studies critique the adequacy of the AASI and underscore many of the problems that still exist, despite the great progress that has been made. However, evaluation of the AASI expanded from the scientific world into the legal world in the 2005 *Ready vs. Commonwealth* case (Ewing, 2006). The court ruled that the AASI did not meet the standards for admissibility of scientific evidence, and results were thus excluded from the case. The court criticized the lack of published studies on the AASI and its high error rate. The fact that all raw data is sent to Abel

Screening Inc. to be processed and that underlying formulas are not made known raised questions and concerns. The court stated, “For all we know, they and their components could be mathematically based, founded upon indisputable empirical research , or simply the magic of young Harry Potter’s mixing potions at Hogwarts School of Witchcraft and Wizardry” (p. 61). The AASI is still widely used but current research demonstrates the need for adaptation and improvement of current assessment instruments and methods for use with sex offenders.

**The Affinity.** Affinity 2.5, the most recent version of the Affinity, is a computer-based assessment developed to assess sexual interest (Glasgow & Fischer, 2006a). It resolves some of the problems of the AASI. The assessment consists of two tasks. The first is a ranking task in which the individual ranks a series of eight line drawings, representing people of various ages and gender, from most sexually attractive to most sexually unattractive. Then the individual rates each of 80 images of fully-clothed males and females, representing a range of developmental stages, on a 15-point scale from very sexually attractive to very sexually unattractive. During the rating task, viewing time is covertly measured. Raw score results are reported. Affinity results are not transformed by standardization. Glasgow, Osborn, and Croxen (2003) indicate that such transformation would be “contraindicated here because the ratings are far from normally distributed, and it is also often the case that latency measures are significantly skewed. It is essential that any data transformation of viewing time measures is both conservative and not misleading” (p. 99). Therefore, the data is transformed to mean ranks as an alternative to norm-referenced standardization.

The benefits of the Affinity are that it presents non-pornographic images, it is less intrusive than PPG, it is a brief assessment, and it, unlike the AASI, reports the raw data obtained for each participant. Researchers have examined the temporal stability of the Affinity with adult



males and females. They found category reliability coefficients ranging from .39 to .74 for males and from .57 to .73 for females (Crosby, 2007; Harmon, 2006). Another study, examined the correlation between Monarch PPG and Affinity results (Cloyd, 2006). These researchers found significant positive correlations in five categories, ranging from .28 to .52. The lingering drawback for both the AASI and the Affinity is the lack of norm-referencing. They both rely on ipsative data instead of normative measures.

### **The Problem of Ipsatives**

The current measures of viewing time for assessment of sexual interest utilize ipsative scores because of the lack of normative data. It is difficult to interpret, predict, or diagnosis based on measures of deviance that reveal only the variance within a particular individual. The concept of deviance assumes normality. Often terms such as “deviant” and “abnormal” are used when discussing the results of ipsative measures. This is a frequently observed misinterpretation of ipsative scores (Fischer & Morgan, 2006). They represent only intra-individual variation and cannot be treated as scores based on known norms. Without norm-referencing, clinicians are limited in their ability to identify and diagnose deviance because they have no standard against which to compare the sex offenders’ results. If, as Marshall (1996) suggests, sex offenders are typically polymorphously perverse, the need for norm-referenced decision making with regards to this population is even more imperative than previously understood. Polymorphous perversity suggests that each sex offender may be uniquely deviant. There is no single pattern or profile that represents all sex offenders. They may come in all forms and with different combinations of attractions and sexual experiences. A norm-referenced pattern of sexual attraction may aid in screening and diagnosing these uniquely deviant individuals because an abnormal pattern can be identified and understood, regardless of the type or style of deviance.

Many have recognized the need for normative data in the assessment of sexual interest. Heiman (1977) noted a general lack of normative data on sexual arousal patterns. Quinsey et al. (1993), recognized the value of viewing time in the assessment of sexual preference in children, but affirmed the need for further validation and normative work. In an investigation on the use of viewing time in normal heterosexual men, Harris et al. (1996) observed the deficit of normative data related to the sexual preferences of children and adolescents. In 2003, Howes attempted to improve norm-referenced decision making based on PPG. He stated that descriptive and predictive conclusions can only be drawn when you know the mean and standard deviation of the associated normal distribution. In addition, Gress (2005) remarked that viewing time measures are limited in their utility because they must employ ipsative measures, due to the fact that no normative database exists. She explains, “The method of scoring is a large stumbling block for VT and needs to be addressed to advance the utilization of this measure” (p. 124).

Fischer has been concerned about the misuse of ipsative scores for several years (Fischer, 2000; Fischer & Smith, 1999; Smith & Fischer, 1999). Fischer and Smith (1999) suggested that the main error in interpreting ipsative scores is the tendency to treat them as normative interval data instead of ordinal data. They explain the reason that interpretation of ipsative ranks may be questionable.

Without knowing the specific raw score means and standard deviation of means for any given subject, it is tenuous to interpret any category other than the highest and lowest scores. A single ipsative elevation may appear to be significantly deviant from the mean, but in reality may be miniscule. Likewise, differences between categories may appear to be large but actually be quite small (p.197).

Fischer's work has led other researchers to ask this question and address the problem of ipsatives (Byrne, 2006; Crosby, 2007; Harmon, 2006), and has also been used in landmark court cases [e.g., Commonwealth of Massachusetts v. Gerard Ready (Ewing, 2006)].

Researchers at Brigham Young University are working to establish the Affinity as a reliable and valid measure of sexual interest and refine its use in various populations. Current research efforts focus on establishing a norm-referenced measure of Affinity results employing Fischer's Chi-square method, a new approach to screening and diagnosis (Fischer, 2004; Fischer & Morgan, 2006; Glasgow & Fischer, 2006a; Glasgow & Fischer, 2006b). This method compares the individual's observed pattern to the normative expected pattern of scores. In this way a clinician can decide if the individual's pattern significantly deviates from the norm (screening), and in what way it is different (diagnosis). This new approach is being applied to data from various studies to determine if it can successfully identify and diagnose known sex offenders (Fischer, 2006a; Fischer, 2006b; Fischer, Byrne, & Glasgow, 2007).

