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Investigating Inner Experience While Reading an Erotic Short Story

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INVESTIGATING INNER EXPERIENCE WHILE READING AN EROTIC SHORT STORY

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Abstract

An investigation of the phenomenological aspects of sexual response is needed for a more comprehensive understanding of human sexuality. To obtain high fidelity descriptions of inner experience during a sexually oriented task, the current study used Descriptive Experience Sampling (DES) while seven participants read an erotic short story. Participants were trained in DES by sampling during everyday activities. After training, they were sampled while reading two classic short stories on a web-based program. Participants then sampled their experience while reading an erotic short story using the same web-based program. Some of the participants were willing to discuss their inner experience during everyday activities and fiction reading, but were unwilling to discuss their experience while reading erotica. Participants who completed the erotica reading study predominantly had vivid inner seeings of sexual scenes, regardless of their dominant experience during natural environment sampling. Most participants reported generally finding the story to be sexually arousing (5 of 7 participants), were engaged in the reading (85% of sampled moments), and innerly saw sexual scenes (74.1% of sampled moments). Despite the high degree of engagement with the reading and the sexual content of the inner seeings, there was little to no direct experience of reading or of sexual arousal (7.4% and 3.7%, respectively). The findings suggest that experience during sexually oriented tasks is particularly private and raise the possibility that a pristine inner experience of sexual arousal is a fleeting but salient phenomenon. Future studies should investigate pristine experience during other sexual activities.

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Chapter 1: Introduction

Physiological reactions to sexual stimuli have been extensively researched and are well understood (Kaplan, 1977; Levin, 2008; Masters & Johnson, 1966). When an appropriately arousing stimulus is presented to a man or a woman, the body will usually respond, but a subjective experience of arousal is not necessarily present. This effect is seen using a variety of sexual stimuli, including visual (photographs and video), auditory, text, and fantasy modalities. The lack of subjective-physiological concordance is especially prevalent in women and is also observed in men, although to a lesser degree (Chivers, Seto, Lalumière, Laan, & Grimbos, 2010).

Efforts by sexuality researchers to understand the subjective experience of arousal have included focus groups and interviews that capture the narrative of sexual situations (Graham, Sanders, Milhausen, & McBride, 2004; Janssen, McBride, Yarber, Hill, & Butler, 2007; Seal, Smith, Coley, Perry, & Gamez, 2007). These qualitative methods have serious limitations for apprehending subjective inner experience during sexual arousal. First, both focus groups and interviews rely on retrospective reports of past sexual experiences. The nature of both sexual arousal and inner experience (i.e., fleeting and personal) make delayed reports unreliable (Hurlburt & Heavey, 2006). Second, the focus groups and interviews were designed with specific purposes in mind, including validating a measure of sexual function (Graham et al., 2004) and describing the most emotionally intimate and physically arousing sexual experiences of participants' lives (Seal et al., 2007). These goals shaped the design of the studies and the kinds of questions asked of participants. That is to say, researchers with a specific area of interest (e.g., sexual inhibition) are in a poor position to know what questions they are incidentally omitting and thus what aspects of the participant's experience they are neglecting (Hurlburt, 2011).

Some of the foremost qualitative researchers in sexual arousal suggest that the exploration of the phenomenological experience of arousal is necessary for the development of a complete theory of sexual arousal (Graham et al., 2004; Heiman, 2001; Meana, 2010). As some consciousness scientists study phenomenological experience, it makes sense to apply a method from this area of research to sexual arousal. Descriptive Experience Sampling (DES) was purposefully developed to address the hazards inherent to researching consciousness (Hurlburt & Heavey, 2006), and is an ecologically valid and reliable method for studying inner experience. Standard DES procedure provides participants with a randomized beeper to wear during normal everyday activity. When the beeper sounds, the participant jots down a few notes about what was ongoing in their experience at the moment of the beep. Within 24 hours, the participant meets with the research team for an in-depth expositional interview to explore the content and form of their experience. This procedure provides considerable structure in the sampling process across subjects as well as to the opportunity to describe in detail the nature of individual experiences with minimal retrospective complications.

This study used DES to investigate inner experience during the reading of an erotic short story. Before asking subjects to use DES while reading an erotic short story, they were iteratively trained to observe their naturally-occurring inner experience using DES. DES while reading an erotic short story allowed the researchers to explore inner experience during a sexually oriented task in a non-theory driven way. In particular, the use of DES provided in-depth descriptions of men's and women's experience during a standardized, relatively natural, arousing task. The use of a rigorous qualitative measure to examine experience during a sexually oriented task is an important addition to the literature.

Historical and Current Theories of Sexual Arousal

Linear Model of Sexual Response

A linear model of the human sexual response is characterized by a sequential progression between phases. The successful completion of each phase is necessary for entrance into the subsequent phase. Level of arousal varies in both degree and slope across the phases. People are more aroused during some points of the cycle than others and the change in the level of arousal varies across the different phases (Masters & Johnson, 1966). One major criticism of linear models of sexual response is the sequential nature, asserting that one phase must start and complete before another phase can begin (Basson, 2001; Hayes, 2011).

The original model of human sexual response, now usually referred to as the EPOR model, is divided into four phases: excitement (E), plateau (P), orgasm (O), and resolution (R) (Levin, 2008; Masters & Johnson, 1966). The excitement phase is characterized by a number of physiological reactions. These reactions comprise what is currently considered the physiological aspects of sexual arousal; men and women only differ due to anatomical differences in these reactions. Possible physiological responses include muscle tension, increased heart rate, elevated blood pressure, and genital vasocongestion resulting in erection in men and lubrication and labial swelling in women, in response to appropriately arousing physiological or psychological stimuli (Levin, 2008; Masters & Johnson, 1966). The excitement phase ends when a certain threshold of arousal is reached and the plateau phase begins; there is either no further increase in arousal, or a significantly slower increase in arousal during this phase. The threshold between arousal and plateau is different for everyone. The EPOR model was strictly focused on physiological

responses to sexual stimuli, which was explicitly identified as a necessary limitation as it was the first study of the human sexual response (Masters & Johnson, 1966).

Masters and Johnson (1966, p. 7) encouraged subsequent researchers to expand on their model to include psychological factors of sexual response. The EPOR model was modified to include desire, which was the first step in addressing the psychological components of sexual response, particularly sexual arousal (Kaplan, 1977). “Desire is an appetite that has its locus in the brain; excitement and orgasm involve autonomic reflexes of the genitals” (Kaplan, 1977). Case studies provided evidence that disruptions of desire affect all stages of the sexual response, such that psychological interference could limit physical sexual function. For example, sexual interactions without preceding desire were described as mechanistic, indicating that desire (a psychological process) is a necessary antecedent for adequate progression through the physiological phases of the sexual response cycle (Kaplan, 1977). Adding desire as a phase, along with the merging of the excitement and plateau phases, yielded the currently accepted, DEOR linear model of sexual response: desire (D), excitement (E), orgasm (O), and resolution (R) (Kaplan, 1977; Levin, 2008).

Dual Response Model of Sexual Response

The Dual Response Model of sexual response (Bancroft, 1999) was developed using evidence from animal and human neurophysiological research in males. This evidence showed that the limbic system was particularly important in male sexual response, including the dopaminergic system, the serotonergic system, and the noradrenergic system. Dopamine agonists enhance male sexual behavior, while dopamine antagonists impair male sexual behavior. Inhibition of serotonin seems to enhance a variety of behaviors including male sexual activity, aggression, eating, and general motor behavior. Drugs that increase serotonin

transmission (e.g., SSRI's) inhibit sexual behavior in male and female humans and animals. The noradrenergic system is likely to be involved with arousal, but current research does not clearly delineate what its role may be as it is complexly related to both serotonergic and dopaminergic systems. In addition to the limbic system, testosterone has been clearly shown to permit and maintain male sexual behavior; this may be via its enhancement of dopamine release. Also, neurological lesions of the temporal lobes or the limbic system are commonly associated with declines in sexual interest and response; the enhancement of sexual interest and response through lesions is very rare (Bancroft, 1999).

Using the evidence described above, the Dual Response Model posits that there are two mechanisms of arousal: the sexual inhibitory system (SIS) and sexual excitatory system (SES). The SES is activated by a sexual stimulus, which can be any physical, psychological, or imagined stimulus that has the characteristics necessary to elicit a sexual response. Sexual arousal has not been shown to be distinct from general arousal in terms of neurotransmitter and hormone response. There is likely a central arousal system which is recruited to sexual response patterns. Individuals generally have a basal level of inhibition, termed inhibitory tone. Inhibitory tone is variable and is likely the result of genetic factors and/or early learning. Those with higher inhibitory tone will tend to have greater intensity in the activation of the SIS. Inhibitory tone can be altered by environmental factors, such as depression or chronic stress. The SIS in males tends to be activated in four response patterns: a perceived non-sexual threat; a perceived sexual threat; chronic stress; and ejaculation (which results in the post-ejaculatory refractory period). The extent of a sexual response is determined by the balance between the SIS and the SES.

Later research has attempted to apply the dual response model to women (Graham, Sanders, & Milhausen, 2006; Graham et al., 2004). In a focus group study, participants were

asked to discuss the topics that made them more or less aroused. These responses were interpreted to mean that women also have some thoughts, feelings and situations that are excitatory and some that are inhibitory. However, as the dual-response theory is solely based on male neurophysiological data, it is unclear to what extent there is a basis for extrapolation to women.

Circular Model of Sexual Response

The circular model of sexual response was developed with the intent of integrating psychological and physiological motivations for sex as well as responses to sexual stimuli (Basson, 2001). In the circular model, men and women mostly exist in a state of sexual neutrality, with varying degrees of willingness to be aroused. Motivations for sexual activity can include a number of prompts, such as a hunger for sexual pleasure, the enhancement of a relationship (e.g., emotional closeness, commitment), a desire to share sexual pleasure, or a desire to increase one's attractiveness in the eyes of a partner. When sexual activity is not motivated by a hunger for sexual pleasure, which is the kind of desire described in the DEOR model, this desire may not occur until after or during arousal. Thus, the original impetus(es) for sexual activity, physical pleasure experienced during activity, and observation of increasing arousal during activity all feed into sexual arousal and desire, eventually resulting in physical and emotional satisfaction. The body then returns to a state of sexual neutrality. The circular model encompasses the physical reactions observed in the DEOR model and the biological processes involved in the Dual Response model. It is an inclusive model that attempts to integrate the current knowledge of these systems into a simple and comprehensive model of sexual response.

A meta-analysis of studies on female sexual response cycles compared 13 original studies and one meta-analysis that investigated or provided evidence for circular or linear models of sexual response since 1990 in peer-reviewed journals (Hayes, 2011). The results showed that the majority of women identified with linear pathways. A likely confound of this finding is that the definition and measures of female sexual dysfunction are based on linear models, and if women have received any education on sexual response it would have described the linear model. There is increasing evidence that circular pathways are more accurate in some ways. In particular, the spontaneous desire of linear models is not the only reason that women engage in sexual activity, and the sequential nature of the linear model is problematic for many women, particularly those experiencing sexual dysfunction. There has been no research on linear versus circular response models in males. This lack of research may exist because the DEOR model seems to work relatively well for most men, although it does break down in older men and for some sexual dysfunctions (e.g., male hypoactive desire disorder) (McCarthy & McDonald, 2008).

Experience during Arousing Tasks and Activities

Relationship between Genital and Subjective Arousal

The findings of a recent meta-analysis of studies on physiological and subjective sexual arousal suggest that factors other than physiological response are important to the experience of arousal (Chivers et al., 2010). The meta-analysis included 132 studies published between 1969 and 2007 with a total sample size of 2,505 women and 1,918 men. The stimuli used were multi-modal across studies (e.g., visual, auditory, textual, and fantasy) and all studies included genital and self-reported sexual arousal responses. A significant correlation between subjective and genital arousal was found for both men and women ($r = .66$ and $r = .26$, respectively). There was no significant effect of individual study methodology or stimulus type. Some studies included

participants with sexual dysfunction, while others used community samples; there was not a significant effect of sexual functioning on concordance of genital and subjective arousal in men or women.

Although the correlations between genital and subjective arousal were significant for men and women, the magnitude of these correlations are very important to the interpretation of these findings. Interpretation of the strength of correlations depends on the circumstance, but a rough guide for positive correlations is to consider $0 \leq r \leq .19$ to indicate a negligible linear relationship; $.20 \leq r \leq .39$ to indicate a weak linear relationships; $.40 \leq r \leq .69$ to indicate a moderate linear relationship; and $r \geq .7$ to indicate a strong linear relationship (Cohen, 1969). Using these ranges, men demonstrated moderate and women demonstrated weak concordance between genital and subjective arousal. Even with statistical significance indicating that this concordance exists in the population, the low and moderate magnitudes of the correlations indicate that level of genital arousal is not a reliable indicator of the level of subjective arousal, and vice-versa, particularly among women.

Qualitative Studies of Sexual Experiences

One study interviewed heterosexual couples regarding their subjective experience during three significant sexual events: their first time having sex, their most physically arousing sexual encounter, and their most emotionally intimate sexual encounter (Seal et al., 2007). The study used a heterogeneous sample of 38 young adult heterosexual couples living in a US city who had been dating for an average of 6.4 months. The data were analyzed according to the presence or absence of traditional sexual scripts. Sexual scripts can be described as interpersonal or intrapsychic. The traditional interpersonal sexual script includes male initiation and progression of sexual activity and female limiting or controlling the extent of sexual activity (i.e., men try to

have sex and women are the gatekeepers). The traditional intrapsychic sexual script for men includes sexual pleasure or conquest and emotional intimacy as motivations for sexual activity; for women, traditional scripts primarily include emotional intimacy. These traditional scripts were found in all three events for both men and women; although there were some differences in age and length of relationship (e.g., female initiation was more arousing for younger men). Emotional intimacy and physical arousal were motivating factors for two thirds of men in all three sexual events and for one quarter of women. Emotional intimacy alone was a more common intrapsychic script for most women.

These data gathered during interviews are retrospective accounts of events that happened as long as two years ago. Asking people to describe their motives and feelings about these events is very problematic (Nisbett & Wilson, 1977; Robinson & Clore, 2002). Memory of events is easily distorted and memory of emotions or motivations surrounding a distant event can change as a person changes or as the view of one's partner changes. Also, this study was developed with the goal of describing significant, positive sexual events in a couple's relationship. As a result, participants discussed almost only positive motivations and experiences of sexual activity. It is possible that for some of these couples much of their sex lives are unpleasant, boring, or dutiful. While focusing on significant events eliminated the need for generalizations and likely increased the accuracy of the reports, these events are unlikely to be representative of what sex is usually like for these couples.

The Sexual Excitation Scale/Sexual Inhibition Scale (SES/SIS) was originally developed for men using psychophysiological data on men's sexual response from the dual response model of sexual arousal, and did not include a qualitative component (Janssen et al., 2007). In order to adapt this scale for use with women, Graham (2004) conducted a focus group study that queried

their participants on three topics: cues to sexual arousal; the distinction between and overlap of sexual desire/interest and sexual arousal; and factors related to the excitation and inhibition of sexual arousal. The study included nine focus groups with a total of 80 women (mean age = 34.3 years, range 18-84); six groups were of mixed ethnicity, sexual orientation, and socio-economic status, two groups were exclusively lesbian and bisexual groups, and one group consisted of African-American women. In all the groups, women reported a wide range of genital and non-genital as well as cognitive and emotional cues to sexual arousal; there was general consensus that lubrication is not necessary to feel aroused, and it does not always indicate arousal. For many women, sexual interest and arousal were difficult to differentiate, and when they could be differentiated they did not seem to have a set order. Sexual interest could lead to arousal or vice versa. When asked about factors that elicited sex arousal or inhibited it, women gave a wide variety of responses with individual preferences and situational factors playing a large role in whether something was exciting or inhibiting. For example, some women found anxiety to be arousing at certain times but not at others. Also, the possibility of being heard or seen during a sexual encounter excited some women, but was a turn off for others. A few consistent themes that played a role for most women in sexual arousal included feelings about one's body, negative consequences of sexual activity, feeling desired/accepted, feeling used, and negative mood.

After the Graham (2004) focus group study, the original creators of the SES/SIS decided a qualitative component could yield valuable information about men's sexual response (Janssen et al., 2007). Janssen and colleagues used an almost identical study design to compare their results with a male sample to Graham's results (Janssen et al., 2007). The study included six focus groups with a total of 50 mostly white, heterosexual men (mean age = 35.2 years, range, 18-70), and included questions on the same three topics: cues to sexual arousal; the distinction

between and overlap of sexual desire/interest and sexual arousal; and factors related to the excitation and inhibition of sexual arousal. Overall, their results were very similar to those found in the female sample, suggesting that there is much more within than between gender variation in reports of sexual arousal. Men also reported a wide range of genital and non-genital as well as cognitive and emotional cues to sexual arousal; there was a general consensus that erections are not necessary to feel aroused, and that one can have an erection without being aroused, although erections are a more important indicator for younger than older men. Men also generally didn't differentiate sexual interest from sexual arousal, especially when discussing partnered sexual activities. Men generally described masturbation as a mechanistic release of tension that didn't include desire and wasn't thought of as a particularly sexual activity. Men showed a large degree of individual variability when it came to sexually exciting or inhibiting situations and factors. Some of the same examples were discussed by the men's groups as the women's as being exciting for some and inhibiting for others (e.g., the possibility of being seen or heard while engaging in sexual activity). Some consistent themes that played a role for most men in sexual arousal included feelings about one's self, feeling desired by one's sexual partner, importance of partner attributes (including partner's self-confidence), self and partner mood state, and feeling emotionally connected to their sexual partner.

These studies provide interesting narratives on participants' views of what they find arousing; however, they do not tell us much about inner experience during sexual activities. The focus group studies not only rely on retrospective accounts, but also had participants talk in a general way about what their experience is like when they are aroused and how it can be enhanced or inhibited. Experience is fleeting and momentary; asking for a generalization may not do justice to their experience. For example, participants reported that certain factors, like

a man being forceful or persistent in his sexual advances, can be arousing in some situations but a turn off in others. So, an attempt to classify forcefulness or persistence as generally arousing or generally a turn off is not an accurate description of the individual's experience: the experience is dependent on the circumstances. Graham (2004) and Janssen (2007) reported a large amount of individual variability, but they were unable to measure the extent to which people vary within their own experience across time. Retrospective interviewing methods are very limited in their ability to capture those differences.

Furthermore, the *a priori* goals of the studies can significantly shape participant responses. Graham (2004) claims that the data they gathered support the excitation and inhibition constructs in women's sexual response, but leading a discussion in which at least a third of the focus was on those constructs did not encourage women to be comfortable in saying they do not have those kinds of experiences frequently or at all. Asking questions about sexual excitation and inhibition specifically will result in people searching their experiences for examples of those phenomena. In fact, Janssen (2007) describes men as often focusing on factors that led them to engage in sexual behaviors, instead of factors that led them to be sexually aroused. This deviation from the question suggests that men were not quite able to answer excitation and inhibition questions about arousal, so they searched for a way to answer it that they believed was "correct."

The data from these qualitative studies supports the growing evidence that distinctions made between arousal and desire by researchers may be artificial and that genital factors are not as important as previously thought in either men or women (Graham et al., 2004; Janssen et al., 2007; McCarthy & McDonald, 2008; Meana, 2010). To further elucidate what it means to be sexually aroused or to feel desire, researchers in the field are calling for "systematically gathered

phenomenological data” (Heiman, 2001) on both men’s and women’s inner experience during sexually arousing or desire inducing tasks (Graham et al., 2004; Janssen et al., 2007; McCarthy & McDonald, 2008; Meana, 2010). This kind of qualitative research is a necessary first step to understanding whether people experience these sexual states in similar ways. By investigating what, if anything, characterizes inner experience during sexually arousing tasks, the door is opened for further exploration of those characterizations using more generalizable, quantitative methods (Heiman, 2001; Meana, 2010). As seen above, the kind of qualitative research methods available to most sexuality researchers are quite limited in their ability to capture reliable reports of the experience of sexual arousal, and we suggest turning to a method designed to produce high fidelity descriptions of pristine inner experience.

Experience Sampling

Historical and Current Views of Inner Experience

Consciousness and how people experience the world has been a recurring theme since psychologists first began studying human nature in a scientific manner. Wilhelm Wundt, the first psychologist to found a psychology research laboratory, devoted considerable time to the study of people’s experience and developing introspection. He defined psychology as the discipline in which “the person looks upon himself as from *within* and tries to explain the interrelations of those processes that this internal observation discloses” (Diamond, 1980). Wundt trained his subjects to observe experience in minute detail, and then used those observations to describe the workings of the mind. Comparing this definition to Hurlburt’s definition of pristine inner experience (below), we can see some important similarities, but perhaps even more important differences.

Pristine inner experience is directly apprehended, naturally occurring, and ongoing experience that is not altered by observation or interpretation (Hurlburt, 2011). Inner experience is “pristine in the same sense as we would say a forest is pristine.... Pristine does not necessarily mean ‘clean’ or ‘tranquil’; much of a pristine forest is mucky, bloody, brutal and so on” (Hurlburt, 2011). Inner experience can be anything: a thought, a feeling, a seeing, a sensing, etc. Although there are no limitations on what exactly can be present before the footlights of consciousness, pristine inner experience rarely involves generalities or causalities. Both Wundt and Hurlburt are interested in the internal; what the person is experiencing with relative disregard for what is occurring in objective reality. However, Wundt led his participants to observe their experience in the way he believed to be important and then used those observations to construct a theory of the mind. Hurlburt is interested in the raw data with as little influence from the researcher or the observer as possible.