Researchers have determined non-pedophilic exclusively heterosexual responses of adult males (Crosby, 2007) and females (Harmon, 2006) to Affinity 2.0. These normative results are being compared to results obtained from known sex offenders. A recent sample of offenders who have completed their jail sentences and are presently engaged in outpatient therapy in Vancouver, Washington is currently being analyzed (Fischer, 2006a). Another sample of over 300 offenders who are in the early stages of adjudication and treatment has been collected in Salt Lake City, Utah and are being analyzed. Initial results were presented at the 2006 International Conference of the Association for the Treatment of Sexual Abusers (Fischer, 2006b). At this same conference, Fischer and Morgan presented the results of a study comparing the responses of a sample of known sex offenders from the UK with normal male responses. Using Fischer's

Chi-square approach they were able to successfully screen this sample of offenders (efficiency of .80).

These studies promise to advance the utility and efficacy of sex offender assessment. However, the original version of the Affinity (Affinity 2.0) has recently been updated. Affinity 2.5 is the newest and most improved version of this measure of sexual interest. The update added more slides to each category, and represents a 42.9% increase in the number of stimuli which seems to be a significant increase.

## Method

The selection of participants for this study and the procedures used are detailed in the following section. A description of the measures employed and the data analyses are also given.

### Participants

Participants included female students age 18 or older that were recruited from psychology, student development, and nursing classes at Brigham Young University, a private religious university with a predominately Christian student body. All students who participated received extra credit, as allowed by their professors. This study sought responses of exclusively heterosexual non-pedophilic adult females. Therefore, only data from students identifying themselves as exclusively heterosexual and claiming no history of pedophilic interest were analyzed as part of this study.

To determine the number of exclusively heterosexual non-pedophilic females necessary to satisfactorily complete this study, the reference data obtained for a similar sample of females using Affinity 2.0 was examined. In order to proceed with the greatest efficiency, the researcher sought to determine the number of participants that would produce the most accurate and true representative pattern, while allowing for conservation of time and other resources in conducting the study. The central limit theorem states that the true mean of a population is approximated by the sample mean as the sample size increases. An increase in sample size also leads to a decrease in the variance of the sampling distribution (Howell, 2002). Therefore, Harmon's (2006) Affinity 2.0 data was analyzed to determine the ideal number of participants for this study. Using her data, sampling distributions of increasing sample size were generated. The sample sizes ranged from 10 to 60 in increments of 10. Mean response curves and mean variances across the 8 categories were calculated and graphed. The sampling distributions of each sample size consisted

of 10 samples of randomly selected participants at each sample size (i.e. 10 samples of 10 participants, 10 samples of 20 participants, 10 samples of 30 participants, and so on). Sampling means and standard deviations for each category were obtained, and researchers looked for the point at which the patterns stabilized. Figures 1–3 illustrate the means and standard deviations of each sampling distribution, as well as the standard deviation of the sampling distribution standard deviations. A visual examination of these results suggests that the mean proportions of total time spent in each category began to stabilize around an N of about 50 participants. The standard deviations of the proportions of total time spent in each category also stabilized and grew smaller around this number. Thus, it was determined that a sample of at least 50 exclusively heterosexual non-pedophilic females would best meet the practical and statistical demands of this study.

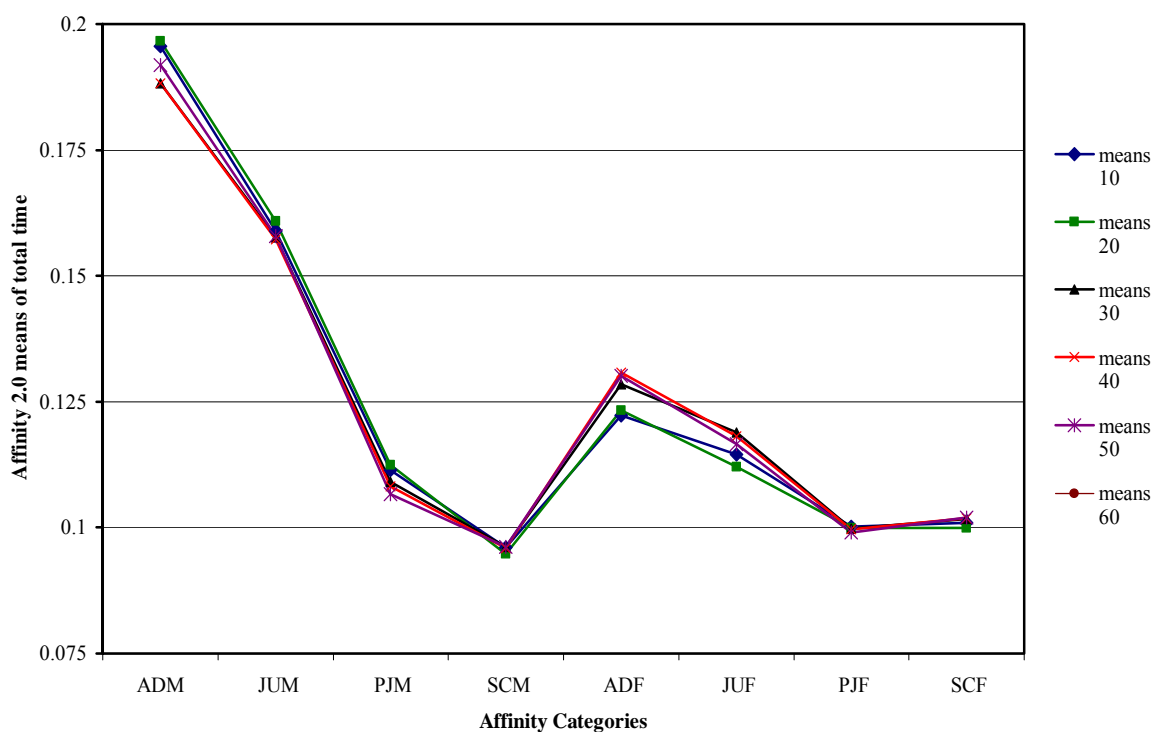


Figure 1. Affinity 2.0 means of sample means.