Of course, there is much history between Wundt’s definition of psychology and Hurlburt’s investigations of pristine inner experience. The earliest phase of that history was introspection. Introspective psychology came to its peak in the early 1900’s with the Würzburg School in Germany and E.B. Titchener at Cornell. They represented opposing schools of thought regarding the role of imagery in inner experience. Titchener believed that all inner experience included some sort of image, even if it is vague and difficult to perceive. The psychologists of the Würzburg School argued that they had examples of thought that included no imagery and propagated the concept of imageless thought. After 20 years of study, the two schools remained convinced of their respective arguments (Hurlburt & Heavey, 2006). When the findings were reviewed more recently, the data gathered by the different labs was practically identical; the disagreement was only in the interpretation (Brock, 2013; Monson & Hurlburt, 1993).

During the early 1900's, both Freudian psychologists and behaviorists argued against introspective research, which is one reason for the decline of introspection as a common research method. Freud believed the unconscious was the most important part of a person; therefore, introspection was a useless tool because it was unable to examine unconscious events. The behaviorists, on the other hand, believed that inner experience was too difficult to research reliably, partly due to the unresolved conflict between introspectionists on the subject of imageless thought. Instead, they championed the study of easily quantifiable characteristics, i.e., behaviors. Freudian theories have fallen out of favor, but behavioral research boomed, later to be supplemented by theories and research focused on cognitions, resulting in the current dominance of cognitive-behavioral research in scientific psychology.

Cognitive-behavioral psychologists, when engaging in therapeutic practice, often use self-report questionnaires to investigate thoughts, feelings, and other aspects of inner experience. They base their therapies on being able to ask someone what they are thinking or feeling, and being able to get an accurate answer (Hurlburt, 2011). Cognition researchers avoid the use of thoughts as data, usually relying on reaction times or other similarly quantifiable dependent variables to draw conclusions about mental processes. Thus, cognitive-behavioral therapy operates under the assumption that thoughts are vitally important and easily observable, while cognition research seems to hold to the opinion that thoughts are not observable and thus are not suitable for investigation in and of themselves. Indeed, research has shown that people are quite bad at describing their mental processes (Nisbett & Wilson, 1977). However, there is a small subset of researchers who continue to devote their efforts to elucidating inner experience. Many of these methods are considerably influenced by the cognitive-behavioral mindset of the field, either assuming they are getting an accurate answer when they ask what someone is thinking or

feeling, or inferring thoughts and feelings based on other measures (Brock, 2013; Hurlburt & Heavey, 2006).

Methods such as self-report questionnaires are likely adequate if the goal is to study a general state at an approximate time, but the study of pristine inner experience requires a more precise method. When one tries to observe inner experience as it is occurring, in an on-going fashion, the act of observing interferes with the ability to observe. If you decide “I am going to pay attention to my inner experience now,” your inner experience will necessarily involve your paying attention to your inner experience. If you try to recall your experience after the fact, forgetting, as well as personal motives, desires, and interpretations, can easily shape and change your recollection. If our goal is to understand pristine inner experience, these challenges must be confronted (Hurlburt, 2011).

Methods for Studying Inner Experience

Armchair introspection. Armchair introspection can be described as self-initiated, present-tense, and targeted judgments of currently occurring inner experience (Siewert, 2011). Essentially, the participant asks herself questions on pre-determined topics about what is currently ongoing in her experience. For example, if visual imagery is of particular interest to the researcher, then at various points the participant might ask herself, “What am I seeing right now?” Proponents of armchair introspection believe that this method more accurately captures the potential “depth” of inner experience, or the complexity that we expect inner experience to hold, than do experience sampling methodologies such as the Experience Sampling Method and Descriptive Experience Sampling (Siewert, 2011).

Asking pointed questions of this nature may access a larger depth of experience within that topic, but it is unclear whether or not that depth accurately reflects what the person was

actually experiencing. If asked “What are you seeing right now?,” people might search their experience for any visual aspect, regardless of how salient or even extant the visual experience was at the moment of the inquiry, simply to be able to provide the questioner with some sort of answer. This is just as true if the questioner is external or internal. Even if the researcher asked pointed questions about every possible experience (What are you thinking right now?; What are you feeling right now?; What are you smelling right now?; etc.), we would have a biased and distorted list focused on what the questioner could think to ask about, and be no closer to having a clear look at pristine inner experience. Furthermore, the intention of focusing on a certain aspect of experience will necessarily be part of one’s inner experience and will predispose the investigator to attend to that aspect of experience and disregard others (Hurlburt & Schwitzgebel, 2011).

Researchers employing armchair introspection frequently use themselves as the participant, as it is a difficult task to complete with objectivity and consistency. Introspection by practiced researchers can be characterized as serious, in the sense that it represents considerable time and effort accorded to the skill of observing inner experience. After researchers seriously introspect, they often use the information they gather to determine what aspects of their experience are important enough to explore in a more representative sample (Hurlburt & Schwitzgebel, 2011).

Introspection by unpracticed volunteers can be characterized as casual; casual introspections are unlikely to be particularly reliable or valid approximations of inner experience as it is not a common endeavor in our society or a skill many people have practiced. Casual introspection is an attempt to obtain more generalizable information, but these participants may be even more likely to over-report experience in the researchers’ area of interest. Serious

introspection is distorted by the method of observation and the *a priori* assumptions of the researchers; casual introspection potentially distorts the data by using inexperienced introspectors to investigate inherently biased hypotheses. Ultimately, armchair introspection raises serious concerns that render it a questionable method for investigating pristine inner experience (Hurlburt & Schwitzgebel, 2011).

Experience Sampling Method. The Experience Sampling Method (ESM) uses randomized signals and self-report forms to sample participants' everyday states and activities (Csikszentmihalyi & Larson, 1987; Larson & Csikszentmihalyi, 1983; Trull & Ebner-Priemer, 2009). The participant receives a beeper that has been programmed to signal the participant randomly between predetermined hours (e.g., 8:00 AM to 10:00 PM) for a relatively extended time period, usually about a week. The participant is also given a booklet of Experience Sampling Forms (ESFs) and instructed to fill out a form as soon as a signal occurs, if it is at all possible. The specific items on the ESF vary by study, but it generally includes questions about one's current activity, thoughts, mood, and location. Some of these topics are assessed using open-ended questions, while some are set on Likert-scales (Larson & Csikszentmihalyi, 1983). Participants are encouraged to fill out a practice ESF during the initial debriefing and to ask any questions about the procedure (Csikszentmihalyi & Larson, 1987).

ESM can claim good ecological validity, minimal retrospective requirements, and real-time assessment of a person's perception of moods, thoughts, and behaviors (Trull & Ebner-Priemer, 2009). However, ESM cannot claim to capture pristine inner experience as defined above. Participants receive minimal training with regard to time period of interest and the language used on the ESF. Furthermore, using an ESF brings focus to specific aspects of experience and does not account for how a participant's view of herself may influence their

report. Both the limited training and use of the ESF do not allow for the direct, unbiased apprehension necessary to identify pristine inner experience.

A primary limitation of ESM is the minimal training, making it difficult to know what time period participants are referring to when describing their experience or what the words they use to refer to their inner experience actually mean to them (Trull & Ebner-Priemer, 2009). Even though participants are cued to a specific moment in time, there is no way to be sure that they are describing only thoughts or feelings occurring at that precise moment. At times, participants using this method have indicated that they reported events from hours before the beep occurred (Hurlburt & Heavey, 2006). Additionally, there is no guarantee that the words used on the ESF mean the same thing to the participant as they do to the researcher. Language for private, internal events has not been shaped to the degree that language for external events has been (Heavey, Hurlburt, & Lefforge, 2010; Skinner, 1974). For example, some individuals may report thinking about a sad event when they were actually feeling sad. These limitations in training suggest that the frequency of reported thoughts and feelings may be inaccurate, and it is impossible to determine the degree of the inaccuracies or which of the reports are inaccurate.

The use of the ESF is a cost-effective and easy way to obtain a large number of samples, but any predetermined list of questions and lack of a method for developing a shared language to describe inner experience raises questions about the fidelity of the findings as by definition it cannot capture pristine inner experience. ESF reports of behavior correlate well with other measures of behavior (e.g., reported level of activity compared to heart rate), and self-report questionnaires of thoughts and feelings correlate with ESF reports of thoughts and feelings (Csikszentmihalyi & Larson, 1987). However, using questionnaires to validate other questionnaires does not allow us to evaluate whether the method is limiting the kind of data we

are collecting. Furthermore, there are many reasons that two self-report measures of thoughts and feelings (ESF and traditional questionnaires) could be correlated. Perhaps after providing the initial report participants were biased to agree with themselves on the second report, regardless of whether the questionnaire or the sampling occurred first. Participants could also easily be reporting what they expect their experience to be at a particular moment, instead of what was actually occurring. If a beep occurs while receiving a hug from a loved one, the participant may expect to have been feeling happy or loved, while it is possible that they were actually thinking about what to make for dinner.

Additionally, by using the ESF, participants are cued to pay attention to and reflect on certain aspects of their experience, while ignoring unknown others. If a person is asked to report their mood in terms of cheerfulness vs. irritableness, they will likely search their emotions to determine if there is any hint of cheerfulness or irritableness, even if they were not aware of any mood at the moment they were signaled (Hurlburt, 2011). It is also possible that a participant is more likely to report being cheerful if they view themselves as a generally cheerful person. This may lead participants to report on events or emotions that are far distant from the moment of the beep. When they are signaled to attend to their experience, they may think carefully about each question and try to remember an instance in which they had that experience and what it was like for them. In this way, the use of the ESF may bias participants to report experiences that are not present to them at the moment of the beep, and even that they may never have actually experienced. The ESM is reliable and valid in its measure of behaviors such as physical activity or medication adherence (Trull & Ebner-Priemer, 2009), but may be unable to reliably identify fleeting, subjective experiences such as feelings and thoughts, which are the main interest of this project.

Descriptive Experience Sampling. Descriptive Experience Sampling (DES) is an introspective method that was developed by identifying the challenges inherent in studying inner experience and attempting to account for and minimize them as much as possible. Similar to ESM, DES focuses on ecologically valid experience by asking participants to wear a beeper in their everyday environments. DES begins with an introductory interview to broadly discuss the data collection procedure and conceptual considerations. This includes our collaborative approach to investigating participants' inner experience and our commitment to high fidelity reports of experience, as well as logistical considerations of how to work and wear the beeper in the participant's natural environment and instructions to take down notes about inner experience at the moment of the beep. The moment of the beep is explained as the split second before the beep interrupts whatever is ongoing in the person's experience (Hurlburt & Heavey, 2006; Hurlburt, 2011). On the day the participant is given the beeper, the description and discussion of inner experience is kept intentionally vague. DES tries to exert as little influence as possible on the participant while she is exploring the nature of her inner experience to limit the potential bias toward certain aspects of experience. The participant is simply told to attend to and make a note about whatever was ongoing and directly present in their experience when the beep began (Hurlburt & Heavey, 2006; Hurlburt, 2011). Both inner experience and the moment of the beep are difficult to describe to someone who has never participated in DES, so training in these concepts occurs over multiple sampling days.

After this introductory interview, the participant schedules an expositional interview and is instructed to wear the beeper within the 24 preceding hours (Hurlburt & Heavey, 2006). At the outset of the first expositional interview, the investigators typically reiterate the collaborative nature of the following discussions. The goal of the investigation is to find out what the inner

experience of this particular person is like, and that cannot be achieved without the person's cooperation. The participant has 51% of the vote in the endeavor, which means she has the final say over how the process unfolds, including the ability to retroactively withdraw her consent. She always has the right to decline to talk about a beep or to decide she no longer wants to continue in the investigation for any reason. This conversation both engages the participant in the task before her and makes her more comfortable in discussing such private experiences with the investigators (Hurlburt & Heavey, 2006).

A large part of the first expositional interview is often spent defining the moment of the beep and inner experience. Participants generally have a much longer understanding of that moment than what is intended, and therefore report experiences starting well before the beep and even after the beep. The first sampling day is considered part of training, and is almost never used in data analysis. Instead, the investigators use the interview to help the participant understand the moment of the beep and the specificity and level of detail of interest to the investigators (Hurlburt & Heavey, 2006; Hurlburt, 2011). This is achieved by gearing questions towards the participant's direct experience and essentially ignoring statements of generality, causality, or context. Also, the investigators directly discuss differences between the state of the world and what was most salient for the participant. For example, if a participant reports eating a hamburger at the moment of the beep, she may have been tasting the savory burger and sweet ketchup or feeling her jaw move as she chewed, but she also may have been eating the burger without anything related to that act being present in her awareness at the moment of the beep. It is a fact of the world that she is eating a hamburger when the beep occurs, but her inner experience could be anything. During interviews, the investigators will explain this concept using specific examples from the participant's sampled moments in an attempt to clarify what

was directly present to the participant at the moment of the beep. This combination of open disclosure and reinforcement of attending to inner experience (as well as the bracketing of presuppositions, discussed further below) is the iterative training process that helps participants focus on their pristine inner experience (Hurlburt & Heavey, 2006; Hurlburt, 2011).

Hazards of inner experience investigations. Regardless of the method an investigator prefers, studying inner experience is inherently difficult and careful thought and planning is required to address the difficulties adequately. Heavey and colleagues (2010) identify 10 fundamental hazards to the study of inner experience:

- 1) Retrospection, recalling something after some period of time has passed, has been shown to be unreliable in a large body of literature (e.g., (Nisbett & Wilson, 1977; Robinson & Clore, 2002), as discussed above. Additionally, it is generally accepted that the more distant the event from the attempt to recall, the greater the distortion of the recollection, regardless of motivation to report accurately or recognition of the distortions (Hurlburt & Heavey, 2006). DES acknowledges that retrospection is likely as, if not more, important a consideration in recollection of inner experience. DES addresses this hazard by depending on retrospection as little as possible. The procedure asks participants to capture their ongoing inner experience the moment after it happens, jot down notes within a few seconds of the experience, and participate in the expositional interview within 24 hours. If it is indicated, the expositional interview can be conducted within minutes of the sampled moment of inner experience to further minimize retrospective distortions.
- 2) Presuppositions, unconscious assumptions about the nature of a participant's inner experience held by either the investigator or participant, distort the report and perception of an individual's inner experience. DES addresses this hazard by aiming relentlessly to bracket

presuppositions in a myriad of ways (Hurlburt, 2011), too lengthy to here enumerate. Three primary structural characteristics that serve to bracket presuppositions include random sampling, “open-beginninged” questions, and an overall open-beginninged method. By randomly selecting moments, we will not be getting a biased selection of what the participant or investigator believes to be important moments of inner experience.

Open-beginninged questions do not assume some aspect of inner experience to be present, and do not assume inner experience itself to be present. For example, compare “What, if anything, was in your experience at the moment of the beep?” and “What were you feeling at the moment of the beep?”; both are open-ended, but the latter assumes that the participant was feeling something, while the former allows the participant to describe anything or nothing. DES investigators work hard to start work with each participant with the view that they know nothing about that person’s inner experience, but participants have a harder time waiting to see what arises from investigation. The iterative training process encompassing DES’s “open-beginninged” nature as a method is described below.

- 3) Semantic memory, or knowledge, is a threat to faithfully apprehending inner experience because it can overwhelm the episodic memories, memories of autobiographical events, required for DES. In response, DES focuses only on precise, brief, and recent experiences. Participants are trained to distinguish semantic and episodic memories through the iterative training process.
- 4) Differentiating between experiences that are actually ongoing and able to be apprehended and experiences that are assumed to be occurring but are impossible to apprehend is a skill that must be learned, and there is always a risk that participants will fail to make this distinction. People often infer incorrect causes for their behavior (Nisbett & Wilson, 1977);

thus these self-determined causes cannot be considered a component of pristine inner experience. DES addresses this risk by focusing solely on inner experience that is directly present to a person and systematically avoiding discussion of processes, causes, generalities, etc.

- 5) Objectifying persons, or treating a person as a data point or part of an average, risks losing sight of the individual as the source of the experience. DES requires a careful description of each sampled moment and an idiographic profile of each participant before any conclusions about a group can be considered.
- 6) Reluctance on the part of a participant is to be expected as inner experience is extremely personal, and may be embarrassing or confrontational. DES investigators strive to protect their participants' privacy, openly acknowledging that there may be moments participants do not want to discuss and having no reservations about skipping that moment if a participant wishes. Also, investigators strive to be objective and non-judgmental in their view of inner experience. Finally, participants are true co-investigators in the process. Without the participant, DES investigators would not be able to continue their research, and without the investigators, the participant would not be able to apprehend their inner experience. The partnership is developed through the iterative process.
- 7) Language leaves much to be desired when it comes to identifying and describing inner experience. Because inner experience is inherently private, society cannot reliably shape the use of a single word to mean a single thing. For example, if a participant says "I was thinking about my mom," she could mean she was picturing her mom's face, repeating a recent conversation with her mom in her head, feeling sad because she hadn't seen her mom in a long time, or any number of other things. DES addresses the hazard of imprecise and

sometimes insufficient language by only using talk that can be discriminated and avoiding talk that cannot be discriminated. Participants are encouraged, through the iterative process, to describe all aspects of experience, not to embellish or add details to experience, to report only experience occurring at the moment of the beep, and to explicitly define the meanings of terms they use.

- 8) Ecological validity is best achieved by direct observation in a natural environment. The risk to inner experience investigation comes from assuming that analog observation is an adequate approximation of direct observation. DES is only interested in pristine inner experience, which only occurs in natural environments and must be observed by the individual having the experience.
- 9) Investigators must be skilled to be able to faithfully apprehend the inner experience of another individual. DES acknowledges that investigators require substantial training and that even with equivalent training, the skill of investigators will likely vary. Also, the quality of any descriptions of inner experience produced by DES must be evaluated by the consumer.
- 10) Participants also require considerable skill to apprehend and report their pristine inner experience, and it is very unlikely that they possess that skill at the outset of an experiment. DES attempts to gradually increase a participant's ability through iterative, successive approximations of the skills involved in the process. Iterative does not only mean repetitive, but also gradual improvement over repetitions. Iteration is necessary to allow participants to approach their inner experience with minimal expectations of what they will find, thus bracketing their presuppositions, imparting the level of detail in which DES is interested, defining the moment of the beep, becoming used to using the beeper so it does not

substantially alter participants' behavior or inner experience, and involving the participant as a co-investigator.

DES was developed with each of these hazards in mind. While there are strengths and limitations to the ways DES has addressed these hazards, it is the only method that has systematically dealt with all of them (Heavey et al., 2010).

Heavey and Hurlburt (2008) have encountered five frequent phenomena in their years of research on pristine inner experience: inner speaking, inner seeing, feeling, sensory awareness, and unsymbolized thinking. Although content has shown little consistency within or between individuals, form emerged as a potentially important aspect of inner experience. Different people experience each of the five frequent phenomena at different rates. Some people experience all the phenomena with approximately equal frequency, but more often one or two phenomena dominate a person's inner experience. So far our research has not pointed to differences between the genders in the occurrence of phenomena, but some research does suggest that specific populations may experience certain phenomena more often than others. For example, women with bulimia tended to have multiple, fragmented experiences on very different topics in a single moment (Jones-Forrester, 2009), people with schizophrenia tended to have very strong feelings and distorted inner seeings (Hurlburt, 2011), and lower levels of psychological distress were associated with higher frequencies of inner speaking (Heavey & Hurlburt, 2008).

Interpreting DES data. After each interview, the investigators write descriptions of each sample. After the last interview, the investigators meet and discuss the recurring characteristics, if any, across the participant's experience. This generally includes the frequency with which the participant experiences certain types of phenomena and the quality of those experiences (Hurlburt & Heavey, 2006). As a result of this conversation, the investigators write an

idiographic profile for each participant. The idiographic profiles of participants with a common feature (e.g., psychiatric diagnosis) can be collected into nomothetic characterizations, if they emerge from the data (Hurlburt, 2011; Hurlburt & Heavey, 2006; Jones-Forrester, 2009). This process may also be appropriate for participants undergoing a common task or in a common situation (e.g., reading an erotic short story).

Besides the analytic arguments for reliability, DES has demonstrated good inter-observer reliability (Hurlburt & Heavey, 2002). Hurlburt and Heavey (2002) independently interviewed 10 participants from a stratified random sample on six samples each, for a total of 60 samples. They then rated whether or not 16 aspects of inner experience were present. Five aspects occurred frequently enough to be analyzed separately, and were found to have inter-observer-reliability kappas ranging from .52 to .92 (median of .76). As most DES studies ask participants to obtain six samples a day for multiple days, Hurlburt & Heavey (2002) provide a Spearman-Brown reliability estimate for a 19-sample-average reliability of DES characteristics. The median typical reliability estimate was .98 (range from .91 to .98).

Additionally, there is preliminary evidence that DES is a valid and veridical measure of inner experience. In a collaboration between the creator of DES and neuroscientists, the inner experience of a participant trained in DES was investigated while in a functional magnetic resonance imaging (fMRI) scanner (Kühn, Fernyhough, Alderson-Day, & Hurlburt, 2014). First, the participant completed a classic neuroscience imagination task in the scanner, generating verbal, auditory, visual, emotional, and somatosensory imagery. These data were later compared to the data obtained from the DES task. After four days of sampling in her natural environment, the participant was sampled during nine 20-minute scanner sessions. The DES investigator characterized the scanner samples according to the five frequent phenomena of inner experience,

and found that the participant's experience was primarily characterized by inner speech, with variations between inner speech and inner hearing (the experience of producing imagined speech and the experience of hearing imagined speech, respectively). The brain area typically associated with language and speech based samples, the left inferior frontal gyrus, was significantly more active compared to other brain areas during moments of DES-identified inner speech and compared to moments that DES-identified as not including inner speech. Also, activation of the left inferior frontal gyrus was greater during moments of inner speech than inner hearing. As the results are only from a single participant and a single DES investigator, the findings may not be generalizable (Kühn et al., 2014). However, they do offer preliminary validation of the DES method. Furthermore, DES is not only valid in the sense that it reliably measures a construct it claims to measure; the study described above suggests that the inner experience DES captures through interviews is actually occurring as an observable and measurable neurological event.

Current Study

To date, no studies have been published using experience sampling techniques to investigate inner experience during arousing tasks or in relation to sexual activity. The aim of this study was to explore the inner experience of several individuals while they engage in a sexually oriented task: reading an erotic short story. Descriptive experience sampling is the method best suited to capturing ongoing, pristine inner experience while minimizing distortion due to bias, retrospection, and presuppositions. Armchair introspection would not allow a person to both read an erotic short story and attend to their ongoing experience, and ESM would employ questions about sexual arousal, likely biasing participants to report it being present even if it is not. Also, DES has successfully been used to investigate commonalities in inner experience within specific populations in the past, and is well suited to be used during a task. Thus, DES

was chosen because of the necessity of using a sexually oriented task and the goal to atheoretically observe pristine inner experience during this task.

The current study used DES to examine the inner experience of individuals while they read one erotic story. The story was chosen from a website based on popularity ratings, and was edited to be an appropriate length. Participants were recruited from the participants of a previous DES study in which they were trained in the DES method for four days while they engaged in their typical activities and sampled while reading two classic short stories. Participants were informed during the consent process of the sensitive and explicit nature of the reading involved in the study, and were encouraged to express any concerns or ask any questions about the procedures.

After consent, participants were emailed a link to a website that displays the erotic story; this website included beeps programmed to sound within certain sections of the text. As in standard DES procedure, participants were instructed to take note of their inner experience at the moment of the beep. Within 24 hours of completing the reading, participants engaged in an expositional interview with the investigators, providing high fidelity reports of their inner experience at each sampled moment. An idiographic profile was created for each participant based on all sampled moments in this study and the previously collected samples during the fiction reading and everyday activities. We compared participants' experience while reading the erotic story to their experience reading fiction short stories and their everyday experience.

Chapter 3: Method

Participants

Participants were university students recruited from the University of Nevada, Las Vegas (UNLV) Psychology Subject Pool. They completed screening questionnaires about their overall mental health symptoms and self-talk for inclusion in a study in which they trained in DES over four natural environment sampling days. The participants then were sampled while reading two instances of classical fiction (short stories by Ernest Hemingway and F. Scott Fitzgerald). Fourteen of the 17 participants who completed the fiction reading study agreed to be contacted about future DES research.

We contacted the 14 eligible individuals and described the erotica-reading study. Four initially declined participation. Ten participants were interested in continuing to participate in using DES to research erotica reading. One of these 10 declined when she read examples of erotica on literotica.com and found them to be too explicit for her comfort. Two more participants declined after completing the present study's erotic reading task because they did not feel comfortable describing their experience in an expositional interview. Thus a total of seven participants declined participation in the study, two of whom were men and five of whom were women.

The seven participants who completed the erotic reading task and the expositional interview included one man and six women. They received \$10 and one hour of research credit for their participation. They ranged in age from 18-30 ($M = 20.57$, $SD = 4.28$) and consisted of three freshmen, two sophomores, one junior, and one senior. The participants were ethnically diverse: one participant was White/Caucasian (14.3%), one was Hispanic (14.3%), two were Black/African-American (28.6%), two were Asian/Asian-American (28.6%), and one was multi-

racial (14.3%). All participants self-described as heterosexual, five reported being in a relationship, one reported dating, and one reported being single. Participants varied in their prior experience with and exposure to erotica. Two participants reported having no prior experience with erotica, two reported having brief exposure but not regularly consuming erotica, and one participant reported regular consumption of erotic reading material; two participants were not asked about their prior experience with erotica.

Materials

The erotic short story was chosen from literotic.com based on research describing what aspects of written erotica are important to be arousing to both genders. Men and women prefer stories that are written from the viewpoint of their own gender (Garcia, Brennan, DeCarlo, McGlennon, & Tait, 1984). Also, based on a sample of undergraduate students, men prefer stories that include explicit descriptions of sexual scenes, women prefer stories with an emotional connection between the characters, and both prefer stories featuring individuals of a similar age (Scott & Cortez, 2011). Therefore a story was chosen for the present study that included characters of approximately college age, sections featuring both the man and woman in the story as the dominant partner, visually graphic descriptions of sexual activity, and a romantic plotline between the characters. The story was also selected to be broadly appealing by being highly rated on the website and focused on one heterosexual couple engaging in vaginal intercourse and oral sex. “Not Her Type,” by an anonymous writer with the pseudonym “hotknight,” met these criteria. The story was edited to an appropriate length for the study, taking approximately 30-45 minutes to read. The reading level of the story was determined to be grade 8.4 by the Flesch-Kincaid readability tests (Kincaid & Naval Technical Training Command, Research Branch, 1975). The story can be found in Appendix A.

Apparatus

Participants were trained using a randomized noise generator, or “beeper”. The beeper is a small portable box that can be clipped on a belt or put in a pocket. It connects to headphones so participants receive the DES beep directly in their ear, and participants can adjust the volume so that it is clear by not startling. The beeper is programmed to signal randomly within an hour of being activated with an average of 30 minutes between each beep. Participants were provided with a small notebook to take notes about their experience at the moment of the beep.

The erotica text was presented to the participant via a web-based program designed for these studies. The program was available on any computer with access to the internet and presented the text on slides of approximately 15-20 lines each. A beep was administered on four preselected slides to signal the participant to attend to their inner experience. The slides during which the participants were sampled were chosen by the investigator to include sexual scenes. Appendix B shows these four slides.

Procedure

Training

During their participation in the fiction reading study, the participants were trained in the DES sampling method and used the web-based program to read while sampling. Specifically, they wore a randomized beeper during everyday activities on four separate occasions and recorded notes about the sampled experience. They participated in expositional interviews with the investigators within 24 hours of wearing the beeper. At the beginning of the first expositional interview, the investigators stress the collaborative nature of the following discussions. Participants are asked to be forthright in their descriptions and are encouraged to decline to discuss a beep rather than withhold some aspect of experience. This conversation both engages

the participant in the task before her and makes her more comfortable in discussing such private experiences with the investigators. The collaborative nature of the investigations is reinforced throughout the training days, further enabling participants to be honest in their descriptions as they are aware of their ability to stop the interview at any point.

After completing the four natural environment sampling days, participants completed an hour long classic fiction reading task, during which they read “Winter Dreams” by F. Scott Fitzgerald, and “Big Two-Hearted River” by Ernest Hemingway. The stories were provided via the web-based program described above. The stories were displayed on a series of slides. On six preselected slides, the participants received a DES beep. The experience sampling task and expositional interview were identical to those used in the natural environment except that the beep terminated itself after a few seconds instead of being terminated by the participant.

Recruitment

Participants who completed the DES fiction reading study were asked at the end of their fiction reading interview or were contacted via phone about their interest in participating in this study. Those who were potentially interested in participation were given further information about the study, had any questions answered, and were taken through the informed consent process. The investigator explained the study procedures, including the nature of the reading task (i.e., explicit written erotica) and the video-taping of the expositional interview. Also, we stressed that although the task had changed to allow us to investigate experience during a sexually oriented task, we were interested in whatever was present in experience at the moment of the beep, regardless of whether or not it seemed related to the erotic story or the reading. Those who agreed to participate completed a short demographic questionnaire including an item asking about their sexual orientation.

Erotica Reading Phase

In the erotica phase, participants were asked to read the erotic short-story described above. The story was provided via the web-based program described above. The participants were encouraged to read in a private, comfortable setting, such as at home, to mirror as much as convenient the manner in which erotica is usually read.

At four times while reading, the participants received a DES beep on slides preselected for their sexual content. The beeps occurred twelve seconds into slide 22, three seconds into slide 41, six seconds into slide 48, and eight seconds into slide 64. This method of beep administration allowed for participants to receive the beep on the same slide, but at slightly different points in the reading depending on individual reading speed. The beep signaled them to attend to their ongoing inner experience and to jot down notes about that experience. Within 24 hours, participants took part in an expositional interview aimed at gaining a detailed understanding of their experience at the moment of each beep. One to five individuals (UNLV professors and graduate students in training as DES investigators) participated in the interview with the participant. The interviews were videotaped for future examination by the researchers. The expositional interview did not follow a specific script; they were necessarily free flowing and interactive in nature. However, the initial question was always some version of "What was in your experience at the moment of the beep?" and the rest of the interview was follow-up and clarification questions working toward a high-fidelity understanding of the experience present at the beep. This process was repeated for each of the beeps that occurred during the reading, or for one hour, whichever was shorter. At the end of the interview, participants were asked if they had found the erotic story sexually arousing, if they were attending to the reading, and if they had any prior experience with erotic literature.

Within 24 hours of completing the expositional interview, the student investigator wrote a detailed description of the participant's inner experience at each of the sampled moments. These descriptions were reviewed and edited by all other investigators present at the expositional interview until we obtained high fidelity descriptions of the sampled moments.

Data Analysis

All investigators who were involved in a participant's sampling met to develop an idiographic description of that individual's inner experience based on all sampled moments. This process involved discussing the features of experience present at each sampled moment as aided by reviewing beep descriptions, personal notes from interviews, and video recordings of interviews. When possible, ambiguities were resolved by discussion and, if necessary, reviewing the videotape of the expositional interview. Sometimes investigators continued to have different understandings of the features of inner experience after these discussions—such disagreements were encouraged. These disagreements were included in the beep descriptions; a description that captures the messiness of apprehending the experience at any given moment by clearly identifying differences in understandings is a higher fidelity description than one that is neat simply for the sake of being neat. After reviewing each sample and working to obtain high fidelity understandings of each participant's inner experience across sampling days, each investigator wrote a brief summary of the salient features of that individual's inner experience. The student investigator reviewed these independent summaries and provided a comprehensive profile of the participant, which was then recirculated to the investigators for commentary and revision.

The experiences present in each sample description were also independently coded by a UNLV professor and two graduate students in the DES lab with regards to which, if any, of the

five frequent phenomena were present at the time of the beep. The professor and one of the graduate students were present at the erotica day interview. The independent coding was rectified such that the investigators came to an agreement about whether the phenomenon was present (1), absent (0), or possibly present (.5). The percentages of how often each phenomenon was present out of all sampled moments was included as part of the idiographic profile for each participant.

Because this study was focused on inner experience while reading an erotic short-story, the results section primarily describes the kinds of experience that participants had during the erotic reading task. The idiographic profiles of each of the participants were presented in a discussion of the earlier phases of the study (Kelsey, 2016), as was a discussion of inner experience while reading classic fiction (Brouwers, 2015). References to the idiographic profiles and fiction reading were included here as they relate to individual experience during the erotic reading task.

Chapter 4: Results

This chapter describes inner experience phenomena that occurred for these participants while reading an erotic short story. We provide examples of these phenomena and note how they are similar to or distinct from inner experience for these same participants while reading fiction short stories. We also describe individual differences in inner experience while reading an erotic short story, and how these individual differences relate to that participant's experience during natural environment sampling days. The seven participants collected six samples on each of four natural environment sampling days, six samples during the classic fiction reading, and four samples during the erotica reading. Thus, the erotica reading was the sixth day of sampling. Across the environments, some participants did not always collect the full number of samples (e.g., ran out of time before interview) and some collected extra (e.g., used an old version of a browser to complete the reading and received an extra beep). In total, we collected 27 samples of inner experience while reading an erotic short story, 40 samples of inner experience while reading fiction, and 119 samples of inner experience in a natural environment.

Phenomena while Reading an Erotic Short Story

DES is an idiographic method, designed to be able to apprehend phenomena that may be characteristic of a single individual as well as characteristics that are common across individuals, such as the five frequent phenomena described by Heavey and Hurlburt (2008), and called the 5FP by Kühn et al. (2014). We begin by considering the 5FP (inner seeing, inner speaking, unsymbolized thinking, feeling, and sensory awareness). Table 1 shows the frequency of the 5FP for each participant on the erotic reading day. Across all participants, inner seeings occurred during the majority of samples (74.1%), while inner speaking, unsymbolized thinking, feeling, and sensory awareness all occurred relatively infrequently (3.7%, 14.8%, 13.0%, and

11.1%, respectively). Six of the seven participants predominately experienced inner seeing while reading the erotic short story. The seventh participant, Nina, had approximately equally frequent experiences of inner seeing, feeling, and sensory awareness. All examples presented below are from the erotic reading day, which is the sixth day of sampling for each of these participants. Many examples of the phenomena are provided below, and a complete list of beep descriptions and codings for all participants' sampled moments during the erotic reading day is available in Appendix C. Participants' inner experience phenomena during the erotica reading occurred in roughly similar proportions to the classic fiction reading (i.e., most commonly inner seeing), but showed a completely different pattern during natural environment sampling days, during which sensory awareness was most common (30.7%).

Table 1

<i>Five frequent phenomena while reading an erotic short story by participant</i>						
<u>Participants</u>	<u>Inner Speaking</u>	<u>Inner Seeing</u>	<u>Unsymbolized Thinking</u>	<u>Feeling</u>	<u>Sensory Awareness</u>	<u>Total Samples</u>
Adele	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	2
Felicity	0% (0)	80% (4)	40% (2)	0% (0)	20% (1)	5
Georgia	0% (0)	100% (4)	0% (0)	12.5% (.5)	0% (0)	4
Harrison	0% (0)	100% (4)	0% (0)	25% (1)	0% (0)	4
Jenni	0% (0)	50% (2)	0% (0)	0% (0)	25% (1)	4
Nina	0% (0)	25% (1)	0% (0)	25% (1)	25% (1)	4
Olivia	25% (1)	75% (3)	50% (2)	25% (1)	0% (0)	4
Total	3.7% (1)	74.1% (20)	14.8% (4)	13.0% (3.5)	11.1% (3)	27

Note: Counts are presented in parentheses. Counts of .5 indicate a phenomenon's possibly being present. Each participant's dominant phenomenon is bolded.

Inner Seeing

The majority of the samples during the erotica reading included inner seeing wherein the participant was innerly seeing a vivid sexual scene (20/27, 74.1%). The inner seeings were illustrative of the story to differing degrees: often they were straightforward illustrations of the text; sometimes they included details from the participant's personal life; sometimes they included details that were incongruent with the story. Some inner seeings had unusual characteristics like being incomplete or being purposefully created from the story. Below we provide examples and further describe these different phenomena that all fit into the broad category of inner seeing.

Illustrative. Roughly half of the sampled moments (12/27, 44.4%) included inner seeings directly illustrating what the participant was reading in the story at the moment of the beep. During these sampled moments, participants were comprehending the reading but did not have any experience of the reading itself—their direct experience was of a visual illustration of the unfolding story. Sometimes these illustrative inner seeings were seen in motion, as if the participant were watching a movie, as in this example:

Harrison 6.2 (Day 6, Sample 2): At the moment of the beep, Harrison is innerly seeing a woman in a purple blouse with buttons, sighing heavily. She breathes in, then out, then in again and when she breathes in her blouse stretches tight between the buttons. The woman has brown hair down to her shoulders, red lipstick, and has her eyes closed, but the stretching of the blouse at the buttons is most central to Harrison's experience. He is seeing the woman from straight on. At the same time that he innerly sees the woman breathe in, out, and in again, he hears the woman's frustrated sighing; the sighs are louder than they would have been in a real situation and are heard on his right side. There is no experience of

reading at the moment of the beep. <<<This description makes the sighing seem an integral part of the seeing, whereas my recollection is that the sighing was parallel to but not part of the seeing. Have I conflated that with another sample??>>>

This inner seeing is directly illustrating what is occurring in the story Harrison is reading, although it is focused on just one part of what was happening in the story at the time: the female character's deep breathing.

There are also examples of participants illustrating the story without motion, as if a snapshot were taken of people in real life. Here is an example of such an experience:

Olivia 6.1: At the moment of the beep, she is innerly seeing the woman in the story standing in an alley with her left leg up on a box in the process of hiking up her long black skirt and wearing a loose white top with her hair in a bun. There are brick walls, a light source above the woman, trashcans, and boxes in the alley. The inner seeing is detailed and in color, but is not in motion, as if it is a single frame out of a movie. The point of view is looking straight at the woman from the other side of the alley (that is, from about 8 feet away).

Olivia's inner seeing describes a very complex scene and includes details, such as what the female character is wearing, that were given much earlier in the story and were not directly mentioned in the text she was currently reading. We do not believe that the differences between Olivia's and Harrison's inner seeings are an artifact of the description process, but rather that they reflect actual differences in how the inner seeings are experienced. In fact, Harrison also experienced a single frame inner seeing, indicating both between and within subject differences.

Semi-illustrative. The examples given above directly illustrate what is happening in the story. There were a number of sampled moments that included inner seeings related to the story but that did not completely correspond to the plot line. We have termed these kinds of inner seeings semi-illustrative, and they occurred in 5/27, or 18.5%, of sampled moments. An example of this kind of phenomena follows:

Georgia 6.2: At the moment of the beep, Georgia is innerly seeing the man and woman from the story in the back seat of a taxi making out and grabbing at each other's heads and faces. She sees this scene as if she is looking back at them from between the two front seats, and can see scattered lights behind them through the back window. The inner seeing is detailed, realistic, and in motion.

The text Georgia was reading when the beep sounded described the woman *alone* in the taxi, anxiously waiting to arrive at the male character's apartment. Georgia is clearly illustrating some part of the story, as the female character is in a taxi at night, but has somewhat diverged from the plotline by inserting the male character into the scene.

Incorporating personally relevant details. Some participants noted that some details of their inner seeings were related to or directly pulled from their own real life experience. This occurred in 3/27 or 11.1% of erotic reading day samples. At the moment of the beep, they were not aware that the details they were seeing were from their personal life, but realized that they were upon recounting and describing the experience to us. The italicized portion of Georgia 6.3 is provides an example of this phenomenon.

Georgia 6.3: *At the moment of the beep, Georgia is innerly seeing the man from the story thrusting against the woman in a hotel room. The man is shirtless, and while Georgia cannot see the woman she knows that she is lying on her back.*

Georgia is seeing the man's right side and the hotel room behind him. This inner seeing is detailed, realistic, in motion, and is understood to be representative of the story. [The visual details of the seen hotel room are a recreation of the room where Georgia and her boyfriend had recently stayed, but this fact was not present at the moment of the beep.] Georgia is also somehow mentally sensing or feeling wanting to have sex. This mental feeling somehow involves her body in a diffuse way, and is a low level of arousal, maybe 15 on a scale of 0-100. [At the end of the interview Georgia mentioned that she thought she had not completely adequately conveyed the arousal, but that this was not out of shyness or embarrassment but because it was difficult to describe.]

The fact that the hotel-room details came from Georgia's personal life are not part of Georgia's inner experience at the moment of the beep. It seems that it is only upon careful inspection of one's inner experience that an individual may recognize that inner seeings can incorporate past experience.

Incongruent details. Another kind of pristine experience that occurred while reading an erotic short story was the presence of details that were incongruent with the story (6/27, 22.2%). This could occur even in the context of inner seeings that were otherwise directly illustrating what was happening in the reading at the moment of the beep. Sometimes, upon describing their inner seeings during the expositional interview, participants noticed that the details were slightly off, given what the story described:

Adele 6.0A: At the moment of the beep, Adele is innerly seeing the woman in the story running out of the nightclub. The woman is running across the street towards the dark alley where the man is waiting for her; this is seen from the

perspective of the man in the dark alley and the woman is running towards him. The nightclub is on the right; there is a car in front of the club; the woman is wearing a nude colored, patterned, spaghetti strap dress [this is not what she was wearing in the story, which was a “low rise long black skirt with a slit up to her upper mid-thigh and a white cotton wrap-around shrug top with wide sleeves and a neckline that showed a moderate but noteworthy amount of cleavage”]; in the interview, Adele seemed surprised that she saw her wearing this dress], and the setting is dark. The inner seeing is in motion and is not very detailed, mostly just dark shapes [there are no facial features or hair and very little color].

It was only when Adele was asked to describe all the details of her inner seeing that she noticed the discrepancy between the story’s black skirt/white cotton top and her own seeing of a nude spaghetti-strap dress. At the moment of the beep, she simply experienced herself to be seeing what was happening in the story.

Adele had another inner seeing in which the details she saw were incongruent with the story, but in that instance she did not notice the discrepancy in the moment or even later when describing her experience during the interview:

Adele 6.1A: At the moment of the beep, Adele is innerly seeing the woman in the story sitting on the hood of a dark car in a dark alley being “eaten out” by the man in the story. This is seen from an angle, from the perspective of someone walking by the alley and looking to the right to see into it. The hood of the car is on the right, and the woman is sitting above the tire facing the alley opening. She is wearing a black skirt that is hiked up around her waist and her right leg is over the

man's left shoulder; the man's head is in between the woman's legs. The setting is dark and the inner seeing is not detailed, in color, or in motion.