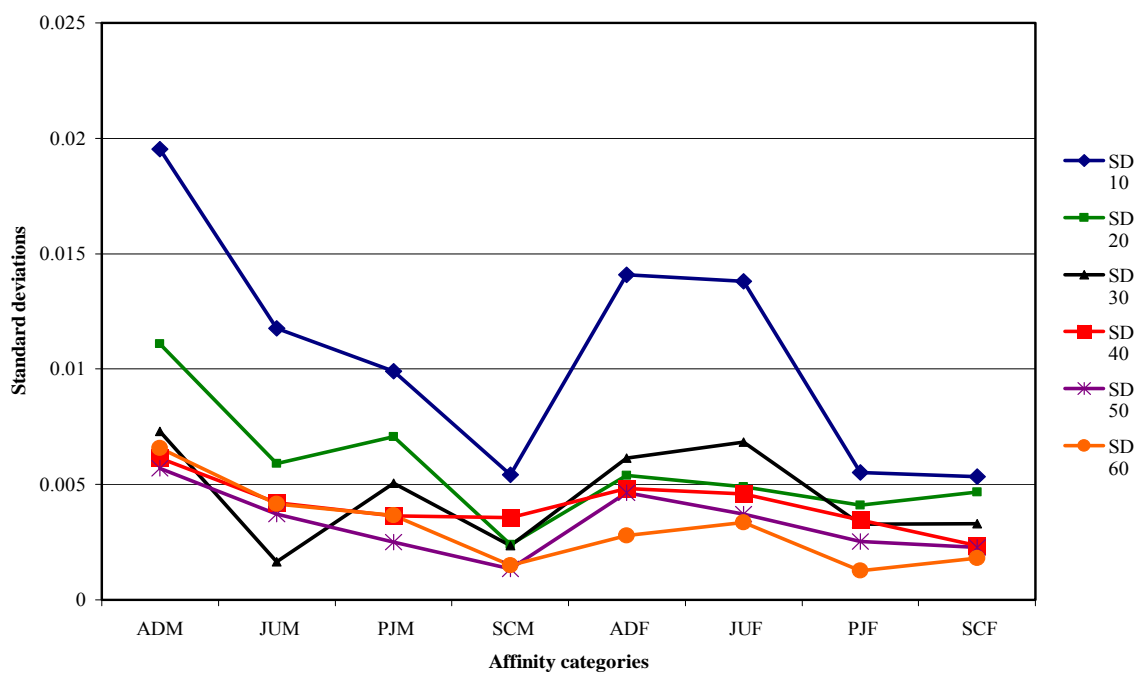


Figure 2. Affinity 2.0 standard deviations of sample means.

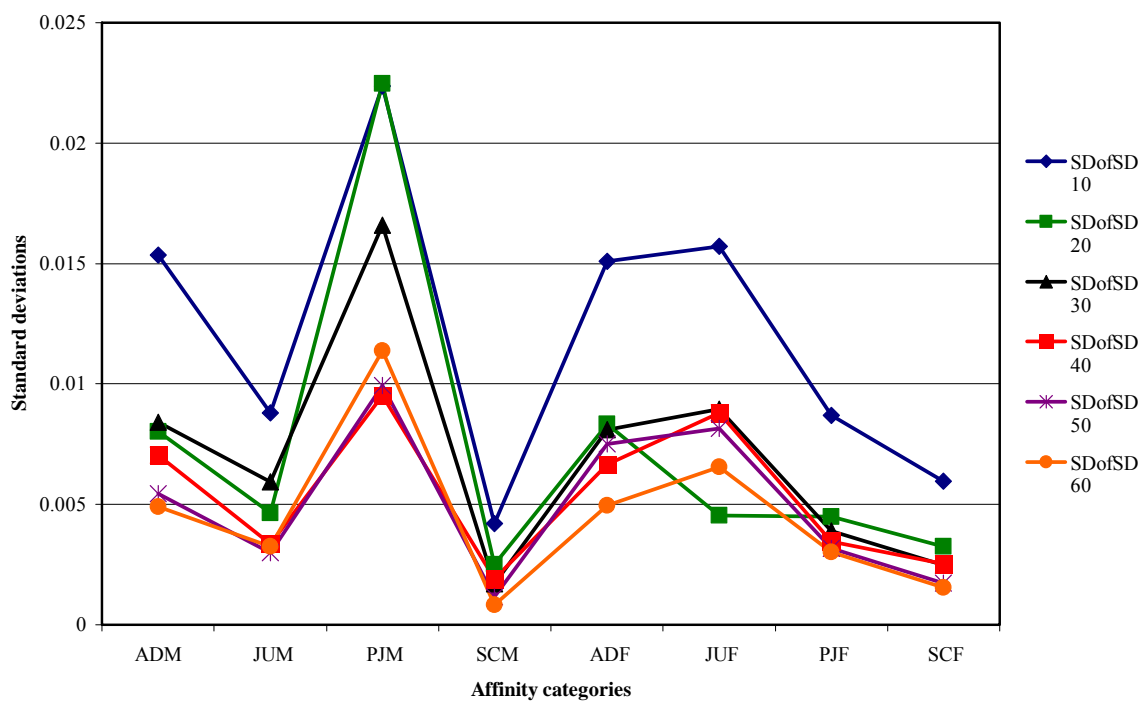


Figure 3. Affinity 2.0 standard deviations of sample standard deviations.

Sixty-eight students participated in this study. Responses from 5 of the 68 participants were excluded from the data analysis. Four of these participants indicated on the Kinsey scale that they were not exclusively heterosexual and one had an invalid administration. Participant ages ranged from 18 to 26 years with a mean age of 20.48. Of the 63 participants included in the data analysis, 7 (11%) were freshmen, 18 (29%) were sophomores, 23 (36%) were juniors, 13 (21%) were seniors, and 2 (3%) were graduate students. Fifty-five (87%) of the participants reported that they were single and 8 (13%) reported being married. None of the participants endorsed a marital status of divorced or widowed. Fifty (79%) of the 63 participants reported their ethnicity as Caucasian, 6 (9%) as Asian, and 3 (5%) as Latina. Three (5%) participants reported mixed ethnicity and one participant (2%) did not report her ethnicity. These percentages appear to accurately reflect the ethnic make-up of the student population at this university, but may differ from that of other universities or regions of the United States.