In the text during which this beep occurred, there is no mention of a car whatsoever. The couple is in a dark alley, but they are standing against a wall. Unlike in sample 6.0A, Adele does not notice during her description of the experience that she inserted the car into the scene. In general, Adele is illustrating the plot of the story, but she may have included a detail that made the situation more physically possible or make more sense for her. This, of course, is just speculation. We cannot be certain why Adele might have innerly seen a car in this scene. Also, unlike the previous beep in which Adele was surprised by seeing the female character in a nude dress, the female character is now wearing a black skirt, as described in the story.

Multiple inner seeings. Occasionally, participants experienced multiple inner seeings while reading erotic short stories (4/27, 14.8%). The several inner seeings were related to the text in some way. Below, the italicized portion of Olivia 6.4 is presented as an example of multiple seeings that accompanied a thought about the text:

Olivia 6.4: [Olivia was laughing about the uselessness of the condom in the current scene—they had had lots of unprotected sex— and about how overly romantic and unrealistic the story is.] At the moment of the beep, Olivia is innerly saying “What was the point of that?” (“that” was emphasized and referred to the condom). [She indicated that the inner saying sounded how she would say it if she said it out loud. Part of this experience was also a chuckling partly innerly and partly out loud—the inner speaking was part of or shaped by the chuckle. She was unable to give further details on how the chuckling was present.] This (the inner speaking and chuckling) occupies about 70% of her experience. *Also at the*

moment of the beep, Olivia is thinking about how overly romantic and unrealistic the story is. This involves multiple flashes of inner seeings including rose petals, candles, and bath water from previous scenes in the story, as if she is flipping through certain aspects of previous scenes including the unrealism of a woman having multiple orgasms with so little stimulation.

For Olivia, all these inner seeings were a single experience, her representation of the “overly romantic” characterization she made of the story. In this example, it is unclear exactly how the inner seeings present themselves, and they are only a part of a relatively complex momentary experience.

The example below demonstrates the degree to which some participants are able to clarify multiple inner seeings:

Felicity 6.0D: At the moment of the beep, Felicity is innerly seeing a series of about six different scenes of the characters in the story having sex in different positions, wearing different clothes, and with different backgrounds. The individual scenes are in motion and all scenes are in a horizontal line moving from left to right with no breaks between them. The scenes are organized so that the first scene is of the couple having sex once during a week, the next 2 scenes are of the couple having sex twice during a week, and the next 3 scenes are of the couple having sex 3 times a week.

The organization and presentation of Felicity’s multiple inner seeings is directly present to her, while Olivia’s are described simply as flashes. This suggests that multiple inner seeings present themselves in a variety of ways and can be part of even more complex moments of experience.

Incomplete Illustration. Infrequently, some features of a participant's inner seeing were incomplete, as if the construction of the inner seeing was interrupted by the beep. This occurred in 2/27, or 7.4% of all erotica day samples:

Harrison 6.4: At the moment of the beep, Harrison is innerly seeing a woman face down on the bed, biting her lip. The woman's eyes are closed and she is clutching the sheets while having sex with a man behind her, but the woman biting her lips is the most central aspect of his experience. There is no movement in the scene. This innerly seen woman is not completed or fully developed at the moment of the beep; Harrison describes it as being black outlines on a white background, with the woman's lips being a little more detailed than the rest of the scene. The inner seeing is not experienced as a line drawing or lacking something at the moment of the beep.

Harrison described these drawing like features as part of his inner seeing, but his experience was simply of seeing the characters in the story having sex.

Illustrating tangential detail. Some participants had inner seeings that were directly illustrative of tangential details they were reading, and were not direct illustrations of the story plot. This occurred on 3 out of 27 sampled moments, 11.1%. One example of this phenomenon in Jenni's experience is presented below:

Jenni 6.1: [Jenni had just read "...[her hair] continued to fall over what she was doing."] At the moment of the beep, Jenni is innerly seeing the Latina woman in the story she was reading standing naked, facing her, moving her head so that her wild, undone hair is swinging side to side. Jenni sees the entire woman (or at

least from the knees up), but she is focused almost entirely on her moving, undone hair, though she can tell the woman has some makeup on.

In the story, the main female character's hair is undone and frustrating her as she is having sex. Jenni's experience is directly related to the description of the character's undone hair, instead of the actions in which the woman is engaged in the story. Her experience is still related to the plot and includes one of the previously seen main characters.

In an example taken from Felicity's samples, the illustration of a tangential detail is unrelated to the story; it is strictly about the detail as in the italicized portion of the description below:

Felicity 6.0D [Felicity had just read the words "French noble."] At the moment of the beep, Felicity is innerly seeing a framed black and white photograph of a French nobleman. The nobleman is wearing a feathered cap, leaning on a cane with his right hand, and standing with his left hand on his hip. The frame is gold and ornate. That is, the seeing is in color (the frame is gold) but the photo is in black and white. Simultaneously, Felicity is innerly seeing the man from the story kissing the woman. Felicity is unsure if the man is kissing the woman on the neck or on the hand. They are in an alley at night next to a black street and a trashcan, with buildings in the background. Felicity sees the couple as if she is next to them. Both inner seeings are generally in front of her; the framed photograph of the French noble is about 60% of her experience, while the couple is about 40% of her experience.

Felicity is both illustrating the specific detail “French noble” and a scene from the story. Her illustration of the words is removed from the context of the story and instead seems to draw on her general concept of a French noble.

Other inner seeings. There were two instances of inner seeings that did not fit well into a category with the other samples. One sampled moment may be best characterized as an intrusive memory that was triggered by the reading (1/27, 3.7%):

Nina 6.2: [Nina was remembering one of her own previous experiences in a taxi cab; she was reading about a sexual situation in a taxicab, and from there had recalled/imagined one of her own related experiences.] At the moment of the beep, she is innerly seeing the taxi driver in the dark cab turned over his right shoulder and looking at her. It is dark, with few details present. She also innerly hears the taxi driver tell her, in his dark, deep voice, to take off her shirt. Exact words were not in experience, but she was confident she innerly heard the voice she remembered. [Nina had stopped reading and was completely absorbed in this inner seeing/inner hearing at the moment of the beep. Nina had felt disgusted prior to the beep, but that had faded from her experience by the moment of the beep.]

This inner seeing was clearly sparked by the content of the story, and Nina reported that this was an unpleasant recollection of a difficult and unwanted personal experience from her past. Nina was no longer attending to the story or engaged in reading and reported an emotional reaction that was not present at the moment of the beep.

In the other singular example, a participant experienced the process of purposefully creating an inner seeing based on the reading (1/27, 3.7%):

Jenni 6.1: At the moment of the beep, Jenni is innerly seeing Jasmin from behind wearing a thong. Jasmin has light brown skin and is standing in a dimly lit room. Jenni is seeing all of Jasmin but she is focused on her thong and the area of her body near it. This seeing is about 60% of Jenni's experience. Jenni is also experiencing reading, the experience of seeing the words and the in-experience creating of this picture based on the words. This is an active process in her experience involving the words themselves being directly present in her experience, rather than a passive soaking up of their meaning or something happening on autopilot, and a directly experienced creation process from the words to the seeing.

Jenni was the only participant to experience this phenomenon on the erotica reading day. It is unclear exactly how the "creating" is in experience.

Unsymbolized Thinking

Felicity and Olivia experienced unsymbolized thinking in half of their sampled moments; the other five participants had no unsymbolized thinking experiences. Overall, unsymbolized thinking occurred in 4 of 27 sampled moments, 14.8%. Felicity's unsymbolized thinkings were directly connected to the plotline and were focused on the sexual interaction of the characters, as shown in the italicized portion of the beep description below:

Felicity 6.0A: At the moment of the beep, Felicity is anticipating the characters in the story having sex. This anticipating is a cognitive idea that is located in a general area just behind her head and is not present in words or pictures, and is about 80% of her experience. Felicity is also feeling her fingernail being dragged across her left ear; this sensation is present in her ear [not her fingernail] and is

about 10% of her experience. Felicity is also reading with comprehension, which is about 10% of her experience. [The meaning of the reading is present, but not the act of reading or the words she is reading.]

In Felicity's other unsymbolized thinking, sample 6.0E, she is also "anticipating" a meeting between the main characters, and described the experiences as being similar.

In Olivia's experience, she was still somewhat engaged with the reading, but her unsymbolized thinking was removed from the current action of the story:

Olivia 6.3: At the moment of the beep, Olivia is thinking three different things: (1) identifying where she is in the reading (that is, she was noticing that the computer screen showed that she was reading slide 40-something out of 60-something, meaning she was close to the end [we did not ask if she knew exactly what slide she was on]); (2) wondering when the remaining beeps are going to happen and if they are all going to happen one right after the other (that is, because she was near the end, she wondered whether the experimenters were going to present beeps bunched together); and (3) wondering what kinds of questions she is going to be asked (her thought didn't specify what kinds of questions might be asked—that is, the wondering did not speculate about the questions). These thoughts are not represented by words or pictures and the story is not present in experience.

Olivia left the story to wonder about the process of being sampled and interviewed. Her other unsymbolized thinking occurred in Olivia 6.4 as part of a complex and multi-faceted experience including multiple inner seeings (described above) and inner speaking (described below). The unsymbolized thinking in 6.4 was a characterization of the story as unrealistic in terms of the

woman's frequent orgasms. Therefore, while reading an erotic short story unsymbolized thinking was present as both experience directly associated with the story and broader awareness of the characteristics of the task.

Feelings

Overall, feelings occurred in 3.5 out of 27, or 13.0% of sampled moments, a somewhat lower frequency than the 26% reported by Heavey and Hurlburt (2008). Feelings occurred once each for three (or possibly four) participants during the erotic reading task, and not at all for the other three participants. The possible feeling experience was an experience of sexual arousal, and we were unsure whether or not it should be characterized as a feeling. It is described in more detail below. All feelings present at the moment of the beep were directly related to what the participants were reading:

Nina 6.4: Nina is annoyed, felt as pressure in her right temple. [Nina described being annoyed at the characters, and the reading to be ongoing, but this was not directly in experience at the moment.]

Nina 6.4 was a negatively valenced feeling, but positively valenced feelings were also present, as in the italicized portion below:

Olivia 6.2: At the moment of the beep, Olivia is taking a deep breath along with the woman in the story. She is purposefully trying to create for herself the anticipation/excitement of the woman in the story. She is feeling a small amount of anticipation/excitement, which is experienced as the deep breath [this was a general excitement and not specifically sexual]. There is also some experience of being present in the taxicab—the door, the seat—related to this experience of trying to recreate the anticipation/excitement. This breathing/feeling occupies

about 60% of her experience. Also at the moment of the beep, Olivia is innerly seeing a yellow taxicab pulling up in front of a townhouse at night. She is seeing the entire scene and is not focused on anything in particular. The inner seeing is detailed, in color, and in motion; the taxi cab drives up from the right. This inner seeing occupies about 40% of her experience. [The inner seeing is illustrative of the story except that the story has the cab pulling up in front of an apartment and Olivia sees the cab in front of a townhouse. Olivia's breath is also parallel to the woman in the story, who is taking a deep breath at this time.] [There was no experience of arousal.]

Olivia is purposefully trying to create a certain feeling, and is having some success. This example can also be described as a “doing of” experience. This is distinct from Nina's annoyance, which occurs without any effort.

Sensory Awareness

Overall, sensory awareness occurred in 3 out of 27, or 11.1% of sampled moments, a somewhat lower frequency than the 22% reported by Heavey and Hurlburt (2008). Feelings occurred once each for three participants during the erotic reading task, and not at all for the other four participants. Sensory awareness was never experientially related to the story and was sometimes the dominant experience and sometimes a lower level of salience. For Felicity, her experience of sensory awareness (given in italics below) was a minor part of a sampled moment that was more focused on unsymbolized thinking (described above).

Felicity 6.0A: At the moment of the beep, Felicity is anticipating the characters in the story having sex. This anticipating is a cognitive idea that is located in a general area just behind her head and is not present in words or pictures, and is

about 80% of her experience. *Felicity is also feeling her fingernail being dragged across her left ear; this sensation is present in her ear [not her fingernail] and is about 10% of her experience. Felicity is also reading with comprehension, which is about 10% of her experience.*

One sampled moment included sensory awareness that was somewhat related to sexual arousal, although arousal was not present at the moment. This will be described further in the Sexual Arousal section below.

Inner Speaking

Inner speaking occurred only once in the samples collected during the erotic reading (1/27, 3.7%). Presented in italics below is the only example of inner speaking in this study. It is part of Olivia 6.4, the complex inner experience described that includes multiple inner seeings and unsymbolized thinking:

Olivia 6.4: [Olivia was laughing about the uselessness of the condom in the current scene—they had had lots of unprotected sex— and about how overly romantic and unrealistic the story is.] *At the moment of the beep, Olivia is innerly saying “What was the point of that?” (“that” was emphasized and referred to using the condom). [She indicated that the inner saying sounded how she would say it if she said it out loud. Part of this experience was also a chuckling partly innerly and partly out loud—the inner speaking was part of or shaped by the chuckle. She was unable to give further details on how the chuckling was present.] This (the inner speaking and chuckling) occupies about 70% of her experience. Also at the moment of the beep, Olivia is thinking about how overly romantic and unrealistic the story is. This involves multiple flashes of inner*

seeings including rose petals, candles, and bath water from previous scenes in the story, as if she is flipping through certain aspects of previous scenes including the unrealism of a woman having multiple orgasms with so little stimulation.

Olivia's experience of inner speaking was not reading the words of the story, but rather a comment on an aspect of the story.

Sexual Arousal

While reading the erotic short story, only one participant had any direct experience of sexual arousal (1/27, 3.7%), regardless of how broadly we or the participant defined "arousal." That is, we asked participants if their experience included any physical sensations, feelings, thoughts, or any other experience that they might characterize as arousal. In the one instance of a direct experience of sexual arousal, it was not the participant's dominant experience, and was particularly difficult to describe:

Georgia 6.3: At the moment of the beep, Georgia is innerly seeing the man from the story thrusting against the woman in a hotel room. The man is shirtless, and while she cannot see the woman she knows that she is lying on her back. She is seeing the man's right side and the hotel room behind him. This inner seeing is detailed, realistic, in motion, and is understood to be representative of the story. *Georgia is also somehow mentally sensing or feeling wanting to have sex. This mental feeling somehow involves her body in a diffuse way, and is a low level of arousal, maybe 15 on a scale of 0-100. [At the end of the interview Georgia mentioned that she thought she had not completely adequately conveyed the arousal, but that this was not out of shyness or embarrassment but because it was difficult to describe.]*

One other participant had an experience that she characterized generally as being related to sexual arousal, but that did not include an in the moment experience of sexual arousal:

Nina 6.3: Nina is feeling warmth in both cheeks in an area of a couple inches around with no clear borders [an instance of sensory awareness as discussed above]. [She may have been feeling warm throughout her body a bit earlier, but at the moment of the beep she was only attending to the warmth in her cheeks. Reading was ongoing, but no details are present in experience at the moment. She later explained that she understood this warmth to be related to being aroused, and that she was more aroused somewhat before this beep, but the arousal had faded, leaving only the warmth in her cheeks.]

These examples suggest that momentary experiences of sexual arousal are difficult to capture, and for Georgie difficult to describe, at least when in the context of reading an erotic short story.

That sexual arousal is difficult to capture in momentary experience is further supported by participants' self-reported experience of subjective arousal after completing the expositional interview. Two participants reported no experience of arousal, while five participants indicated generally finding the story arousing or finding it arousing at specific times during the story.

Those participants who found the story arousing indicated that they would have been willing to report that arousal if it had been interrupted by the beep.

Comparisons with the Natural Environment and While Reading Classical Fiction

Table 2 compares the frequency of the 5FP in the three environments explored in this series of studies—the natural environment, while reading classical short stories, and while reading erotic short stories—for the seven participants in this study. This table shows that all the

main characteristics of inner experience (that is, all the 5FP) that had been described by Heavey and Hurlburt (2008) were present in all three environments.

However, during both classical fiction reading and erotica reading experience involved much more inner seeing than was found in the natural environment. All the variations of inner seeings that were experienced during the natural environment (and by Heavey & Hurlburt, 2008) were also experienced during the fiction and erotica reading. Also, sensory awareness was less common while reading an erotic short story than in the natural environment and while reading classical fiction short stories. This is perhaps surprising in the same sense that the lack of experience of sexual arousal is surprising—one might have expected sexually explicit reading to potentiate sensory kinds of experiences. That was not the case. The frequencies of the other frequent phenomena (inner speaking, unsymbolized thinking, and feeling) do not paint a clear picture. They all occurred at relatively similar, infrequent rates, as shown in Table 2.

Table 2

<i>Five frequent phenomena across environments</i>					
	<u>Inner</u> <u>Speaking</u>	<u>Inner</u> <u>Seeing</u>	<u>Unsymbolized</u> <u>Thinking</u>	<u>Feeling</u>	<u>Sensory</u> <u>Awareness</u>
Natural	18.5%	12.2%	12.2%	17.6%	30.7%
Fiction	8.8%	65.0%	13.8%	7.5%	31.3%
Erotica	3.7%	74.1%	14.8%	13.0%	11.1%

Participants' experiences suggested they were highly engaged with the erotic short story while they were reading. Also, every participant reported being engaged with and attentive to the erotic short story at the end of the interview. Five of the 7 participants' experience indicated they were predominantly or exclusively attending to the reading during sampled moments. One

participant's experience suggested they were paying attention during three of four sampled moments (75%), and Nina was unusual in that her experience suggested that she was only attending to the story during one of four sampled moments (25%). Overall, 85% of sampled moments reflected the participants being actively engaged in the erotica reading. During the fiction reading, 65% of sampled moments included engagement with the stories. We compared the frequency of sampled moments that suggest active attention during the erotica reading day and the fiction day using a dependent-samples t-test. The difference in attention between the erotic and fiction reading task was approaching significance ($t(6) = 1.98, p = .09$).

Individual Differences in Experience

The participants in this study all had some aspect of their experience that was unique. In this section, these individual differences are described with attention to differences across different sampling environments.

Georgia, Harrison, and Felicity

All three of these participants primarily experienced inner seeings while reading erotica but had very infrequent inner seeings in the natural environment. Felicity had 2 experiences of inner seeing out of 16 (12.5%) samples in the natural environment but 4 experiences of inner seeing out of 5 (80%) erotica reading samples. In her natural environment, Felicity's experiences were dominated by inner speaking (53.1%) and sensory awareness (37.5%).

Georgia had 1 experience of inner seeing out of 17 (5.9%) samples in the natural environment while all 4 (100%) erotic reading samples included inner seeing. In her natural environment, her experiences were dominated by feelings (41.2%) and sensory awareness (32.5%). In general, Georgia's experiences seemed very closely tied to whatever was occurring in her external world. For example, on the second natural environment sampling day, Georgia

reported having a fight with her boyfriend at the beginning of sampling, and 4 of the 6 (66.7%) collected beeps contained feelings directly related to the argument. Georgia was also the only participant to have any direct experience of sexual arousal.

Harrison had 1 experience of inner seeing out of 18 (5.6%) samples in the natural environment while all 4 (100%) erotic reading samples included inner seeing. In his natural environment, his experiences were dominated by sensory awareness (66.7%); his sensory awareness was often related to a feeling, but the feeling was not directly present in experience. Harrison's inner seeings on the erotic reading day seemed poorly constructed, as if he was not particularly good at inner seeing, but the erotic reading elicited this kind of experience. A good example is Harrison 6.4 presented above in the incomplete illustration section. Harrison is seeing a black outlined image of a woman on a white background. At the moment of the beep, the incompleteness of the inner seeing is not in awareness, and it is only upon describing the inner seeing to the investigators the Harrison identified the unusual visual characteristics.

Nina

During the erotica reading, Nina's experiences were parallel to the story, but not directly related to the storyline. In sample 6.1, she heard her boyfriend say "I need you," which were words being spoken by the female character in the story. Also, in sample 6.2 she was remembering one of her own sexually related experiences in a taxi while reading about the female character from the story being in a taxi. These parallel experiences occurred for all of Nina's erotic reading samples. Sometimes Nina was reading with comprehension at the moment of the beep (6.3, 6.4), but sometimes she had left the reading task entirely in favor of her parallel experience (6.1, 6.2). This parallelism was observed in Nina's fiction reading samples, as well.

Olivia and Jenni

Both of these participants had what could be called “meta” experiences, or “doing of” experiences. These involve the intentional manipulation or creation of experience. For Olivia, this occurred across all environments. In the natural environment, she purposefully created a mental block to avoid thinking about something (4.4). During the fiction reading, she described purposefully adding visual details to an inner seeing as she obtained more details from the text (5.4). During the erotica reading, Olivia was trying to feel the excitement/anticipation of the story’s female character, with some success (sample description given above, 6.2).

On the other hand, Jenni had generally vague experience or a lack of experience during her natural environment sampling. Jenni seemed to have the language to describe her experience, but her experience was not particularly clear or detailed. Similar to Olivia, Jenni also experienced purposefully creating inner seeings from the text on both the fiction and erotica reading days (5.1 and 6.1). However, Jenni was the only participant to describe experiencing the process of reading. She tentatively described making out individual words and attending to the process of reading during one fiction reading sample (5.4). When sampled while reading erotica, Jenni was more confident that she was experiencing reading.

Jenni 6.3: At the moment of the beep, Jenni is reading in experience. She is experiencing the process of reading rather than the meaning of what she is reading [that is, the experiential aspect was of somehow grasping the words themselves and extracting their meaning, but the story itself was not in experience]. This reading is not highly salient, but is definitely ongoing in her experience. She cannot describe the process further.

Similar to her natural environment samples, Jenni was confident of what was occurring in 6.3, but there were no details regarding that experience to describe. In 6.4, Jenni also reported a low salience experience of the process of reading.