### **Procedures**

Upon arrival to take part in this research study, each participant was instructed to read and sign informed consent documentation. Each participant was assigned a participant number in order to protect her identity and ensure confidentiality. No names were recorded in the computer database or on the questionnaires. A single master list matching participant names and numbers was kept in a locked file, to be accessed only by members of the research team.

After reviewing the consent form, participants were directed to a private room designated for the purpose of this research, and received instructions in order to complete the 15–20 minute computerized assessment of sexual interest. Once the researcher had given instructions and answered any questions, he or she exited the room until the participant had finished. Upon



completion of the assessment, the participant filled out the Demographic, Social Desirability, and Sexual Interest Questionnaire (DDSQ).

### **Measures**

Two measures were used in this study. Data regarding the sexual interest of participants were collected using a computer-based assessment of sexual interest. Also a questionnaire was employed to gather information about demographics, social desirability, and sexual interest.

**Affinity 2.5.** The original version of the Affinity was designed to assess the sexual interest of males with mild mental retardation. The current version is licensed for use as a clinical assessment tool for disabled adult male offenders and non-disabled male offenders. Glasgow (2003) has also approved the use of the Affinity 2.5 to be used for research and evaluation purposes with adult male non-offenders, juvenile male offenders, and female offenders.

Affinity 2.5 is a computer-based assessment that creates individual profiles of relative sexual interest by age and gender (Fischer & Morgan, 2006). This profile is generated as the participant completes ranking and rating tasks. The participant begins the assessment by viewing and ranking several prototype images. These prototype images are simple line drawings that depict a character from each of the eight categories: male adult, female adult, male adolescent, female adolescent, male preadolescent, female preadolescent, male small child, and female small child. The participant begins by ranking the line drawings according to their level of attractiveness, from most sexually attractive to most sexually unattractive. The participant begins by selecting the prototypes that represent the type of person who he or she considers to be the most sexually attractive. The participant continues selecting prototypes until he or she reaches a point where the remaining images are no longer attractive to him or her. The participant will then

begin to rank the remaining images according to their unattractiveness. The purpose of this prototype ranking procedure is to predict the rank order of each category when ranked by time spent viewing photographs of individuals in each category or the reported attractiveness ratings of those same photographs in a subsequent task. Ultimately, viewing time is used to serve as a test for honesty of this ranking self-report (Glasgow, 2003).

The rating procedure consists of showing the participant several practice images and 80 test images. Each of the prototype categories represented in the ranking procedure is represented by 10 photographic images. The participant is then instructed to view the picture and then rate the image's sexual attractiveness by using a 15-point sliding scale that ranges from "very sexually attractive" to "very sexually unattractive." As the participant is undertaking this rating procedure, two measures of viewing time are being surreptitiously recorded. The first measure of viewing time is On-task Latency (OTL) which is the time elapsed from the initial presentation of the image to the time that the participant rates the image. The second viewing time recorded is the Post Task Latency (PTL) which is measured from when the participant rates the image to the time the image is changed. All viewing time measurements are reported in raw score form in seconds and converted to mean ranks (Glasgow, 2003). For computerized graphing purposes, raw scores are converted to ipsative mean rank values that sum to a constant of 317. Images are rank ordered from the longest-viewed to the shortest-viewed and assigned a value from 1 to 80. The rank scores of the images in each category are then averaged to provide a mean rank of images in each category. The sum of the mean ranks is a constant 317. This allows the graphic representation of each participant to be consistent across clients but the true underlying raw score behavior is lost.

**Questionnaire.** Designed specifically for Affinity studies (and previously used in Harmon's 2006 Affinity 2.0 study), the Demographic, Social Desirability, and Sexual Interest Questionnaire (DDSQ) consists of three parts. The first part is a demographic section created to gather information about the participant, such as age, ethnicity, and marital status. The second section, designed to ascertain the individual's concern with social desirability, includes a condensed version of the Marlow-Crowne Social Desirability Scale (M-C 33), called the M-C 2(10). This shortened version was developed in 1972 by Strahan and Gerbasi. The third section is a sexual preference inventory, adapted from the Kinsey Heterosexual-Homosexual Scale (Kinsey, Pomeroy, & Martin, 1998), which allows the participant to report sexual preference.

### **Data Analysis**

The researcher completed two analyses of the data from this study. The first analysis generated an expected normative pattern by creating a proportion mean or weight for each category. These weights were obtained by using the raw scores of the reference group participants to create means for each category and then divide those category means by the mean of the total time to complete the assessment. These proportion means or weights will be used as the expected pattern to compare future observed patterns obtained using Affinity 2.5.

The second analysis was a re-examination the temporal stability of Harmon's (2006) data gathered using Affinity 2.0. The original analysis of the test-retest data in the Affinity 2.0 study was done by computing the Pearson's Product Moment Correlation Coefficient for the category means and medians at time 1 and time 2 (Harmon, 2006). Data about individual categories on the Affinity are only helpful and informative in the context of the overall pattern in which they exist. Instead of calculating test-retest reliability by category, as Harmon initially did, the researcher examined the reliability in terms of the overall patterns obtain from time 1 to time 2. Employing

a Chi square “goodness of fit” analysis allowed for an examination of how well the overall patterns matched. The greater the fit between the two patterns, the greater the reliability of the Affinity instrument. An expected normative pattern is necessary in order to effectively employ Fischer’s Chi square method (Fischer, 2004; Fischer & Morgan, 2006; Glasgow & Fischer, 2006a; Glasgow & Fischer, 2006b) in the interpretation of Affinity data. Time 1 responses were used as the expected pattern and compared to the time 2 responses, designated as the observed pattern.

## Results

Each participant completed the M-C 2(10) social desirability scale. The average score for this sample was 5.24 with a standard deviation of 1.93. Harmon's (2006) study with Affinity 2.0 reported an average score of 4.02 and a standard deviation of 1.9 on this measure of social desirability. A mean score of 4.6 with a standard deviation of 2.1 was reported by Strahan and Gerbasi (1972) on the M-C 2(10). It appears that the mean scores of social desirability reported in this study and in Harmon's (2006) study are within normal limits. Therefore, it seems that participants in this study are not overly influenced by a desire to appear socially acceptable in their responses.

For the first part of the analysis, category proportions were created by taking the time each participant spent viewing the slides in each of the 8 categories and dividing those total category times by the total viewing time across all categories. The average category proportions were calculated across all 63 participants and are shown in Table 1 and Figure 4 below. These proportions indicate that participants spend most of their time viewing images of adult males and juvenile males. They spend much less time viewing slides in any of the other categories, with the exception of the adult female category.

Table 1

*Affinity 2.5 Means*

	ADM	JUM	PJM	SCM	ADF	JUF	PJF	SCF
Affinity 2.5 Proportion Mean	.188959	.163744	.112625	.091773	.12432	.114796	.101294	.102489

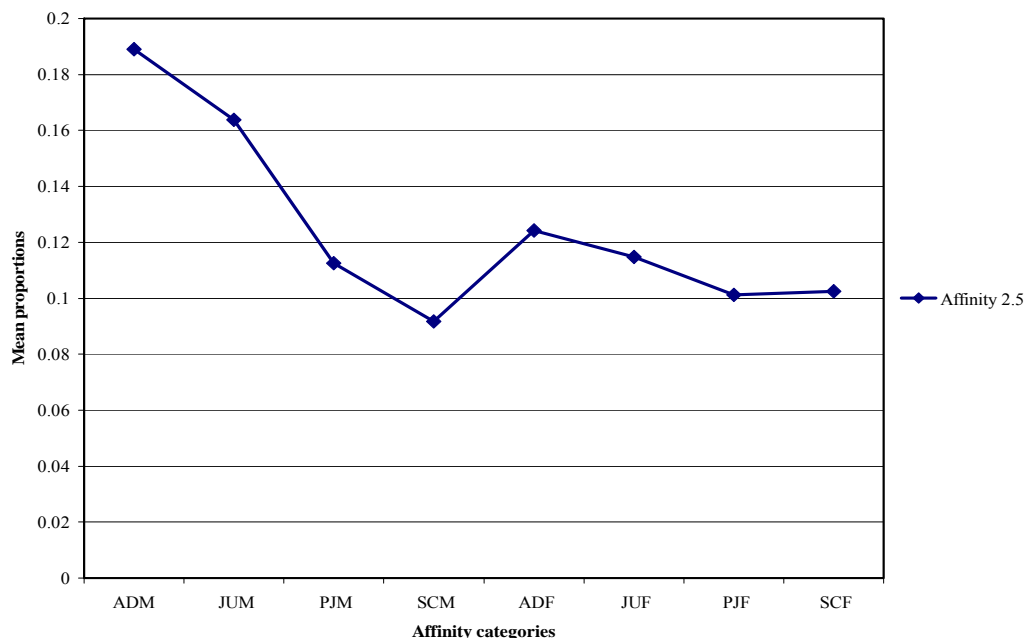


Figure 4. Affinity 2.5 mean proportions.

The mean category proportions obtained from these 63 exclusively heterosexual non-pedophilic females were compared to those previously gathered from a similar sample of 120 participants using Affinity 2.0 (Harmon, 2006). Affinity 2.0 proportion means were established by averaging the test-retest proportion means. The comparison shows the proportion means to be very similar. The results are illustrated in Table 2 and Figure 5 below.

Table 2

*Comparison of Affinity 2.5 and Affinity 2.0 Proportion Means*

	ADM	JUM	PJM	SCM	ADF	JUF	PJF	SCF
Affinity 2.5 Proportion Mean	.188959	.163744	.112625	.091773	.12432	.114796	.101294	.102489
Affinity 2.0 Proportion Mean	.208522	.16174	.10792	.091839	.123937	.112456	.096358	.097229

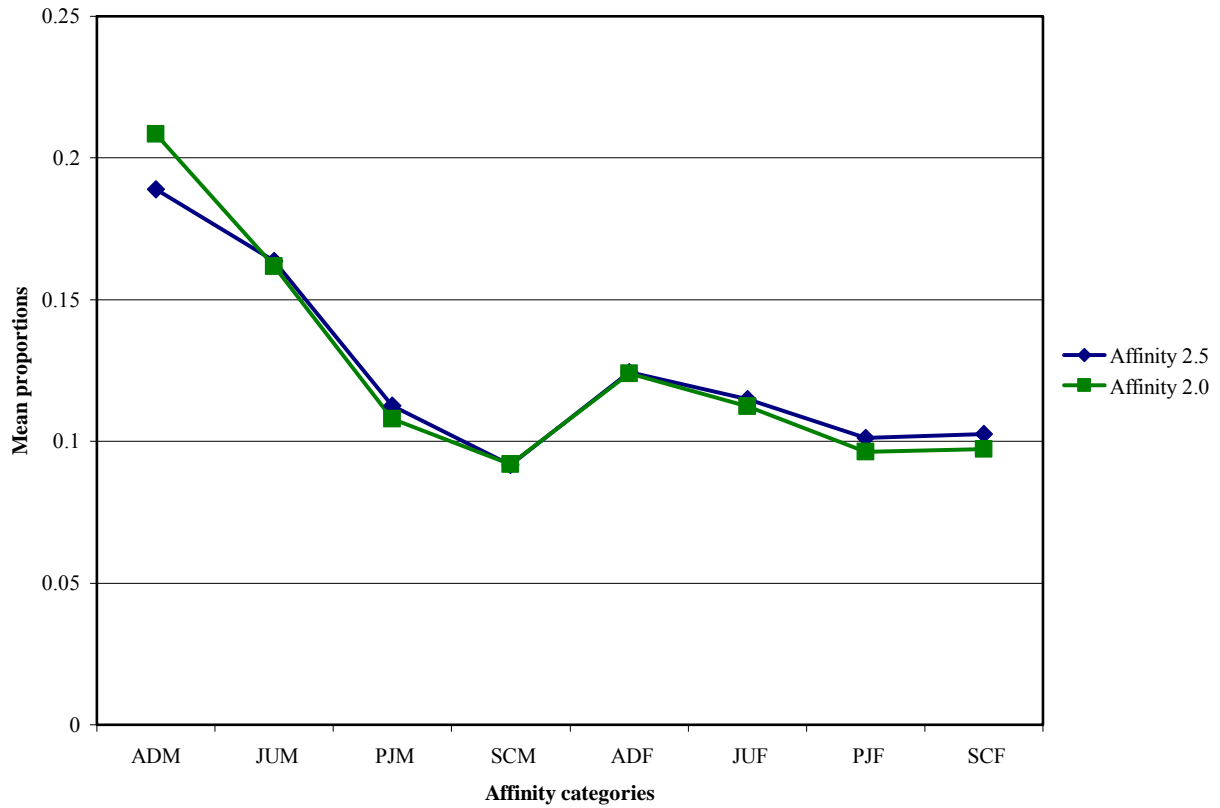


Figure 5. A comparison of Affinity 2.0 and Affinity 2.5 mean proportions.