Adele

Across environments, Adele had difficulty with the sampling task. It is unclear whether Adele had unclear experience like Jenni, had difficulty with the interview process, or did not have sufficient language to describe her experiences. Adele reported having difficulty with reading comprehension during both reading tasks, although she indicated that the erotic short story was easier to follow. Her experience during the erotic reading task was characterized by inner seeings that were illustrative of the story. This is distinct from her natural environment and fiction reading samples, in which she most frequently had “just seeing” experiences where she described simply seeing what was in front of her.

Chapter 5: Discussion

This study was an initial exploration of pristine inner experience while reading an erotic short story. Seven participants were trained in Descriptive Experience Sampling during four natural environment sampling days, were sampled while reading fiction short stories, and were sampled while reading an erotic short story. We collected a total of 27 samples during the erotica reading day.

Attrition

An unanticipated yet important result of this study was the rate and characteristics of attrition. In general, DES participants are very engaged in the procedure and enjoy their participation; this was true of these participants as well. All participants in the classic fiction reading study completed a post-reading day interview, and all reported enjoying the task (Turner II, 2015). When approached for this erotica reading study, four of the 14 potential participants declined to participate initially, one was interested in continuing to sample but declined when she read examples of erotica, and two agreed to participate, completed the erotic reading task, and declined to complete the interview. This resulted in only 50% of the participants who were approached for the study completing the procedure.

For DES, this is an uncharacteristically high attrition rate and suggests that while these individuals were willing to engage in discussion about private events (i.e., inner experience), they were less willing to do so with sexual topics. It appears that there may be something uniquely private about sexual topics, which seemed to result in at least three of 14 individuals declining participation. It is possible that other participants also declined because they were uncomfortable with the topic, but we cannot say for certain.

Past research has shown that there is a volunteer bias in sexuality research. Participants who volunteer for sexuality studies tend to have fewer negative feelings about sex, higher levels of sensation seeking in general, a more positive attitude towards sex, and more sexual experience (Saunders, Fisher, Hewitt, & Clayton, 1985; Strassberg & Lowe, 1995; Trivedi & Sabini, 1998; Wolchik, Braver, & Jensen, 1985). This prior research suggests that only individuals who have particularly favorable views of sex and are comfortable with their own sexuality are willing to participate in sexuality research. This study supports the notion that only a subset of individuals are willing to participate in sex research. Previous studies (Strassberg & Lowe, 1995; Wolchik et al., 1985) also indicate that volunteer bias in sexuality studies is not the result of participants being unwilling to participate in research in general. The results of this study support this finding as participants were comfortable and enjoyed describing their everyday experiences, but declined to continue participation and discuss experiences related to sexuality.

The high rate of attrition may have contributed to the low frequency of directly observed experiences of sexual arousal in the sampled moments. The two individuals who declined to participate in the expositional interview after completing the erotic reading task indicated that they were uncomfortable describing their experience. This may have been because their pristine inner experience included direct experiences of sexual arousal. These participants also may have simply been uncomfortable describing the vivid sexual scenes that other participants described in their sampled moments.

All participants (except Nina) described innerly seeing sexually explicit scenes, but their pristine experience included little or no personal reactions to them. The participants answered detailed questions about these inner seeings, including the position of the characters, their state of undress, and the sexual acts in which they were engaged, but they generally denied the

presence of personal reactions like arousal, embarrassment, or excitement in their pristine experience. Given that participants declined to participate in the interview because they were uncomfortable describing their experience, this study may not have fully captured the kinds of experience that can be present while reading an erotic short story. It seems an easier and less intrusive task for participants to describe sexual scenes in detail than to face the same kind of intensive questioning about a direct sexual experience. However, it is possible that this sample, and the types of experiences reported, is *more* representative than most sexuality studies. In this study, the participants were recruited first for a reading study and were asked to participate in a sexually oriented task only after they had completed the reading study. Thus, we had earned the participant's trust and regard prior to inquiring about sexual topics, so our participants may have been *more* willing to participate in a sexually study than had the initial recruitment been for a sexually oriented study.

The particularly private nature of sexual topics for individuals has important clinical implications. Sexual dysfunction is a common issue for the public, especially as it relates to other mental and physical health issues (e.g., depression, hypertension, history of sexual abuse; Aaron, 2012; Bitzer, Giraldi, & Pfaus, 2013). However, training for addressing sexual topics with patients is not usually included in standard curricula (Wiederman & Sansone, 1999). Even if patients have sexual concerns, our attrition rate suggests that at least some individuals may be unlikely to broach the subject on their own and may minimize the extent of the issue. Our participants were being directly asked to describe their inner experience during a sexually oriented task, but not about their actual sexual experiences. Participants were uncomfortable discussing sexual topics, despite having spent multiple hours discussing private events with the

interviewers. These findings underscore the importance of medical and mental health professionals directly inquiring about sexual concerns and taking any reports seriously.

Pristine Experience while Reading an Erotic Short Story

The pristine inner experience of the participants while reading erotica was predominantly inner seeing of explicit sexual scenes depicting the plot of the erotic short story. These inner seeings ranged in clarity and how closely they were tied to the story, but were generally vivid, detailed, and clear. Nina was the only participant who didn't predominantly experience inner seeings related to the story. The four other frequent phenomena (feelings, sensory awareness, unsymbolized thinking, and inner speaking) occurred for some participants but not for others. Three participants experienced feelings, three participants experienced sensory awareness, two participants experienced unsymbolized thinking, and one participant experienced inner speaking.

Only one sampled moment included a direct experience of sexual arousal. This was surprising given the sexual content present in most participants' inner experiences. The experience was difficult for the participant to describe and was present at a low level of salience at the moment of the beep. Further, when participants were asked for their overall characterizations of the task, they reported being engaged with the story and most reported a subjective experience of sexual arousal at points during the reading when they were not interrupted by the beep. As only four samples were collected per participant, it is possible that the lack of sampled sexual arousal was due to the beeps simply not being occurring at arousing times.

It is unlikely that participants had a direct experience of arousal and did not report or describe it during the interview. The training portion of the study fostered a feeling of comfort and comradery between the investigators and the participants, as described in the Method section

above. Participants were encouraged to decline to describe a moment if they were uncomfortable discussing any part of it, as their experience is their property. We are confident that our participants were comfortable enough with the investigators to take advantage of this option. Indeed, two participants declined to complete the interview altogether because they were uncomfortable discussing their experience. Also, when attempting to classify an experience as sexual arousal, we cast as wide a net as possible, including anything that either the participant or investigators might characterize as sexual arousal (physical sensation, thought, feeling, etc.). Participants explicitly declined any direct experience of sexual arousal during the interviews. Thus, it is unlikely that a participant was actually describing an experience of sexual arousal that was not accurately characterized as such in the results.

According to linear models, sexual arousal is characterized as a continuous build up of excitement. The circular and dual-response models of sexual response do not strictly prescribe to the same continuous build up of sexual excitement, but still describe engagement with sexual tasks and material as generally eliciting increasing levels of sexual arousal. These models do not distinguish between a biological process of arousal, an overall process of subjective arousal, and pristine inner experience of arousal.

Based on the results of this study, we can confidently say that while reading a short story that most participants found to be generally subjectively arousing, a pristine inner experience of sexual arousal was present fleetingly, if at all, for these participants. Thus, a pristine experience of sexual arousal while reading an erotic short story may be characterized as a fleeting phenomenon, with brief peaks that are not continuously present in moment to moment experience. Perhaps these fleeting, pristine experiences of sexual arousal are so salient and memorable for the individual that they lead to a broader characterization of subjective arousal

during a sexually oriented task, like reading an erotic short story (or other methods employed by sexuality researchers).

This notion of fleeting but salient pristine experience of sexual arousal could tie in with the literature on the lack of concordance between physical and subjective measures of arousal. As general measures of subjective arousal are not asking about a specific (enough) point in time, the individual does their best to incorporate the sensations of their body and their experience over the course of many seconds or minutes. If pristine experience of sexual arousal is fleeting, they may be trying to remember moments that they have not been trained to apprehend, and thus they may incorporate these approximate memories with whatever is going on with their body. They may report low levels of subjective arousal because the pristine experience is so brief. They also may report high levels of subjective arousal because the pristine experience is so salient. Although these speculations call for more research, they suggest possibilities for the enigmatic lack of concordance between physical and subjective arousal observed in previous studies (Chivers et al., 2010).

A distinction between a general process of sexual arousal and a direct experience of sexual arousal echoes DES findings with regards to emotional processes and directly experienced feelings. While feelings are commonly present in pristine inner experience, they are not ubiquitous, as many emotion researchers assert (Heavey & Hurlburt, 2008). Also, feelings are not always directly present even when participants report an overall emotional process or behavioral evidence of an emotional state (e.g., A participant reporting he knew he was angry, but at the moment was only feeling his clenched fists and pounding heart; Heavey, Hurlburt, & Lefforge, 2012). Perhaps a pristine experience of sexual arousal is a particular kind of feeling.

The biological processes and general experience may be ongoing, while the direct experience of it is not always present in pristine experience.

Pristine Experience across Environments

As discussed above, the dominant phenomenon present while reading this erotic short story was inner seeings. Even individuals who experienced very little inner seeing in their natural environment primarily saw vivid scenes while reading. Participants seem to be drawn in by this story and become fully immersed in the plot line. This interpretation is further supported by the majority of sampled moments reflecting active engagement with the erotic reading task. Even those who did not report an overall experience of sexual arousal were attending to the plot line and innerly seeing the characters engaged in sexual scenes. And it seems likely that those participants who declined to complete the expositional interview were engaged in the task. Although we presented some data that participants may have been more engaged in the erotica reading than the classic fiction reading, the increased engagement may not have been because erotica is somehow more compelling than classic fiction. It may have been due to the length of the reading (30-45 minutes for erotica; 60 minutes for classic fiction), the reading level of the erotica short story (erotica: grade 8.4; classic fiction: 11.8), or simply the novelty of participating in a sexuality study.

In the United States, there is a large industry devoted to producing erotic material: literature, photography, video, etc. Something about sexual stories and content seems to grab attention and not let go. This study suggests that immersion in sexual stories is not only true at a purposeful or general level, but also in pristine experience. These findings may help explain the distribution of sexual material even when it is illegal and the rise in pornography consumption as laws regarding its publication become less stringent.

These findings may also have implications regarding the incidence of compulsive sexual behavior. Pornography has become increasingly more accessible through the internet and sex therapists have started to have clients who are obsessed with the consumption of pornography. Even when they want to engage in other activities, they are unable to disengage from erotic material. This study gives examples of participants who, seemingly regardless of their current state of sexual arousal, are immersed in the erotic short story to the exclusion of all other stimuli. One can imagine that paired with physical pleasure, like masturbation, continued consumption could easily become an inescapable urge.

Limitations

This study was necessarily limited in scope. As a first attempt to survey inner experience during sexually oriented activities, we chose a single method, a single sexual stimulus, and used a small sample. This study produced interesting results that give rise to much speculation. These results are not generalizable but are rather the jumping off point for future studies looking to investigate these kinds of phenomena further.

The recruitment method employed for this study was unusual. Having first recruited for a reading study may have limited the kind of participants recruited and thus the range experience sampled. It is possible that our sample successfully recruited individuals who may not have otherwise participated in sexuality research. It is also possible that the 50% attrition rate left us with those participants who would have volunteered for a sexuality study. Further research with different recruitment strategies and different methods will be needed in order to understand how these results fit into a broader understanding of inner experience during a sexually oriented task.

It is unclear how to interpret the scarcity of direct experiences of sexual arousal during the erotic reading task. As discussed above, one possibility is that the nature of

phenomenological experience during a sexually oriented-task is essentially different from the biological processes that have been used to inform models of sexual response. Essentially, perhaps the nature of sexual arousal while reading an erotic short story is fleeting, making it difficult to capture in momentary experience. There is also the possibility that DES is poorly suited to explore inner experience during sexual tasks, perhaps due to the interactional nature of most sexual activities. Future studies sampling experience during other kinds of sexual tasks (e.g., while viewing visual sexual stimuli or while engaging in sexual activities) would help to clarify this question.

The slides on which participants were sampled were purposefully selected as sexually explicit scenes, many of which occurred towards the end of the story. Two different participants reported their sexual arousal occurring mostly in the beginning of the reading. Having pre-determined the timing for the beeps may have unexpectedly reduced the likelihood of sampling participants during an experience of sexual arousal. Future studies may be able to use a fully random method of sampling, to reduce the likelihood of the investigator unintentionally biasing the kinds of samples collected. Another option may be to tie the presentation of beeps to a physical indication of sexual arousal. For example, it may be possible to use smartphone technology to monitor participants' heart rates as a cue to sexual arousal and administer a beep after a certain threshold. However, attempting to sample during a specific mental state using a physical indication is problematic from a DES viewpoint.

Summary and Conclusions

The purpose of this study was to investigate inner experience while reading an erotic short story. We gained interesting insights into the kind of experience present (e.g., vivid inner seeings), the kind of experience not present (e.g., direct experience of sexual arousal), and

overall characteristics of inner experience during this task (e.g., highly engaged). There are many interesting questions still to be asked regarding inner experience during a sexually oriented task. This study strongly points towards needing to further investigate the nature of pristine experience during sexually arousing activities.

Appendix A

Erotic Short Story used in Task: “Not Her Type”

Jasmin Marchand had her full lips wrapped around Mark Archer's erect penis when her cellphone rang. He was sitting on the couch in his living room in a T-shirt and his glasses, his sweat pants in a puddle around his bare ankles and Jasmin was kneeling between his legs with her head bent determinedly to her task. She continued to bob her head up and down on his shaft, her hands leaving their stroking duties to search for the chiming handset in her purse as it hung down from her shoulder.

She was licking up the leaking pre-cum from the head of his penis when she brought the phone up to look at the name of the caller on the screen. 'Bianca' it said. Impatient Bianca, wondering how come 'dropping off a message' was taking so long. Jasmin hit the answer button and took her mouth off him. "I'll be right down. Give me a minute!"

"Well, hurry up!" Bianca laughed. "We want to get to the cute guys before some other women snatch them up!"

"Uh-hmm." Jasmin hummed in acknowledgment, her tongue going up and down his cock before Bianca had gotten out her second word. Her eyes locked on Mark's amused face as she hit the hang-up button and continued what she was doing. She licked, sucked, and kissed even as she stroked his shaft with her hands, and she fondled and licked his balls and repeatedly took him back into her mouth until he gave a sharp cry and jerked as his cum began to enter her mouth in spurts. She closed her eyes and swallowed automatically...

Two and a half months since their first fateful night of hard sex and a weekend she had spent naked and being fondled, kissed, licked and fucked in her apartment and then his, their 'arrangement' had not burned itself out. And sex with Mark had become a rather regular part of

her life. At least two days of every week, sometimes three, once or twice four, involved at some point, Mark's dick or tongue sliding inside her pussy and a significant number of orgasms before they took their leave of each other.

This was the second episode of sexual contact between them that day. He had taken her from behind that afternoon in the hotel on 53rd, hard and fast, coming less than five minutes after their entry into the room. Jasmin, easily orgasmic, had still managed to come within that short time. There was often no time to fully undress when she got to the hotel during their lunchtime rendezvous so she usually just hiked up her skirt and opened her blouse, spreading her legs or bending over for him, her panties and bra often off before she left her office. This time, she had successfully gotten her top and office pants off, but her panties she had simply pulled aside, impatient for him to enter her after three days without him being inside her. He had travelled on business and after the second day, with a higher than normal workload, she had become a bundle of nerves and thoughts of him stroking inside her suddenly began to invade her mind at inopportune moments throughout the day.

The blowjob she was administering now was an apology of sorts. She had arrived less than five minutes earlier to give it to him, telling him to sit down and shut up after a quick licking kiss on his lips at the door. She had then hung up her coat and quickly gone to work. Usually she liked to take her time but she had people waiting for her downstairs so she was doing what she knew would overwhelm him quickly so she could swallow him and get back to the car.

It would be her birthday at the stroke of midnight and he had obviously planned to have her already impaled on his cock at the moment the clock struck twelve. But Jasmin's girlfriends had already arranged a night out dancing to celebrate and she could not cancel. Mark had not complained or said anything beyond a neutral "That's okay" when she told him over the phone. It

was when he had called to tell her to meet him at the hotel that morning. Jasmin thought he was disappointed - his fucking of her in the hotel had a touch of ... anger to it, which her naughty side had liked more than she wanted to admit. She was feeling some regret too - she was looking forward to being with her friends, some of whom she had not seen in more than a year - but greeting a new year in her life with an orgasm was something her naughty side would have liked as well. Very much.

As soon as she was certain he was done cumming, Jasmin took her mouth off Mark's penis and stood up, job done. Without another word, she went to the last-minute-check mirror by his apartment door, examining herself before she went back out for any tell-tale signs.

There was a small droplet of cum on her chin and she quickly wiped and licked it off her finger. She reached into her purse for a tube of lipstick and gloss and layered them both on her lips - having left her earlier application on Mark's now semi-flaccid member. She examined herself in the mirror one last time, fidgeting needlessly with long black hair that was still tight in its bun. She was wearing a low rise long black skirt with a slit up to her upper mid-thigh and a white cotton wrap-around shrug top with wide sleeves and a neckline that showed a moderate but noteworthy amount of cleavage. Matching dangling ear-rings and an ankle bracelet, together with a black choker with a gold pendant around her neck completed the picture along with her tiny white handbag and white strappy leather high-heels. She was wearing disposable green contacts on her brown eyes and they looked back at her as she gave herself another once-over.

Jasmin wondered if her friends would notice how her nipples were sharply poking through the lace of her demi-cup and the cotton of her top. She wondered even more if she should have simply straddled and ridden him to his release. Her pussy was alive with heat but it

would be some minutes at the earliest before he would be able to 'rise to the occasion.' Jasmin turned around to find Mark standing and pulling his sweat pants up, and she walked up to him.

"I'll be back as soon as I can. 2 o'clock?" she said, putting her arms around his neck and pressing herself against him.

He kissed her. "Sure. That'll be okay."

Jasmin was still enjoying the next kiss, and the way his hands were stroking her bared hips, when the phone started ringing again. She broke the kiss, sighing. "Be ready for me, Mr. Archer." she said, looking pointedly at his crotch and running her hand over it. Then she touched herself through her skirt. "Cause I'll be ready for you."

He grinned nonchalantly, the all too familiar predatory gleam in his eyes. "Sure."

She nodded happily. It may be nothing more than an 'arrangement' but she would keep him happy if she could. It was definitely worth it for the consistently great - mindblowing, in fact - and satisfyingly regular sex she was having with him. She wore her coat and was answering the phone as his apartment door closed behind her. "I'm coming, I'm coming!"

The line in front of the club was not quite as long as they had feared. Jasmin, Bianca, Nadine, Anna and Charlotte climbed out of their taxi and quickly walked across the street to join the queue. It took less than five minutes for them to reach the front but by that time, Nadine had been forced to fend off two especially strong advances from men in the line while Bianca had allowed one to strike up a conversation with her. The rest of her friends had simply exchanged knowing smiles - Bianca was an incorrigible flirt. Nadine, Anna and Jasmin were still catching up - the three of them had not been together in the same place for almost two years.

The bouncers all smiled at the ladies, and wished them a good night when they got to the door, waving them all in with only a cursory check into their purses. Bianca took her new beau in

with them and smiled naughtily when they took off their coats and he whistled appreciatively at her. She was wearing a midriff baring halter top with a wide keyhole opening into her cleavage and tight low-rise leather pants that clung to her like a second skin. She was wearing no bra and her nipples made clear impressions on the stretchy fabric of her top. Anna and Nadine were both in short skirts and thin loose tops while Charlotte was wearing something long like Jasmin's with a crop top corset. The man in the cloakroom booth also whistled when he saw Jasmin without her coat and he winked lewdly at her as she handed it to him and took the token out of his hand, giving him an amused smile. They descended the stairs down to the strobe-lighted club floor.

An hour later, Jasmin was sipping from her glass and dancing with a slim and very handsome man who obviously wanted to get much closer to her body. Anna was dancing far more closely with a man with dark hair, his hands on her waist and her hand behind his head. Charlotte and Nadine danced with each other, clearly broadcasting that they were not available for dancing with a man any closer than arm's length. Bianca on the other hand had herself wrapped around the man she had come in with after dancing closely with two other men. It seemed she had made her choice about who to take home tonight.

The man Jasmin was dancing with suddenly stepped closer and just as suddenly frowned as she felt someone lean forward from behind to speak softly into her ear. "Hey."

Jasmin turned sharply to see Mark in a well-tailored blazer, designer shirt and dark jeans, with his ever present glasses. She was careful to keep her face neutral as she started to dance with him, inadvertently but completely ignoring the frustration on the face of the man who been dancing with her just a few seconds earlier. Mark was not as handsome as the man she had just left but the sight of him had caused a tightening in her breasts that had her lips parting in heat.

The warmth in between her legs intensified as he moved with her in an easy step, finding herself

a little surprised that he was not atrocious on his feet. He held out his hands and she took them as they continued to dance across the dance floor. Jasmin remembered that he had asked her which club they were going to in the hotel as he pulled her panties back up on her and she had told him.

She put her glass down at some point, and moved into his arms, crushing herself against him like Bianca was doing with her new found beau after an appropriate amount of time so her friends would not suspect that this was not the first time she was seeing him. Charlotte and Anna gave her winks and thumbs up, but Nadine obviously could not see why she left a better looking man for who she was now dancing with as she also shrugged and raised her eyebrows. Jasmin felt his hands settle on her waist, his thumbs stroking the sides of her stomach and she threw her arms around his neck. She felt the mass of his manhood begin to engorge and press against her belly and she trembled as her pussy began to flood with lubrication.