The second part of the analysis consisted of a re-examination of the temporal stability of Affinity 2.0 using Harmon's (2006) data. A Chi-square goodness-of-fit approach was used to compare data from time 1 to time 2. The Chi-square formula used for this analysis can be seen below.

$$\chi^2 = n \cdot \sum_{j=1}^J \frac{(P_j - \pi_j)^2}{\pi_j}$$

This Chi-square approach was used for each of the 120 participants in Harmon's study. The Chi-square coefficients were obtained by multiplying the sums of the differences between the expected (time 1) ( $\pi$ ) and the observed (time 2) (P) proportions by a constant (n). The constant utilized in this analysis was 116, which represents the median of the total viewing at time 2 of the test-retest. The Affinity includes 8 categories which makes the degrees of freedom for this analysis 7. At a significance level of .05 the Chi-square critical value is 14.067. Using this value, 103 of the 120 participants had insignificant Chi-square scores. Significant scores were found for 17 of the 120 participants. According to this Chi-square approach, 86% of the participants had scores evidencing the temporal stability of Affinity 2.0, while 14% of participant's scores did not. Appendix C contains a list of the Chi-square values for each participant.



## Discussion

The following section includes a discussion of the major findings of this study, its strengths and limitations, and its implications for future research.

### Major Findings

In this section, findings regarding the proportion means for Affinity 2.5 and the temporal stability of Affinity 2.0 are discussed.

**Proportion Means for Affinity 2.5.** The proportion means established in this study using Affinity 2.5 are analogous to those established in Harmon's (2006) study using Affinity 2.0. The patterns of proportion means across the eight categories are visibly similar with the biggest difference being no more than .019. This suggests that the 42.9% increase in stimuli did not significantly change the expected exclusively heterosexual non-pedophilic female response pattern. These proportions can now be used as a normative reference pattern against which future individual results can be compared. The significance of the establishment of normative data in the assessment of sexual interest cannot be understated. Throughout the years that clinicians and researchers have been asking questions about sexual interest and arousal and developing objective assessment measures, there has never been normative data that would aid in effectively screening and diagnosing sexual deviance. A normative pattern in the exploration of this topic is especially important because there appears to be no stable or consistent pattern of deviance. Research on patterns of deviance among male sex offender indicated the absence of a single pattern of deviance common to all sex offenders. Figure 6 depicts the patterns (by Chi square residuals) for a sample of male sex offenders.

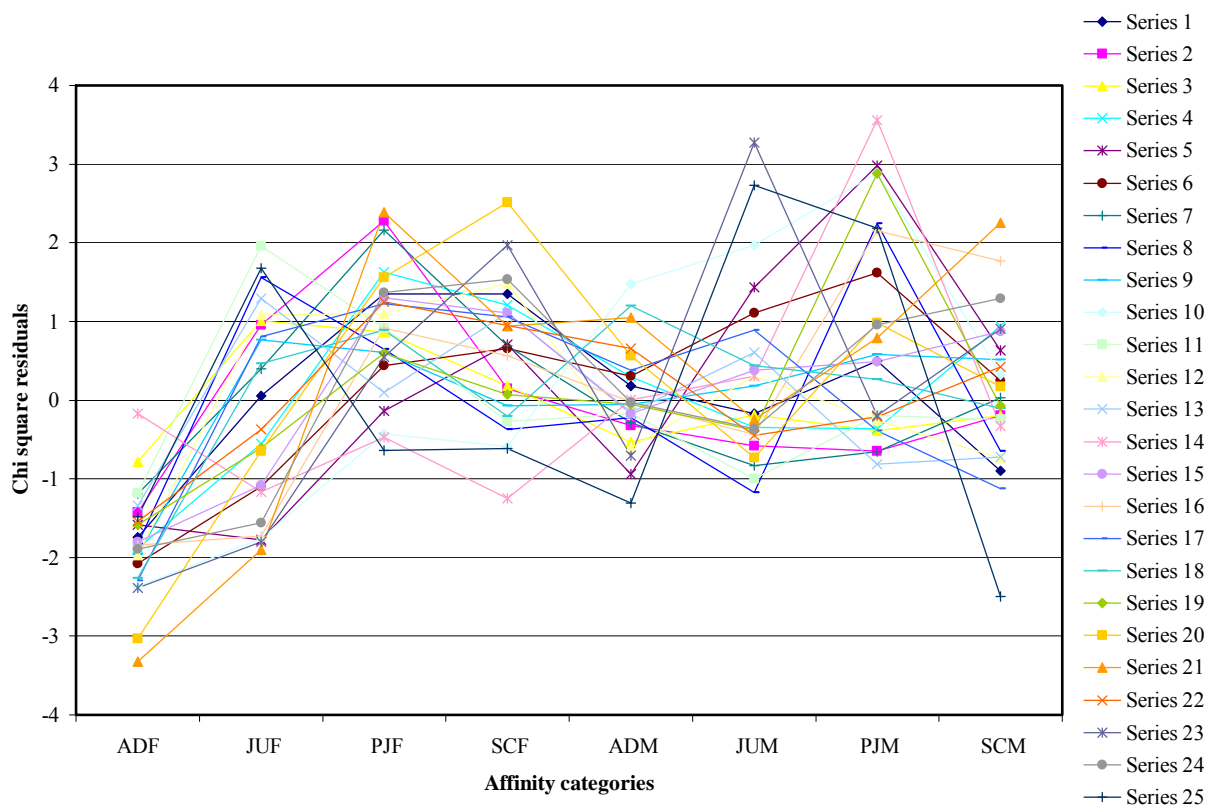


Figure 6. Chi square residuals for male sex offenders.

Each of these sex offenders has a different response pattern specific to his sexual interest and attraction. No two patterns of deviance are the same. Therefore, the need for a normative reference pattern is paramount in the efforts to move toward accurate screening and diagnosis of sex offenders.

Another notable similarity between the Affinity 2.5 response pattern and the Affinity 2.0 response pattern is the presence of what Harmon (2006) referred to as the “blip,” or an unexpected elevation in the viewing time of slides depicting adult females (ADF) and juvenile females (JUF). Israel and Strassberg (2006) conducted a study examining the use of VT as a measure of categorical sexual interest. They found that the VT patterns of men and women were significantly different and also saw a “blip.” They discovered that women showed less category

specificity than men. This means that there was less difference between women's viewing time of male images and female images than there was between men's viewing time of female images and male images. They suggest that this pattern indicates that normal heterosexual women are also attracted to other women.

Harmon (2006) proposes an alternative interpretation. She points out that if the "blip" is an indicator of sexual interest in other women, then all of those participants who specified their sexual interest as exclusively heterosexual on the Kinsey scale must have given a false report. There seems to be no reason to think that they falsified any information provided in the study, particularly given their average scores on the social desirability scale. Therefore, Harmon concludes, the "blip" may be better explained as an instance of social comparison. She notes that women's social comparison has been observed across a variety of racial groups. This type of social comparison would increase the time women spend viewing images of other women.

The fact that the "blip" appeared again in the results of this study seem to signify that some phenomenon is in play. The reason for its consistent appearance in these VT studies is unclear, but it is undoubtedly an important and distinctive characteristic of the exclusively heterosexual non-pedophilic adult female response pattern.

**Temporal Stability of Affinity 2.0.** The second analysis conducted in this study was to re-examine the temporal stability of Affinity 2.0 using a Chi square approach to look at the stability of the response pattern from time 1 to time 2. This analysis was designed to allow the researcher to anticipate the temporal stability of Affinity 2.5. Given the similarity between the response patterns established using both versions of the measure and the increase in the number of stimuli presented on the newer version, it can be expected that the temporal stability would improve using Affinity 2.5. Results of this analysis report that 86% of responses were temporally

stable. Although this speaks well of the instrument, 14% of the participants recorded response patterns that were significantly different from each other. Even though this 14% were not the majority, these results do serve as a cautionary warning to anyone interpreting them. Given that this is the case, it may be recommended that clinicians make it a rule to administer Affinity 2.5 twice and check the temporal stability of the two response patterns before drawing conclusions or planning treatment. Fortunately, administering Affinity 2.5 is a relatively easy procedure. It does not incur any additional cost, takes little time to complete the administration, and the data are instantly available. Conversely, a second administration of the AASI would be costly, time consuming, and problematic in the inaccessibility of raw data to interpret results quickly.

### **Strengths and Limitations**

One of the concerns about this study may be the homogeneity of the sample. The participants for this study were largely of one ethnic group and of similar conservative religious backgrounds. This presents a problem when it comes to considering the generalizability of the normative pattern generated with this population. This study was an introduction to the possibility of successfully describing the response patterns of certain groups. Ethical practice requires that researchers, clinicians, and anyone else seeking to use Affinity 2.5 remember and account for the composition of this particular sample. Despite this limitation in generalizability, the results of this study unmistakably open the door to further examination and research regarding the normative patterns of other populations.

Another concern in doing research on sexual interest and attraction is that some people may decline participation because they are uncomfortable with the topic. It may be that some students who might have participated decided not to because of the nature of the research. This may mean that a bias exists in our sample toward people who are more open and comfortable

with the idea of discussing sexual interest and attraction. Related to this is the problem of participants' willingness to disclose personal information about their sexual interests. Due to the nature of this research, it is possible that the participants might fail to disclose essential information or that they might feel pressure to respond in ways that they feel are socially acceptable. Although this may have occurred with some participants, it appears that the participants in this study were generally willing to disclose this personal information (demonstrated by the fact that several participants indicated on the Kinsey scale that their interests were not exclusively heterosexual) and were largely uninfluenced by a desire to appear socially acceptable (indicated by their M-C 2(10) scores, which fell in the average range).

### **Future Research**

With the results of this study added to the body of existing Affinity research and the establishment of a normative response pattern for Affinity 2.5, the door to improving the screening and diagnostic uses of Affinity has been swung wide open. The establishment of normative data in the assessment of sexual interest is a landmark for work in this field. There are several directions to be pursued as research continues.

This study and its companion study have established normative response patterns for exclusively heterosexual non-pedophilic males and females. It is critical that the work of establishing normative response patterns for various groups continues. The importance of the normative response patterns established for exclusively heterosexual non-pedophilic males and females is undeniable. However, there are many other non-pedophilic groups whose normative response patterns may not exactly fit these ones. For example, it is anticipated that the normative response patterns for exclusively homosexual non-pedophilic males and females will look different and should be the focus of future research. Sexual orientation is expected to be an

important factor in how the normative response patterns of different non-pedophilic populations look. Other cross-cultural factors may also make a difference and should be a focus of future research in the establishment of normative response patterns.

The Affinity has the potential to become a prominent tool in clinical and judicial settings. Such settings will require research that examines and fine-tunes procedures that will lead to accurate screening and diagnosis of sexual deviance. Knowing that deviance in sexual interest exists and the direction in which an individual is deviant is valuable to clinicians providing services to sex offenders and preventing future victimizations.

Another area of focus is to determine the potential of the instrument for overcoming dissimulation. As the instrument is more widely used it can be anticipated that the surreptitious measure of viewing time may be compromised. It is vital for researchers to understand how results are influenced if the VT measure is compromised or by other attempts at dissimulation. One advantage that the Affinity has over other VT instruments of sexual interest is that the pattern based on proportion means, rather than ipsative data, makes it more difficult to dissimulate. For example, an individual who is aware of the VT measure may seek to extend his or her time spend viewing categories that are considered normal and decrease the time spent viewing categories that would be considered deviant. This attempt at dissimulation may go unnoticed if the data are reported as ipsative scores. However, it would be very difficult for the individual to extend or decrease his or her viewing times in just the right proportions to match the normative reference pattern. To date, there is no research exploring this facet of the Affinity.