She wanted to kiss him but she was not certain her friends would not guess that he was not just chance met at the club. He was effortlessly stirring up what she had foolishly started when she went to give him that blowjob. Why did she not ride him instead? She was tempted to just lift up her skirt and let him inside her pussy in the middle of the dance floor - it would still be dancing, wouldn't it? Fucking was dancing too; bodies moving to a particular beat till they both exploded in a crescendo of ecstasy ...

He leaned forward to whisper in her ear "I'm going outside. Come meet me. Five minutes." He suddenly moved away from her and kissed her hand like a French noble. Then he turned and left for the bar, away from the door.

"Who was that guy?" Nadine asked when she went back to her friends - he had virtually carried her across the dance floor away from them.

"I don't know." Jasmin lied, breathing a little flustered.

"Well, he obviously had quite an effect on you." Charlotte said quietly enough for only Jasmin to hear over the loudness of the music, eyeing her chest and turning away with a smug grin.

Jasmin realized her nipples were poking sharply through the cotton of her top and sighed, directing a small frown at her friend. Cum was coating her inner thighs, and she knew she may not be able to last another two and a half hours before she had to get to Mark or go into the bathroom to 'relieve' herself. Perhaps more than once.

But he would be outside in five minutes, waiting for her.

She really had no choice.

"Need to go to the bathroom." Jasmin said quickly. "Back in a sec."

"Okay." Nadine said while Charlotte only raised her eyebrows.

Jasmin went toward the toilets at the rear of the club, keeping an eye out until she was behind a pillar and then swung around, pushing herself through the press of dancing bodies on the side of the club away from her friends. It did not take her long but it seemed to last forever as she had to excuse herself and fend off the hands of more than one man who tried to grab at her hand. One made to lay a hand on her ass and she slapped at the offending hand with a snarl. She reached the door at last and stood on her tip toes to make sure her friends were not, by some strange coincidence, looking in her direction. She saw them, and smiled affectionately. None were. Nadine and Charlotte were dancing with each other still, Bianca was being held from behind by her chosen man and Anna was chatting amiably with the dark haired man she had been dancing with, holding a glass in her hand. Quickly, she ran up the stairs and went past the cloakroom to the entrance. There were even less people lined up. But no Mark.

"Leaving so soon, Miss?" one of the huge bouncers, with the scar over his eye, asked.

"The night's just starting."

"I'll be right back." she said, smiling at the large man before she continued looking around for Mark.

"Cool." the guard answered, turning away to pat down the man in a couple before he let him in.

She suddenly saw Mark to her right, leaning against a car little distance away. He saw her and, expressionless, slowly got off the car and walked on until he disappeared around a corner. Jasmin casually started walking after him, feeling her heart beat faster the closer she got to the corner. She turned it and nearly cursed out loud when she did not see him immediately. But then she saw him looking at her from the mouth of a darkened alleyway twenty yards away from her. He grinned and moved into it, out of sight. Jasmin moved quickly to follow him and entered the alleyway to discover that it was an empty dead end, the only illumination a fluorescent light bulb far up on a fire escape six stories up and the silver light barely reached down to the second floor. Feeling her pussy begin its familiar contractions in anticipation, her naughty side cheering her on, Jasmin decided that it was more than private enough. Mark was leaning on his side against the wall, looking at her with his familiar predatory gleam.

Jasmin let out a moan and nearly ran at him. She pushed him up against the wall and began to kiss him; hands going down to feverishly unzip him out of his pants. He kissed her back, kneading her breasts through her top, licking at her lips and her licking and sucking hungrily back as she reached into the fly of his jeans and boxers to pull out his dick. He froze as she began to stroke his full length and then firmly pushed her away to the perpendicular wall that made the alley a dead end.

"No. Later, Jasmin." he said after a deep breath, swiftly returning his member back into his pants and zipping up.

Jasmin stared at him, confused and trembling. Then she smiled devilishly and began to hike up her skirt till it was bunched around her hips. She was wearing a particularly tiny thong and she moved the lace to one side, exposing the parted and wetly gleaming lips of her vagina.

"I need you, Mr. Archer." she whispered as she began to stroke herself, eyes locked on his. "I need you to fuck me." She plunged a finger into herself and shuddered as her other hand went up to cup and squeeze one of her boobs through her top. She fondled her soft flesh as she continued to piston her finger into her cunt. "Please?" She kept her eyes on his through her shuddering and the low moans in her throat. She smiled as he took a step towards her; the hunger in his eyes reflecting her own, and her finger exited her cunt and began to circle around her clit. She leaned her back against the wall and bent her knees so he could see her more clearly in the very dim light.

Mark reached her in a rush and Jasmin once again single-mindedly reached for his zipper. But she never got more than a quickly lost hold of it as he went to one knee in front of her, his head bending towards her glistening pussy. Jasmin gasped when his tongue touched her, and then whimpered as his lips followed to kiss her swollen clit and suck at her slick wet folds. Jasmin held his head with her hands as he ate her, thankful for the wall and her heels, eyes squeezed shut and shaking and quivering as he worked her pussy with his mouth. She had begun to cry out softly when his mouth left her, making her whimper in protest. She opened her eyes when she felt his hands grip the French-cut waist band of her panties and she obligingly lifted her ass off the wall so he could slide them off her hips and again obligingly stepped out of them when they got to her ankles.

Her eyes were already closed in anticipation when he hitched up one leg to rest on his shoulder and he moved his head between her legs again. She heard him sniff her in deeply as he invariably did - something her naughty side had come to love - before he continued lapping, sucking and kissing at her cunt. She gasped aloud when his tongue rasped against her clit again and she had to bite her lip to keep from screaming when he pressed down on it with his lips. Her weight was now completely balanced on the wall and on one leg, the other leg resting over Mark's shoulder to keep her open for his marauding mouth. She struggled to open her eyes to look down at the man between her legs, his head moving as he inundated her with pleasure. It was one of the most erotic sights she had ever seen. And the fact that practically anybody could take three steps into the alley and see her with her skirt hiked up around her waist, getting her pussy eaten while standing up against the wall had her naughty side turning cartwheels in her head. It was just so wanton and wicked ... and it excited her to no end. Abruptly, she closed her eyes again and bucked against his mouth as she felt her orgasm come rushing at her.

Jasmin let out a sharp squeal as she began to come, shuddering and shaking wildly as wave after wave of pleasure crashed into her. That she was on her feet in a none-too-clean alleyway having her cunt licked and sucked only seemed to enhance the intensity of her orgasm and she barely managed to keep herself upright as Mark's mouth continued the assault on her pussy.

She was barely aware of him moving his mouth away from her as he straightened and stood up. He held her by the waist and bent his head to kiss her, pulling her close. Jasmin kissed him back automatically, putting her arms around his neck. She tasted herself on his lips and mouth and as usual she took her time to lick and get it all off.

"Let's go back to the club." Mark said when Jasmin opened her eyes, staring up at him.

"You are so nasty ..." she finally said with a smile, playfully curling her lip and wrinkling her nose at him.

"Guilty as charged." he replied before his mouth descended on hers again.

They re-entered the club, ten seconds apart. The huge scarred bouncer smiled in recognition at Jasmin and waved her in without any ado. He, however, stopped Mark for a cursory re-search before he let him in. As he walked in, Mark watched Jasmin descend the stairs to the dance floor, watching the seductive sway she put in her hips because she knew he was watching. When she got to the bottom, she looked over her shoulder and quickly kissed her full lips at him before she disappeared into the club's interior.

Their entire encounter had taken just over fifteen minutes.

"Where have you been?" Nadine demanded when Jasmin finally got to her friends after taking a detour around the other side of the dance floor so she could look like she just came from the toilets.

"Little girls' room, remember?"

"Were you having a baby?" Bianca inquired, her new-found beau nowhere in sight for the moment. "Or taking a ...?"

"Hold it, Bianca." Charlotte raised an admonishing hand. "Let's not get too graphic!"

They all laughed, Jasmin was thankful none of them could even begin to guess at what had really happened in those fifteen minutes she had been gone from them. The five women began to dance together when a song they had all loved in University came on the speakers, singing the chorus out loud and giggling at each other. They danced together and laughed for the next three songs. But the next song brought back Anna's man of the night and Anna allowed herself to be led away with an apologetic grin to her friends. Nadine was the next to go off,

surprised and delighted by her Alan showing up. She introduced him to Bianca and Charlotte before she led her man away.

Jasmin felt the hairs rise at the back of her neck when Mark suddenly put his hands on her bare hips. She did not need to turn her head to know it was him. But she still turned her head around to look at him as she started to casually grind back at him behind her. Her friends all giggled and she giggled back at them.

Three minutes later, Bianca's own man for the night found them, found her and dragged her off. Charlotte, finding herself alone without a male dance partner, finally allowed a man to come close enough to dance with her - at more or less arm's length - two minutes afterwards.

Jasmin saw Bianca wrap one leg around her dance partner, salsa like, as they danced; obviously indicating that she was definitely taking him home that night, while Anna was already kissing her date on the dance floor. Nadine was being held from behind, smiling and grinding against her Alan, who obviously could not dance beyond a few simple steps.

Jasmin wanted to turn around and throw her arms around Mark's neck when he leaned over her shoulder to whisper into her ear. "Come with me."

She gestured to Charlotte that she was going with the man who had been dancing behind her as he began to drag her away. Charlotte eyed her sharply pointing nipples and gave her an encouraging grin and wink - obviously thinking Jasmin had found a man to "sing her 'Happy Birthday'." Jasmin allowed Mark to lead her further onto the dance floor into a somewhat darkened corner where the music was much louder than where they had left.

He turned her around to dance with her from behind and Jasmin began to hungrily grind her ass against him to feel more of his completely engorged and hardened member. His hand, the one that was not on her belly, began periodically moving up to cup and squeeze one of her

breasts and then just as casually return to her waist before going back up again. She was aware that anyone looking could see her allowing herself to be fondled like a wanton slut - but she was already beyond caring. In the end, she spun around and pulled his mouth down on hers, wrapping one leg around him and feeling his hand cup her ass and squeeze as she writhed her hips against him, moaning loudly against his mouth.

Mark stepped back away from her after breaking the kiss. She was breathing hard, lips trembling, her pussy was pulsing with cum, her nipples swollen hard and pointing their full aroused one inch through her top. Horny did not begin to describe how she felt.

Mark smiled at her. Then he leaned forward to say in her ear, loudly over the music. "I'm going to fuck you, Jasmin Marchand." Words that have come to send a thrill through her each time she heard him say them. "But don't be too late."

Jasmin could have hit him for the smugness of his grin. She continued to tremble as she watched him weave his way through the dancing crowd. Her cunt felt like a wet and raging inferno and images of Mark plumbing away inside her in every which way flooded her mind as she watched him move away from her. She unconsciously started to push her way through the crowd after him, when she felt a hand grab hers.

It was Bianca. "Who was that guy?" she asked, shouting over the music, curiosity bright in her eyes.

"I don't know ..." Jasmin lied again.

"Liar!" Bianca snorted disbelievingly. "I saw you two!"

Jasmin felt the heat rising on her cheeks and decided to try another tack; "He gave me his number." Not exactly the whole truth, but the truth.

"And?" Bianca smiled naughtily.

"I think I'm giving him a call when I get home." Jasmin grinned back. "Tonight."

"Great!" Bianca laughed, but then she pulled at Jasmin's hand and started dragging her away. "Come on, birthday girl. We're all waiting for you!"

Jasmin took a deep breath to calm herself, resolving to steel herself to get through the next - she looked at her watch; 11:56 - two hours. And then she would make her way as fast as possible to Mark's apartment. In her mind's eye, she saw herself being carried around, naked and impaled on his cock as he carried her to his bed. Then she saw herself being taken from behind as she bent over the back of his couch and he pounded mercilessly into her ...

Bianca pulled her along through the throng of dancing bodies back to their table where Anna, Nadine and Charlotte were sitting expectantly, waiting for her. On the table was a small cake with a candle in the middle of it and 'Happy Birthday Jasmin!!!' written in icing on top. Despite the images of sex rushing through her mind and the haze of her arousal, Jasmin felt tears well up in her eyes as she hugged and kissed them all. They used Jasmin's watch to countdown to her birthday and when it came she blew out the candle as her friends loudly sang 'Happy Birthday' over the music to her. People watching clapped and the bartender sent down drinks. Nadine had brought her digital camera and they all took turns taking pictures of her with the others and then they got Nadine's Alan to take a picture with all of them in it and the cake. After, Jasmin cut the cake with a knife the bartender had kindly lent them, and she gave them each a slice, with one going to the bartender and another going to Alan. Afterwards they danced and laughed and then sat down again to talk before a song they liked got them up to dance again.

Throughout, Jasmin was intensely aware of the empty feeling in her vagina. She found herself squirming in her seat as she felt the cum coating her inner thighs at the nasty thoughts running through her mind. Mark was going to be inside her within ten seconds of her laying eyes

on him, whether it be in his apartment, the parking lot, the lobby of his apartment building or on the street outside it. Her nipples were almost painful in how hard they were and it was all she could do to stop herself from rushing to the toilet to touch and stroke herself to relief.

By the time Nadine was telling the rest of them that she had to go, holding Alan's hand and exchanging looks with him that told all that they were not planning to sleep when they got to their hotel, Jasmin was having to forcefully push aside thoughts of dragging the nearest man into the bathroom with her. It may be only an 'arrangement' she had with Mark, but Jasmin had found that she was not willing to share herself with anybody else until it was over. But if he suddenly showed up again in the club, Jasmin was not certain she would be able to stop herself from spreading herself on the table right then and there, uncaring of how many people were watching. As she contended with the image of Mark fucking her in the club as she somehow balanced herself and spread her legs on a barstool like some pornstar, she promised herself that she would find a way to pay him back for doing this to her.

Charlotte stood up too and said she had to leave, which meant that Anna, who lived in the same part of town, stood up to go too so they could share a cab. Anna went up to the dark-haired man she had spent most of the night dancing with, and exchanged numbers and a chaste kiss on the mouth with him before she came back and hugged and kissed Jasmin on the cheek, wishing her a happy birthday and promising to call her later in the afternoon. Charlotte and Jasmin exchanged hugs as well before she left, waving and blowing a kiss at Jasmin and Bianca.

Jasmin stood up a few minutes later after squirming in her seat at the memory of Mark pleasuring her with his mouth in the dark alley. Images of Mark fucking her were flashing through her mind without any let-up try as she might to suppress them, and she was becoming so

consumed with need she could barely think straight. "I think I should go too, Bianca. I'm kinda tired."

"Oh?" Bianca looked disappointed. She lived just a few streets away from Jasmin, which meant they should share a taxi. She darted a look at the man she had met while they were waiting on line when they first got in - he was standing at the bar having a drink and openly eyeing her. Bianca had spent most of her time in the club dancing wildly with him and much of the last hour kissing him.

"You can stay." Jasmin said, suggestively raising her eyebrows to gesture at Bianca's new beau. "I'll be alright."

Bianca grinned "Are you calling that guy?"

Jasmin shrugged and smiled mysteriously "Maybe."

Bianca gave her an odd look. "He's really not your type, though, right?"

"Maybe I'm broadening my horizons a little." Jasmin said, trying her best to sound flippant and keenly wishing Bianca would drop the subject.

Bianca shrugged her shoulders in a way that said 'whatever floats your boat' and directed a naughty smile at her friend "So you *are* gonna call him? Tonight?"

"I said," Jasmin smiled back, relieved that the subject of her 'type' had fallen by the wayside. " ... maybe."

"C'mon! It's your birthday!"

Jasmin laughed and hugged and kissed her friend good night before she went up the stairs and collected her coat from the cloakroom. She went outside and waved good bye at the bouncers as she casually set off, hoping Mark had her panties with him - she had completely forgotten them once he had slid them off her and continued eating her out in the alley.

Jasmin felt the cum flowing out of her as she walked, her nipples pebble hard on her boobs. She reached for her phone in her handbag and automatically dialed a number as she put the phone to her ear - realizing that she had effectively made herself not a liar to Bianca about getting the guy she was dancing with's number and giving him a call.

"Hi." she heard him say nonchalantly - she thought she could actually 'hear' him smile.

"You'd better be ready for me, Mr. Archer." she snarled.

"Get here and see."

"Just be ready for me, you bastard ...!"

He just laughed.

She hung up and immediately raised a hand to hail a passing taxi. It screeched to a halt and she ran to it and slid into the backseat, calling out Mark's address. She squirmed in her seat throughout, the warmth between her legs growing hotter and hotter as she gave her imagination free rein. The image of her last 69 with Mark came unbidden to her mind. It had been on the floor of her sitting room and she had been on top, struggling to swallow the whole length of him as he repeatedly tongue-kissed her slick wet slit. What she could remember most clearly was that she had had to repeatedly push her hair out of the way and move it behind her ears as it continued to fall over what she was doing. Frustrated, she had raised up, inadvertently pressing down her pussy on top of his mouth and swiftly tied her hair in a quick ponytail before she bent down to her task again. To her delight, he came less than five minutes later all over her breasts and chest. Feeling naughty, Jasmin had insisted on remaining in that position and sucking, licking and playing with his cock and balls until it was hard enough for him to fuck her. That he had already given her a series of orgasms with his mouth on her cunt had been an added bonus as he finally took her from behind ten minutes later as she leaned over the coffee table and then

pounded into her as she wrapped her legs around his pistoning hips as she lay on her back on her hardwood floor. Interestingly enough, her ponytail had somehow come undone during all that subsequent activity.

Her breaths were making her breasts heave when the cab finally pulled up in front of the familiar apartment building. It was 1:41 - she was more than a quarter of an hour ahead of schedule. She wordlessly paid the driver and ran out of the car, leaving him grateful for the 30% tip as she went to hit the buzzer at the front door of Mark's apartment. No answer. She hit it twice again, cursing, when the door issued out its own buzzing noise and swung open by itself. Jasmin went through and went swiftly to the bank of elevators, taking off her coat. It was less than twenty minutes to two o'clock in the morning so the elevators were all mostly on the ground floor. She ran into one and hit the button for Mark's floor repeatedly until the doors slid shut. All that was running through her mind was Mark's cock, sliding its way inside her wet sheath in any and all possible directions; from the front, from behind, from the side, from under her, from over her, so long as he ended up inside her.

Jasmin licked her lips, anticipation making her quiver as she watched the indicator flashing floor numbers closer and closer to Mark's own. She found herself fondling her own breast, squeezing her nipple before she realized what she was doing. She was two floors away when she simply took off her skirt, leaving herself in only her shrug top tied under her breasts and bare all the way down to her shoes. She saw herself in the mirrored walls of the elevator, her bush stark black against her caramel skin. The doors chimed open and she stepped out of the elevator, coat and skirt folded over her arm, and walked swiftly across the hallway and through a branching corridor to her destination, a door with the number #77 on it, totally uncaring if

anybody peeked out their doors and saw her padding through their building naked from her breasts and belly down to her feet.

She hit Apartment #77's doorbell, hard and three times in a row, desire and need making her shake. The door opened, and letting out a loud moan she rushed at the man who opened it, letting her skirt, coat and handbag land in a pile by the door as it swung shut. Mark was wearing what he had been wearing when she had left him in his apartment, still recovering from her expertly administered blowjob. She barely noticed though as she leapt on top of him and somehow they ended up on the floor as Mark stumbled backwards, suddenly finding his arms full of lust-crazed woman. He fell and landed on his rear end, Jasmin straddling him by his thighs and pushing him to lie completely on his back.

Jasmin immediately grabbed hold on his sweat pants by the waistband and began to yank them off him, growling deep and low in her throat as she single-mindedly pulled them down his legs and then threw them to the side. His cock sprang loose, fully engorged, erect and pointing upwards. Jasmin let out a sob of need and swiftly crawled over his body to get to it, straddled over him, desperation and anticipation making her lose sight of everything else but the thick shaft she needed inside her. She was over it in a heartbeat and she held it beneath her in her hand, smoothly guiding it into her opening. Even after weeks of hard and constant sex, her pussy was a marvel of tightness as she sank unto his pole, feeling her pussy contract around the familiar intruder inside her, cum flowing out of her as she cried out in delight.

"Oh Mark ...oh fuck!" she started to shudder violently even before he was fully inside her. She felt a flush starting from her belly and spreading up to her chest. The last inch of Mark's cock entered her as he grabbed hold of her waist, gasping his pleasure, and she cried out as the first wave of an orgasm flooded through her "I'm coooooming!"

She had been so close, penetration had simply pushed her over the edge. Jasmin threw her head back, her mouth open in a silent scream that ended in a choked high pitched gasp. She collapsed on top of Mark, her cotton enclosed breasts crushed against his T-shirt covered chest, gasping and moaning in ecstasy. Mark stroked her hair and the bare small of her back, holding her as if to contain the violence of her passion as she recovered from her orgasm. Her shudders and shaking reduced gradually and she was able to lift her head up and press her lips against Mark's. She stared into his eyes as she began to buck her hips.

"I'm going to fuck you Mark Archer." she whispered to him, smiling at his amusement at her repeating his words back at him.

She lifted up and sat so all of him was inside her at each down stroke as she rode him, squealing in delight at every movement of his cock inside her cunt. His hands reached up to caress her breasts and pinch at her poking nipples through her top, stroking her belly and hips with his fingers. She smiled at him as he teased the skin around the perfect slit of her belly button and she bent over to lick his lips, no let-up in her sliding up and down his dick. He grabbed hold of her ass cheeks and stroked her back with the other hand, making her moan with delight against his mouth. She lifted up again, and she began to go faster, head thrown back as she lifted higher up on him and slammed down. Her ass made a slapping noise each time her butt made contact with his hips. She felt him thrusting back up at her, matching her stroke for stroke. It was not long before her squeals became louder and louder and he was letting out grunts that complemented her cries at each slap of skin against skin.