The research that has been done to improve the understanding of the Affinity is only the beginning of what is needed to establish procedures and methods for its use in various settings. The potential usefulness of this instrument is indisputable. The main purpose of its design is in

clinical work with sex offenders. However, if ethically and appropriately used it may serve as a method of screening those working with vulnerable populations or to inform important legal decisions. These possibilities are exciting but much more research and exploration are necessary to ensure that the Affinity is used ethically and accurately in any setting.

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## Appendix A Demographics, Attitudes, and Sexual Interest Questionnaire

### *Demographics*

1. Age: \_\_\_\_\_
2. Ethnicity: \_\_\_\_\_
3. Year in School (mark the one that applies)
 

<input type="checkbox"/> Freshman	<input type="checkbox"/> Sophomore
<input type="checkbox"/> Junior	<input type="checkbox"/> Senior
<input type="checkbox"/> Graduate Student	
4. Marital Status
 

<input type="checkbox"/> Single	<input type="checkbox"/> Married
<input type="checkbox"/> Divorced	<input type="checkbox"/> Widowed

### *Personal Attitudes*

5. 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 your personality.
  - I never hesitate to go out of my way to help someone in trouble.
  - I have never intensely disliked someone.
  - 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 wrongdoings.
  - 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 only one):

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

## **Appendix B**

### **Consent to be a Research Subject**

#### **Introduction**

This research study is being conducted by Lane Fischer at Brigham Young University to determine the typical pattern of responses to Affinity 2.5 by adult males and females. You were selected to participate because you are over age 18 and have no history of pedophilia.

#### **Procedures**

You will be asked to complete the Affinity 2.5 in a private room in the CPSE research lab (350 MCKB). Affinity 2.5 is a computer administered measure of sexual interest. You will be asked to rank order some line drawings of types of people according to their sexual attractiveness and unattractiveness to you. You will then be asked to rate a series of images of clothed models in everyday activities according to how sexually attractive or unattractive they are to you. No pornographic images are used in Affinity 2.5. Following completion of the Affinity 2.5, you will be asked to fill out a brief questionnaire regarding some simple demographics, personal attitudes and sexual preference.

#### **Risks/Discomforts**

There are minimal risks for participation in this study. However, you may feel some discomfort about disclosing sexual interests or rating images of people.

#### **Benefits**

There are no direct benefits to you. However, it is hoped that through your participation researchers will learn more about how people respond to such rating tasks and help us understand human sexuality better.

#### **Confidentiality**

All information provided will remain confidential. Your responses will be assigned a subject number that will be disconnected from your name. Your responses will be downloaded from Affinity 2.5 to Excel and another statistical program and then erased from the Affinity program files. The questionnaire will also be coded only by a subject number, transcribed into Excel and SPSS and separated from your name. After the research is completed, the questionnaires will be destroyed. Although the questionnaire will ask about your sexual preference, no information will be available to the university or the Honor Code Office.

#### **Compensation**

Participants may receive extra credit or clinical hours in their classes that offer such compensation.

#### **Participation**

Participation in this research study is voluntary. You have the right to withdraw at anytime or refuse to participate entirely without jeopardy to your class status, grade or standing with the university.

#### **Questions about the Research**

If you have questions regarding this study, you may contact Dr. Lane Fischer at 422-4200, lane\_fischer@byu.edu

**Questions about your Rights as Research Participants**

If you have questions you do not feel comfortable asking the researcher, you may contact Dr. Christopher Dromey, IRB Chair, 422-6461, 133 TLRB, dromey@byu.edu.

I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

### Appendix C

Chi square results for test of temporal stability for Affinity 2.0

Participant number	Chi square	Participant number	Chi square
2001	5.981071	2082	8.684241
2002	14.420964*	2083	11.653671
2003	6.673299	2084	3.090187
2004	1.965182	2086	1.606384
2005	2.814373	2087	52.367939*
2006	6.346345	2088	3.681739
2010	6.616936	2089	2.902156
2011	13.045021	2090	9.663765
2013	7.286191	2091	3.429366
2014	6.335428	2092	2.353273
2016	7.214352	2093	0.989063
2017	3.357455	2094	1.398185
2018	1.828692	2095	12.909938
2019	4.589296	2096	7.468020
2020	3.801265	2098	10.397957
2021	9.841126	2099	13.131024
2022	63.066547*	2100	2.078673
2023	3.223287	2101	21.381616*
2024	13.752807	2102	5.147625
2025	1.264070	2103	8.607942
2028	9.982636	2104	4.916868
2031	3.093851	2106	34.718595*
2033	4.063475	2107	9.048381
2034	12.378243	2108	16.849479*
2036	6.153500	2109	4.929983
2037	29.447184*	2111	4.554610
2040	1.581798	2112	6.058275
2041	9.524202	2114	33.757233*
2042	11.450179	2116	11.120395
2044	10.692771	2119	7.468100
2046	9.636887	2120	4.749131
2048	5.276543	2121	881.261575*
2049	7.659597	2122	8.983627
2050	2.735227	2123	1.457761
2052	11.374464	2124	35.360279*
2053	1.548129	2125	4.014268
2054	8.311636	2126	5.002409
2055	2.370778	2127	9.255231
2056	7.706657	2129	11.543619

2057	8.344391	2130	2.500479
2058	6.709635	2132	12.742384
2061	12.824924	2133	10.757075
2062	12.932491	2134	5.058929
2063	5.035843	2135	5.875376
2065	4.687503	2138	16.073339*
2067	6.757058	2139	1.001724
2068	8.097547	2141	4.699784
2069	6.296055	2142	2.195171
2070	5.332927	2143	5.444609
2071	9.249311	2144	17.043996*
2072	28.168102*	2145	13.913375
2073	2.742728	2146	9.866712
2074	1.864474	2147	17.074051*
2075	11.195591	2148	5.512669
2076	53.231952*	2149	24.634659*
2077	251.340914*	2150	3.732507
2078	9.112071	2151	13.315456
2079	11.989261	2152	4.772658
2080	5.095181	2153	8.497750
2081	9.663512	2154	8.268808

\* >.05 significant critical value