Jasmin felt him start to shake in the tell-tale way that told her he was on the edge of coming and she looked down at him, smiling happily. She slid down to bury him deep inside her

and started winding her hips like a belly dancer. "Come for me baby ...!" she said encouragingly "Uhn ... Come inside me ...!"

In response Mark's eyes opened, looking wild but calculating, and his hands moved swiftly; one went to hold her waist and the other went to where they were joined as one to press and to stroke his thumb at the pink nub of her clitoris, to bring her closer to the edge along with him. Jasmin went rigid, crying out at this new sensation, and Mark stiffened, both hands now at her waist as he thrust one last time into her sheath. His dick exploded inside her, and just like he wanted, Jasmin threw her head back and screamed as the new sensation of his pulsing member showering cum inside her, in addition to his quick and rough stimulation of her clit, pushed her over the edge. Mark cried out in counterpoint to her wails until he silenced them both by pulling her down on top of him, his mouth seeking hers. She kissed him just as hungrily, making mewling noises against his mouth even as he groaned against hers, their bodies a shuddering mass of confused entangled flesh.

It seemed like an eternity before Jasmin was able to breathe again. She opened her eyes, aware of Mark's substantially less turgid member inside her and enjoying it like she always did before he left her. His eyes were already open and he was stroking her hair. They smiled at each other for a moment and Jasmin bent her head to kiss him softly, light and wet two-second long kisses repeated again and again as she held his head with her hands. She felt his hands start travelling and stroking all over body, her sides, her back, cupping her ass and her legs curled on either side of him. She purred even as she dropped another kiss on his lips.

It continued for another five blissful minutes, Jasmin now repeatedly kissing a different part of his face, before going back to his lips, thoroughly enjoying herself as he stroked her body and she lay on top of him, still engulfed inside her. Her eyes suddenly widened. His cock was

moving, slowly expanding and lengthening inside her. Her breath caught as her pussy smoothly adjusted to him, her vaginal walls expanding and closing around the swelling visitor.

She stared at him, stunned. "How ...?!"

He only smiled "We are not finished yet, Miss Marchand."

Jasmin was at a loss for words, unable to recall ever feeling quite so exquisitely sexy in all her life, so she bent down and kissed him, hard, thrusting her tongue deep into his mouth. She was still into the kiss when he heaved and turned them over so he was lying on top, still inside her. The kiss broke and Jasmin automatically spread her legs wide in expectation. He was not completely hard but he certainly felt firm enough.

"Fuck me, Mark." she said, lips parted. "I want you to fuck me again."

To her surprise, he shook his head and smoothly slid out of her, making her gasp and shudder at his exit. He stood up on what she noticed were slightly shaky legs and looked down at her. Jasmin eyed his not-quite-fully-erect penis and sat up, a questioning look in her eyes as she looked up at him and licked her lips - she liked 'cleaning him up' with her mouth.

He stared hotly at her for a moment before he reached a hand out to her. "Come here."

His hands grabbed hold of the bow of her top and he undid it and slid it off her shoulders. He went behind her and unhooked the clasp of her demi-cup and let it fall to the floor. He took off her choker and laid it carefully on the coffee table. He knelt at her feet and she balanced herself with one hand on his shoulder as he slipped her shoes off. He stood then and removed his T-shirt. Then with just his hands as she stood quietly naked in the middle of his living room, he began to touch her; caressing her belly and hips, kneading the soft flesh of her ass, cupping her heaving breasts, stroking her quivering thighs. He reached from behind her, from under her ass to stroke a finger against her cum soaked slit. She bucked and shook and his finger left her. He

went in front of her and stroked the wet finger against her lips and she licked the cum off, breasts rising and falling, her nipples pebble hard and swollen in arousal.

In the next moment, she let out a gasp of startlement as he smoothly picked her up and began to walk with her in his arms to his bedroom. As she put her arm around his shoulder, she realized that she enjoyed being carried like this. It made her feel vulnerable and feminine, and very horny. Cum flowed steadily out of her pussy in anticipation, adding another layer to her already soaked inner thighs.

But Mark did not stop in the bedroom, he moved straight on through the open door into the bathroom with her.

Jasmin had made a disappointed sound when Mark had not stopped in the bedroom but as her eyes took in the filled tub with the scattered white and yellow rose petals floating on the lather, she brightened visibly, excited. She had taken showers with him before, but never a bath. The lights were turned down very low, but there were four huge aromatic candles lit around the oval of the tub, giving off a light hint of sandalwood, eucalyptus, lavender and peach as well as illumination. She smiled at him as he gently lowered her into the bubble bath - he had obviously taken note of what she had in her own bathroom and had gone to some length to make her enjoy this.

Jasmin's hair was still in its bun so she had no need to tie it up as she settled into the water. The water was warm, and the bubbles rose up to her nipples. He had even put in bath salts, she realized as she felt the multiple points of effervescence in the sudsy water. The water was already beginning to relax her, unknotting and soothing muscles she did not realize needed unknotting. Even the somewhat pleasant soreness between her legs that she barely noticed nowadays was fading away. She looked up at Mark as he climbed in after her and she

maneuvered herself to sit between his legs after he had settled himself in and reached for her. The water rose higher up the tub's sides at the increase in volume as she lay back against him with a sigh, feeling his cock press against the small of her back. She turned her head and twisted a little, reaching over her shoulder to hold the back of his neck as she pulled him down to kiss her.

"This is nice, Mr. Archer." she said, smiling at him when their tongues stopped dancing against each other.

"Glad you like it, Miss Marchand." He answered with a predatory smile as he picked up an obviously only recently bought foam sponge.

She sighed as he began to 'wash' every inch of her. Jasmin's writhing against him grew more agitated, desperately wanting to feel him administer to her breasts or the wet heat of her sex with his hands and the sponge, but knowing he was studiously avoiding them. The anticipation was becoming overwhelming when he cupped one boob with one hand and started stroking it with the sponge in the other. He took an ordinate amount of time on that one soft mass of flesh, rubbing firmly at a turgid nipple with the sponge as he held and squeezed her tit, nuzzling her neck. Jasmin felt like she was about to have an orgasm right there and then, and she shook in the water, eyes squeezed tight as she whimpered in his arms.

"Oh ... Mark ... oh ...! That feels so ... good ...!"

When he started with the other breast, Jasmin went weak and her head sagged on his shoulder. She let out a small squeal of delight, unconsciously thrusting out her chest. She could not recall ever being so thankful for having two boobs in her life. He took his time like with the other breast, rubbing at her nipple with the sponge and squeezing the soft flesh of her tit. He made her giggle when he playfully bounced it in his hand and she squirmed against him as he

licked her neck. By the time he was done 'washing' her boob, Jasmin was panting, the heat between her legs an inferno of need. She spread her legs and grabbed a hold of his wrist with one hand, trying to pull it beneath the water to where she needed it.

"Mark ... please ..." she gasped when he resisted, chuckling softly in her ear.

"Enjoying yourself?"

She gasped as he pinched her nipple "What do you think?"

"That's not an answer, Miss Marchand." He licked at her earlobe and she sighed. Both his hands went up to cup her breasts and she put her hands on top of them. They were beginning to get pruny, she noticed.

"Yes, Mr. Archer." Jasmin said, breathily. "I'm enjoying myself."

"Think it's time for bed?" he pumped against her ass, making her vividly feel his rock hard erection.

"Yes, Mr. Archer. I think it's very definitely time for bed." Jasmin felt her cunt begin its familiar contraction in anticipation of him finally entering her. His cock pushing its way into her sheath was a sensation she found herself looking forward to with an avidity that surprised her at first but now she simply took it in stride. He could make her cum in any way he wished but her orgasms simply felt fuller and more complete when she came with his dick in her pussy.

"Okay. Wait here." He licked her ear and then levered himself up out of the water and stepped out of the tub, walking over to the towel rack. As she watched him, he rubbed himself dry with a towel, looking at her with a small predatory smile. Then, he replaced the towel and picked up and unfolded a huge bath sheet from the rack before he walked back to the tub.

"Come here."

Jasmin stood up out of the sudsy water and stepped out of the bath tub to stand in front of him. She stood silently as he toweled her dry, stroking the remarkably soft sheet across her back, her arms and her shoulders, picking off the rose petals that clung to her skin. He knelt and ran the large towel over her belly, up and down her thighs and legs, making her shudder as he rubbed the moist spot between them. He dried her pubic hair and then went to his feet, taking his time to dry each breast and the valley between them up to her upper chest. By the time he was done, Jasmin was quivering, thoroughly aroused, the hairs at the back of her neck standing straight up.

"Turn around and close your eyes." he said suddenly, stepping towards her.

Once more, she felt her feet leave the ground and a moment later he was gently laying her down on the bed.

Jasmin felt him trail kisses and licks on her spine as he caressed and stroked her sides, hips and back, practically lying on top of her as he simultaneously kissed and licked her neck, his rock like penis pressed against the crack of her ass. He reached forward and cupped her chin, turning her face to the side so he could kiss her. She moaned as she opened her mouth for his tongue as it flickered on her lips. She kissed him back, hungrily licking and sucking on his lips as she felt her cunt burst into even more of an inferno, cum flowing out of her as she pumped her ass up against his cock. His lips left hers to trail along her jawline and up to her ear. Jasmin groaned as he took her earlobe into his mouth and his hands reached under her to cup her breasts.

"Oh ... fuck!" Jasmin whispered weakly "How are you doing this to me?" She undulated and writhed under him, thoroughly, mind-blowingly aroused and completely consumed by the need to feel him inside her as her cum flooded cunt contracted repeatedly against a familiar imagined invader. It was time. If there ever was a time she needed a man inside her, it was now.

"Inside me, Mark ... please ... I need you ... oh fuck me!"

For a wonder, Mark obediently lifted himself off her and set himself behind her raised pussy, breathing ragged and harsh. Mark picked up a condom pack from the bed, tore it open, and swiftly rolled it on. Jasmin hissed, raising her head and stiffening as he slowly sank into her from behind, feeling herself stretching to accommodate him. He took his time, allowing them to savor the filling of Jasmin's tight cunt inch by pleasure filled inch before he finally had the whole of his dick settled fully in her pussy. She felt her vagina walls contract around the rock hard member as he lay on top of her and nuzzled her neck, his hands reaching under her to cup her breasts possessively. Jasmin sobbed with relief, feeling everything else melt away to insignificance.

"Fuck me, Mark." she said simply.

Mark complied, and he started to slide in and out of her, fucking her at a low and steady speed. Jasmin moaned and whimpered, feeling a complete sense of bliss steal over her as she pumped her ass and fucked him back at the same pace. It was perfect. Mark never varied his slow pace or the depth of his strokes and Jasmin went through three orgasms in smooth succession as he continued to fuck her from behind, lying on top of her, her breasts in his hands, her nipples continuously stroked and pinched by his talented fingers. Every time she felt him begin to shake, about to lose control, he would halt and wait, and she would feel his cock pulse inside her as he calmed down and took himself back from the brink. Then he would start up again.

"Happy Birthday, Jasmin Marchand." Mark said in her ear as he started pumping into her again after another calming pause.

Her heart was pounding and she was beside herself with arousal and need. She needed to make him come. She needed to feel him empty himself inside her. Jasmin felt her pussy begin to

repeatedly contract around him and she trembled. "Mark." she whispered. "I need to feel you come inside me ... please ... Come inside me."

In response, he withdrew completely out of her, making her cry out in protest and shake at his exit. In a heartbeat, he yanked off the condom and a second later he was back inside her, sliding easily into her warm and wet and tightness. She grunted and arched her back as he once again grabbed hold of her breasts, cupping them hard. She writhed, moaning deliriously, as he settled in position before he started pistoning into her again, deep, slow and steady. He held her breasts firmly, her hard nipples rubbing against his palms as he slid in and out of her. Jasmin made a soft "Uhn!" at each stroke and clutched the sheets as he rode her through an orgasm within a few seconds. Minutes later, both of them covered in a fresh sheen of sweat in the air-conditioned air, Jasmin felt herself approaching the brink again, only for Mark to shudder to a halt to lie still inside her. Jasmin writhed, arching her back.

"Mark ... come inside me ... come inside me! Please! Fuck me! Don't stop!" Jasmin was close to screaming as she bucked against him. "Inside me!"

Mark lost control then and he started going hard and fast, frenzied, plunging as hard and as deep as he could go.

"Yess ... thank you! uhn! ... yeesss! ... right there ... uhn ... fuck me! ... uhn ... harder ... uhn ... oh fuck! ... please ... uhn ... yess ...!"

He did not last long, and neither did she. She felt him spurt inside her and she came too, shrieking at the top of her lungs as he grunted loudly and filled her with his semen. Their ecstasy came in a seemingly never ending crash of waves and by the time it ended, Jasmin felt as exhausted as if she had run a marathon. Mark had collapsed, thoroughly spent, on top of her, his penis out of her pussy and rapidly softening after spilling some more of his cum on her ass.

It was many minutes later before Mark gathered the energy, groaned and rolled off her. Jasmin could barely move but she realized that she had to take care of them both; Mark was too far gone. She turned around and slowly sat up, barely able to lift her eyelids. So it took a lot more energy than she could believe for her to take out her disposable contacts and place them on the bedside table, done with them for good. Somehow, summoning some extra energy from somewhere, she moved and felt around for the covers. She found them, thankfully, where she expected them to be, and she pulled them over them both, curling her body up against him, resting her head on his shoulder and sighing contentedly. Her inner thighs were still wet with his and her cum as she faded off to sleep.

Appendix B

Slides in which a DES Beep Occurs

[Beep 1 occurs 12 seconds after this slide is presented.]

Jasmin stared at him, confused and trembling. Then she smiled devilishly and began to hike up her skirt till it was bunched around her hips. She was wearing a particularly tiny thong and she moved the lace to one side, exposing the parted and wetly gleaming lips of her vagina.

"I need you, Mr. Archer." she whispered as she began to stroke herself, eyes locked on his. "I need you to fuck me." She plunged a finger into herself and shuddered as her other hand went up to cup and squeeze one of her boobs through her top. She fondled her soft flesh as she continued to piston her finger into her cunt. "Please?" She kept her eyes on his through her shuddering and the low moans in her throat. She smiled as he took a step towards her; the hunger in his eyes reflecting her own, and her finger exited her cunt and began to circle around her clit. She leaned her back against the wall and bent her knees so he could see her more clearly in the very dim light.

22

[Beep 2 occurs 3 seconds after this slide is presented.]

Her breaths were making her breasts heave when the cab finally pulled up in front of the familiar apartment building. It was 1:41 - she was more than a quarter of an hour ahead of schedule. She wordlessly paid the driver and ran out of the car, leaving him grateful for the 30% tip as she went to hit the buzzer at the front door of Mark's apartment. No answer. She hit it twice again, cursing, when the door issued out its own buzzing noise and swung open by itself. Jasmin went through and went swiftly to the bank of elevators, taking off her coat. It was less than twenty minutes to two o'clock in the morning so the elevators were all mostly on the ground floor. She ran into one and hit the button for Mark's floor repeatedly until the doors slid shut. All that was running through her mind was Mark's cock, sliding its way inside her wet sheath in any and all possible directions; from the front, from behind, from the side, from under her, from over her, so long as he ended up inside her.

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[Beep 3 occurs 6 seconds after this slide is presented.]

In response Mark's eyes opened, looking wild but calculating, and his hands moved swiftly; one went to hold her waist and the other went to where they were joined as one to press and to stroke his thumb at the pink nub of her clitoris, to bring her closer to the edge along with him. Jasmin went rigid, crying out at this new sensation, and Mark stiffened, both hands now at her waist as he thrust one last time into her sheath. His dick exploded inside her, and just like he wanted, Jasmin threw her head back and screamed as the new sensation of his pulsing member showering cum inside her, in addition to his quick and rough stimulation of her clit, pushed her over the edge. Mark cried out in counterpoint to her wails until he silenced them both by pulling her down on top of him, his mouth seeking hers. She kissed him just as hungrily, making mewling noises against his mouth even as he groaned against hers, their bodies a shuddering mass of confused entangled flesh.

48

[Beep 4 occurs 8 seconds after this slide is presented.]

Mark complied, and he started to slide in and out of her, fucking her at a low and steady speed. Jasmin moaned and whimpered, feeling a complete sense of bliss steal over her as she pumped her ass and fucked him back at the same pace. It was perfect. Mark never varied his slow pace or the depth of his strokes and Jasmin went through three orgasms in smooth succession as he continued to fuck her from behind, lying on top of her, her breasts in his hands, her nipples continuously stroked and pinched by his talented fingers. Every time she felt him begin to shake, about to lose control, he would halt and wait, and she would feel his cock pulse inside her as he calmed down and took himself back from the brink. Then he would start up again.

"Happy Birthday, Jasmin Marchand." Mark said in her ear as he started pumping into her again after another calming pause.

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Appendix C

Erotica Reading Day Samples

Descriptions from sampled moments are labeled with a title indicating the participant, the sampling day, and they order in which they occurred, e.g., Adele 3.2. Adele is the participant, 3 indicates the third sampling day, and 2 indicates the second beep collected. Examples of natural environment samples are on days 2-4 (day 1 excluded for training purposes), examples of fiction reading are on day 5, and examples of erotica reading are on day 6. For both reading days, the second number indicates which slide the sample occurred on (slides 1-6 for fiction reading and slides 1-4 for erotica reading). However, there were some instances in which the beep did not occur on the expected slides. In these cases, there will be a letter to indicate that it occurred on an unexpected slide. So, if Adele received a beep between the third and fourth expected slide while reading erotica, the title for that beep description would be Adele 6.3A. If she received another beep between the third and fourth slides, the title would be 6.3B, and so on. If Adele received a beep before the first scheduled beep, then the title would be Adele 6.0A.

Adele

Adele 6.0A (page 21): At the moment of the beep, Adele is innerly seeing the woman in the story running out of the nightclub. The woman is running across the street towards the dark alley where the man is waiting for her; this is seen as if Adele is the man in the dark alley and the woman is running towards her. The night club is a on the right, there is a car in front of the club, the woman is wearing a nude colored, patterned, spaghetti strap dress [this is not what she was wearing in the story; Adele seemed surprised that she saw her wearing this dress], and the setting is dark. There is a bald, heavy set, black, male bouncer outside that club that Adele innerly hears say “Oh, you’re leaving so early” in a male voice. The woman responds “I’ll be right back”; this

is not innerly heard but known to be her response based on the reading. The inner seeing is in motion and is not very detailed, mostly just dark shapes [there are no facial features or hair and very little color]. The entire scene is present at the moment of the beep, although the woman running towards her is the most salient aspect. [Reading was not in experience at the moment of the beep, but the inner seeing was representative of what was occurring in the story.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing

Adele 6.1A (page 23): At the moment of the beep, Adele is innerly seeing the woman in the story sitting on the hood of a dark car in a dark alley being eaten out by the man in the story. This is seen from an angle, as if Adele is walking by the alley and looking to the right to see into it. The hood of the car is on the right, and the woman is sitting above the tire facing Adele. She is wearing a black skirt that is hiked up around her waist and her right leg is over the man's left shoulder; the man's head is in between the woman's legs. The setting is dark and the inner seeing is not detailed, in color, or in motion. [Reading was not in experience at the moment of the beep, but the inner seeing was representative of what was occurring in the story.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing

6.3: [Missing]

6.4: [Missing]

Felicity

Felicity 6.0A (page 4): [Felicity had just finished reading the words "pulled aside."] At the moment of the beep, Felicity is anticipating the characters in the story having sex. This anticipating is a cognitive idea that is located in a general area just behind her head [<<<RH is

slightly dubious: he wonders whether Felicity fully understood the question>>>], and is not present in words or pictures, and is about 80% of her experience. Felicity is also feeling her fingernail being dragged across her left ear; this sensation is present in her ear [not her fingernail] and is about 10% of her experience. Felicity is also reading with comprehension, which is about 10% of her experience. [The meaning of the reading is present, but not the act of reading or the words she is reading.]

5FP: Unsymbolized thinking; Sensory awareness

Idiographic: Analyzing/thinking about reading content

Felicity 6.0B (page 6): [Felicity had just read the words “dancing to celebrate”; there was no reading in experience but it was ongoing.] At the moment of the beep, Felicity is innerly seeing the club from the story as if she has just walked in the door of the club (that is, she experiences herself as being there, not merely as having a point of view or perspective near the door). She sees colored lights [which seemed central or striking to her experience], strobe lights, a lot of people dancing and mingling, and balloons in a dark room. The inner seeing is in motion but there is no music or sound. [Felicity seemed surprised both that there was no music [<<<RH does not recall this detail, but may have missed it>>>] and that there are balloons in the inner seeing (she didn’t think clubs have balloons), but she is confident that both things are true of her inner experience.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing

Felicity 6.0C (page 10): [Felicity had just read the words “regular sex.”] At the moment of the beep, Felicity is innerly seeing a series of about 6 different scenes of the characters in the story having sex in different positions, wearing different clothes, and with different backgrounds. The

individual scenes are in motion and all scenes are in a horizontal line moving from left to right with no breaks between them. The scenes are organized so that the first scene is of the couple having sex once during a week, the next 2 scenes are of the couple having sex twice during a week, and the next 3 scenes are of the couple having sex 3 times a week. [This inner seeing was representative of the words “regular sex” and was informed by a previous paragraph that stated that the couple had sex once, twice, or three times a week. The words “regular sex” and the previous paragraph were not directly in experience.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing; Multiple inner seeings

Felicity 6.0D (page 16): [Felicity had just read the words “French noble.”] At the moment of the beep, Felicity is innerly seeing a framed black and white photograph of a French nobleman. The nobleman is wearing a feathered cap, leaning on a cane with his right hand, and standing with his left hand on his hip. The frame is gold and ornate. That is, the seeing is in color (the frame is gold) but the photo is in black and white. Simultaneously, Felicity is innerly seeing the man from the story kissing the woman. Felicity is unsure if the man is kissing the woman on the neck or on the hand. They are in an alley at night [This beep takes place on page 16. There has been no alley discussion so far. There is an alley-at-night scene that begins at page 20. It seems possible that she has confabulated some of those details into her description of this beep.] next to a black street and a trashcan, with buildings in the background. Felicity sees the couple as if she is next to them. Both inner seeings are generally in front of her; the framed photograph of the French noble is about 60% of her experience, while the couple is about 40% of her experience. [The inner seeing of the couple was present first and continued, ongoing when the inner seeing

of the French noble began and the beep occurred. That is, at the moment of the beep the seeings were simultaneous, even though one had started prior to the other.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing; Multiple inner seeings

Felicity 6.0E (page 19): [Felicity had just read the words “I’ll be right back.”] At the moment of the beep, Felicity is innerly seeing Jasmine [the female main character] in the club with her friends. Felicity experiences herself as being in the club, sitting at the table as part of Jasmine’s group of friends. She sees colored and strobe lights and hears music in the club. Felicity also hears the friends asking questions and Jasmine saying “I’ll be right back.” This detailed inner seeing is in motion, includes sounds, and is about 70% of her experience. Felicity is also anticipating Jasmine going to meet up with the main male character of the story. The anticipating is explicitly present to her at the moment of the beep; that is, it is some sort of directly apprehended cognitive experience that is not present in words or pictures and is about 30% of her experience. [It was similar to the anticipation of 6.1]

5FP: Inner seeing; Unsymbolized thinking

Idiographic: Illustrative inner seeing; Analyzing/thinking about reading content

Georgia

Georgia 6.1: [Georgia was reading the words “I need you, Mr. Archer.” She remembers being shocked at the graphicness of the reading, but at this moment neither being shocked nor reading was in her experience.] At the moment of the beep, Georgia is innerly seeing the man and woman from the story embracing each other in a dark alleyway. The man is on the left and is grabbing the woman’s neck with his left hand; the woman has her left leg around the man’s waist. The man is wearing a suit and the woman is in a red lace bra and panties. The alley is as if

between two houses, there are rocks on the ground, and the man and woman are standing behind two air conditioning units that are in the alley. This inner seeing is detailed, realistic, in motion, and is understood to be representative of the story.

5FP: Inner seeing

Idiographic: Illustrative inner seeing

Georgia 6.2: [Georgia was reading the words “her breasts.”] At the moment of the beep, Georgia is innerly seeing the man and woman from the story in the back seat of a taxi making out and grabbing at each other’s heads and faces. She sees this scene as if she is looking back at them from between the two front seats, and can see scattered lights behind them through the back window. [In the reading passage, only the woman (not the man) was in the taxi; The man-woman scene, and visually speaking the people in it, had been in a TV show that Georgia had recently watched, but despite its disparities from the reading and relationship to the TV show, the seeing is understood to be a seeing of the story.] The inner seeing is detailed, realistic, and in motion.

5FP: Inner seeing

Idiographic: Semi-illustrative/tangentially-related inner seeing; Incorporating personally-relevant details into the seeing

Georgia 6.3: [Georgia was reading the words “stroke his thumb,” though again reading was not in her experience.] At the moment of the beep, Georgia is innerly seeing the man from the story [the same man that she saw in the first beep, but this wasn’t in her experience] thrusting against the woman in a hotel room. The man is shirtless, and while she cannot see the woman she knows that she is lying on her back. She is seeing the man’s right side and the hotel room behind him. This inner seeing is detailed, realistic, in motion, and is understood to be representative of

the story. [The visual details of the seen hotel room were a recreation of the room where Georgia and her boyfriend had recently stayed, but this fact was not present at the moment of the beep.] Georgia is also somehow mentally sensing or feeling wanting to have sex. This mental feeling somehow involves her body in a diffuse way, and is a low level of arousal, maybe 15 on a scale of 0-100. [At the end of the interview Georgia mentioned that she thought she had not completely adequately conveyed the arousal, but that this was not out of shyness or embarrassment but because it was difficult to describe.]

5FP: Inner seeing; Feelings?

Idiographic: Illustrative inner seeing; Feelings related to the text

Georgia 6.4: [Georgia was reading the words “pumped her ass.”] At the moment of the beep, Georgia is innerly seeing the brunette woman from the story [that she saw in the first beep, but this wasn’t in her experience] from her bare shoulders up. Georgia knows the woman is having sex with the man from the story, but she cannot see him. The woman is wearing bright red lipstick and has her head propped against the headboard on her pillow. She has curled hair and is moaning. The moaning is continuous and of moderate volume. [6.4 was different from the inner seeings of 6.1-6.3 in that 6.4 included sound.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing

Harrison

Harrison 6.1: [Harrison was reading “I need” in a passage about a man and a woman in a dark alley.] At the moment of the beep, Harrison is innerly seeing a woman with her skirt pulled up, pressing her breasts against a man on the edge of a triangle of light in an otherwise dark scene. [The light source is not seen, but it is high above the man and woman and cast a triangle of light

in what Harrison knows to be a dark alley.] He is seeing them from the side, and most central in his experience is the woman pressing her breasts against the man, then her bare leg up to her butt, and then the woman's skirt being up. This inner seeing is in color and there is no motion seen, as if this were a single frame of a movie. Harrison also has a sense of anticipation or shock at the moment of the beep that he experiences as a slightly bothersome tension in his chest. There is no experience of reading at the moment of the beep.

5FP: Inner seeing; Feelings

Idiographic: Illustrative inner seeing; Feelings related to the text

Harrison 6.2: [Harrison was reading "familiar" in a passage about a woman in a taxi cab, breathing heavily.] At the moment of the beep, Harrison is innerly seeing a woman in a purple blouse with buttons, sighing heavily. She breathes in, then out, then in again and when she breathes in her blouse stretches tight between the buttons. The woman has brown hair down to her shoulders, red lipstick, and has her eyes closed, but the stretching of the blouse at the buttons is most central to Harrison's experience. He is seeing the woman from straight on. [He could not give an estimate of distance beyond that it wasn't too far away.] At the same time that he innerly sees the woman breathe in, out, and in again, he hears the woman's frustrated sighing; the sighs are louder than they would have been in a real situation and are heard on his right side. There is no experience of reading at the moment of the beep.

5FP: Inner seeing

Idiographic: Illustrative inner seeing

Harrison 6.3: [Harrison was reading "her waist" in a passage about a man and a woman having sex on the floor, with the woman being on top.] At the moment of the beep, Harrison is innerly seeing a man and woman having sex on the floor; the man is flat on the floor with his head

slightly lifted and his hands on the woman's waist. The woman is sitting upright on top of the man and moving her hips side to side. Both the man and the woman are completely naked and skin colored; Harrison is mostly aware of the woman's breasts. [One detail of these innerly seen breasts was that they did not have nipples or areolas. This was not experienced as odd at the moment of the beep but seemed odd retrospectively.] The floor is seen as an indistinct gray color. The woman is looking intensely at the man [Harrison knew she was looking at the man because of the context of the story and the direction her head was pointing]. The facial features of the woman are not central to experience at the moment of the beep. This inner seeing is from the viewpoint of just to the left of the man's head, looking at the woman from her right side, and is about 60% of his experience at the moment of the beep. At the same moment, Harrison also hears a woman's soft moan at the moment of the beep. It might be the woman in the inner seeing moaning, but the moan and the inner seeing are not coordinated in his experience. The moan is about 35% of Harrison's experience. Additionally, Harrison does not experience reading at the moment of the beep, but he might be innerly seeing the word "intensely" in all lowercase, large, black, Times New Roman font. The word is different from how it appears on the screen; the text is larger but he cannot give it an exact size. If this is in experience, it is about 5%.

5FP: Inner seeing

Idiographic: Illustrative inner seeing; Focus on specific word or words

Harrison 6.4: [Harrison was reading "pumped" in a passage about a man and a woman having sex on a bed, with the woman being face down on the bed with the man behind her.] At the moment of the beep, Harrison is innerly seeing a woman face down on the bed, biting her lip. The woman's eyes are closed and she is clutching the sheets while having sex with a man behind her, but the woman biting her lips is the most central aspect of his experience. There is no

movement in the scene. This innerly seen woman is not completed or fully developed at the moment of the beep ; Harrison describes it as being black outlines on a white background, with the woman's lips being a little more detailed than the rest of the scene. The inner seeing is not experienced as a line drawing or lacking something at the moment of the beep. [During the interview we speculated that it was as if the beep happened to catch the inner seeing before it was completed.] It is seen from an almost straight on view point, but slightly off center to Harrison's left or the couple's right. Along with the inner seeing, Harrison hears the woman moan two times, a couple of seconds apart. The first moan is about half as loud as the second moan, and the second moan is slightly louder than it would have been in real life. The still inner seeing and the two moans are part of the same experience; the moans are made by the woman in the inner seeing. There is no reading in experience at the moment of the beep.

5FP: Inner seeing

Idiographic: Illustrative inner seeing

Jenni

Jenni 6.1: [Jenni was reading about Jasmine wearing thong.] At the moment of the beep, Jenni is innerly seeing Jasmine from behind wearing a thong. Jasmine has light brown skin and is standing in a dimly lit room. Jenni is seeing all of Jasmine, but she is focused on her thong and the area of her body near it. This seeing is about 60% of Jenni's experience. Jenni is also experiencing reading, the experience of seeing the words and the in-experience creating of a picture based on the words. This is an active process in her experience involving the words themselves being directly present in her experience, rather than a passive soaking up of their meaning or something happening on autopilot, and a directly experienced creation process from the words to the seeing. [The color of Jasmine's skin was the same as the color of Jenni's skin,

and the thong she was seeing was the same as one of her thongs, but neither of these things were in Jenni's experience at the time of the beep.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing; Incorporating personally-relevant details into the seeing; Experience of the reading process

Jenni 6.2: At the moment of the beep, Jenni is innerly seeing the Latina woman in the story she was reading standing naked, facing her, moving her head so that her wild, undone hair is swinging side to side. Jenni sees the entire woman (or at least from the knees up), but she is focused almost entirely on her moving, undone hair, though she can tell the woman has some makeup on. [Jenni was reading, but that was occurring on autopilot outside of experience. That is, this experience of reading is distinctly different from that in 6.1: here the words themselves, which are about wild hair, are not themselves present in experience but are, through some non-experiential process, being immediately and effortlessly translated into the seeing. Jenni said that the woman she was seeing was one she had seen in a wild porn movie, but that that was not her experience at the moment of the beep.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing

Jenni 6.3: At the moment of the beep, Jenni is reading in experience. She is experiencing the process of reading rather than the meaning of what she is reading [that is, the experiential aspect was of somehow grasping the words themselves and extracting their meaning, but the story itself was not in experience]. This reading is not highly salient, but is definitely ongoing in her experience. She cannot describe the process further. [Jenni understood these three samples to be substantially different from each other with respect to the experience of the reading process: in

6.2, the process is not experienced (a seeing related to the reading automatically appears); in 6.1, the word translation process is partially experienced at the same time as the resulting seeing is experienced; in 6.3 what experience there is entirely on the word translation, with no resulting semantic (story significant) visual experience.]

5FP: None

Idiographic: Experience of the reading process

Jenni 6.4: At the moment of the beep, Jenni is rubbing her right eye, feeling the rubbing and tears in her right eye and a little bit on her cheek. This is about 75% of her experience. The remainder of her experience is comprehending the reading, which involves going along with the storyline.

5FP: Sensory awareness

Idiographic: Just reading with comprehension

Nina

Nina 6.1: Nina is innerly hearing the words “I need you” whispered in her own voice in her right ear. The words she hears sound the same as when Nina herself had spoken them the previous Friday night, and this similarity was known to Nina at the moment of the beep. [Reading may have been ongoing at this moment, but was not in her experience.]

5FP: None

Idiographic: Sensation related to the story

Nina 6.2: [Nina was remembering her own previous experience in a taxi cab; she was reading about a sexual situation in a taxicab, and from there had imagined her own experience.] At the moment of the beep, she is innerly seeing the taxi driver in the dark cab turned over his right shoulder and looking at her. It is dark, with few details present. She also innerly hears the taxi driver tell her, in his dark, deep voice, to take off her shirt. Exact words were not in experience,

but she was confident she innerly heard the voice she remembered. [Nina had stopped reading and was completely absorbed in this inner seeing/inner hearing at the moment of the beep. Nina had felt disgusted prior to the beep, but that had faded from her experience by the moment of the beep.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing

Nina 6.3: Nina is feeling warmth in both cheeks in an area of a couple inches around with no clear borders. [She may have been feeling warm throughout her body a bit earlier, but at the moment of the beep she was only attending to the warmth in her cheeks. Reading was ongoing, but no details are present in experience at the moment. She later explained that she understood this warmth to be related to being aroused, and that she was more aroused somewhat before this beep, but the arousal had faded, leaving only the warmth in her cheeks.]

5FP: Sensory awareness

Idiographic: Sensation related to the story

Nina 6.4: Nina is annoyed, felt as pressure in her right temple. [Nina described being annoyed at the characters, and the reading to be ongoing, but this was not directly in experience at the moment.]

5FP: Feelings

Idiographic: Feelings related to the text

Olivia

Olivia 6.1: [Olivia was visualizing what was happening in the story; this is illustrative of the story, although she recognized that certain details that she saw (such as the black dress and the white top) had not been described.] At the moment of the beep, she is innerly seeing the woman

in the story standing in an alley with her left leg up on a box in the process of hiking up her long black skirt and wearing a loose white top with her hair in a bun. There are brick walls, a light source above the woman, trashcans, and boxes in the alley. The inner seeing is detailed and in color, but is not in motion, as if it is a single frame out of a movie. She is looking straight at the woman from the other side of the alley (that is, from about 8 feet away). [She did not see the man who was described in the story—she viewed the woman from the same place that the man in the story might be, but did not experience herself to be in the scene nor to be taking the man’s perspective, but just to be viewing the woman from where the man might be. There was no experience of arousal.]

5FP: Inner seeing

Idiographic: Illustrative inner seeing

Olivia 6.2: At the moment of the beep, Olivia is taking a deep breath along with the woman in the story. She is purposefully trying to create for herself the anticipation/excitement of the woman in the story. She is feeling a small amount of anticipation/excitement, which is experienced as the deep breath [this was a general excitement and not specifically sexual]. There is also some experience of being present in the taxicab—the door, the seat--related to this experience of trying to recreate the anticipation/excitement. This breathing/feeling occupies about 60% of her experience. Also at the moment of the beep, Olivia is innerly seeing a yellow taxicab pulling up in front of a townhouse at night. She is seeing the entire scene and is not focused on anything in particular. The inner seeing is detailed, in color, and in motion; the taxi cab drives up from the right. This inner seeing occupies about 40% of her experience. [The inner seeing is illustrative of the story except that the story has the cab pulling up in front of an apartment and Olivia sees the cab in front of a townhouse. Olivia’s breath is also parallel to the

woman in the story, who is taking a deep breath at this time.] [There was no experience of arousal.]

5FP: Inner seeing; Feelings

Idiographic: Illustrative inner seeing; Details incongruent with the story; As if present in story; Feelings related to the text; Sensation related to the story

Olivia 6.3: At the moment of the beep, Olivia is thinking three different things: identifying where she is in the story (that is, she was noticing that the computer screen showed that she was reading page 40-something out of 60-something, meaning she was close to the end [we did not ask if she knew exactly what page she was on]); wondering when the remaining beeps are going to happen and if they are all going to happen one right after the other (that is, because she was near the end, she wondered whether the experimenters were going to present beeps bunched together); and wondering what kinds of questions she is going to be asked (her thought didn't specify what kinds of questions might be asked—that is, the wondering did not speculate about the questions). These thoughts are not represented by words or pictures and the story is not present in experience.

5FP: Unsymbolized thinking

Idiographic: Experience related to elements of the study

Olivia 6.4: [Olivia was laughing about the uselessness of the condom in the current scene—they had had lots of unprotected sex— and about how overly romantic and unrealistic the story is.] At the moment of the beep, Olivia is innerly saying, “What was the point of that?” (“that” was emphasized and referred to the condom). [She indicated that the inner saying sounded how she would say it if she said it out loud. Part of this experience was also a chuckling partly innerly and partly out loud—the inner speaking was part of or shaped by the chuckle. She was unable to give

further details on how the chuckling was present.] This (the inner speaking and chuckling) occupies about 70% of her experience. Also at the moment of the beep, Olivia is thinking about how overly romantic and unrealistic the story is. This involves multiple flashes of inner seeings including rose petals, candles, and bath water from previous scenes in the story, as if she is flipping through certain aspects of previous scenes including the unrealism of a woman having multiple orgasms with so little stimulation. [The story is present in awareness, and these experiences are directly related to the story.] [There was no experience of arousal.]

5FP: Inner speaking; Inner seeing; Unsymbolized thinking

Idiographic: Inner speaking in response to text; Semi-illustrative/tangentially-related inner seeing; Multiple inner seeings; Analyzing/thinking about reading content

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Curriculum Vitae

Leisze Lapping-Carr

University of Nevada, Las Vegas

Phone: (206) 802-8245

Department of Psychology

Email: llapping@unlv.nevada.edu

Education

Bachelor of Arts with Honors: Psychology; Religious Studies

2005-2009

Brown University, Providence, RI

Advisor: John Wincze, PhD

Overall GPA: 3.79

Psychology GPA 3.89

Anticipated: Doctor of Philosophy: Clinical Psychology

2013-present

University of Nevada, Las Vegas

Advisor: Chris Heavey, PhD

Current GPA: 4.0

Awards and Honors

Summer Session Scholarship, UNLV Graduate College

2015

Phi Kappa Phi Honor Society, Graduate Student Member

2015

Honors in Psychology, Advisor: John Wincze, Ph.D., Brown University

2009

Thesis: Investigation of the Relationship between Spirituality and Sex Behaviors in College Students

Research Positions and Experience

Graduate Assistant

8/2013-present

Advisor: Chris Heavey, Ph.D.

Descriptive Experience Sampling, UNLV

This research entails exploring inner experience using a structured phenomenological research method. This method has been used to investigate the inner experience of many different populations. My research interests focus on sexuality, and we are currently having participants engage in the DES procedure while reading erotica.

Graduate Assistant

1/2014-08/2015

PI: Stephen Benning, Ph.D.

Psychophysiology of Emotion and Personality Lab, UNLV

Collected psychophysiological data (including EEG and peripheral sensors) for a study investigating candidates for endophenotypes of depression. This study examined anhedonia in a theoretically coherent way by administering three tasks designed to elicit wanting, liking, and reward learning to patients with atypical and melancholic depression. Also have been involved in the planning stages of a study to assess sexual response to heterosexual, homosexual, and primate sexual images across men and women and compared to neutral images. We have started collection psychophysiological data and I plan to conduct data analysis as part of my participation in this project.

Research Assistant, Grant Writing Support

1/2013-7/2013

PI: Lydia Chwastiak, MD, MPH

Motivational Interviewing to Improve Diabetes Outcomes in Schizophrenia

This pilot feasibility randomized controlled trial aims to develop an innovative model of diabetes treatment: a multidisciplinary team based at a community mental health center. This team approach addresses key patient-, provider- and systems-level factors which contribute to poor quality of care for a clinically complex population.

Research Assistant, Primary Recruiter and Follow-up Interviewing

10/2011-7/2013

PI: Douglas Zatzick, MD

Disseminating Organizational SBI Services (DO-SBIS) at Trauma Centers

This is a group randomized clinical trial that aims to disseminate evidence-based alcohol screening and brief intervention procedures to level 1 trauma centers nationwide in the United States. The intervention contains an organizational development component to assist trauma centers in building capacity for mental health service delivery.

Research Assistant, Primary Recruiter and Follow-up Interviewing 1/2010-12/2012

PI: Wayne Katon, MD

Reducing Disparities and Improving Care for Depression in OB-GYN Clinics: Depression Attention for Women Now (The DAWN Study)

This is a randomized controlled trial testing a depression care management program for women attending OB-GYN clinics in the University of Washington health care system. The primary aims of the study are to evaluate, compared to usual care, a depression intervention consisting of enhanced education, engagement, and depression care management (with a choice of antidepressant medication monitoring and/or provision of brief psychotherapy).

Research Assistant; Neuropsychological Assessment Administrator 11/2008-5/2009

PI: Willoughby Britton, PhD

The Effects of School-based Mindfulness Training

This is a randomized controlled trial assessing the effects of meditation practices, on attention, self-awareness, emotional well-being, compassion and school likeability in 6th graders at Moses Brown School in Providence, RI.

Research Assistant; Neuropsychological Assessment Administrator 1/2008-11/2008

PI: Willoughby Britton, PhD

Mindfulness Meditation and Depression: Possible Neurophysiological Mechanisms

In order to promote learning from both didactic (third person) and experiential (first person) perspectives, "meditation labs" have been incorporated into several courses by Professor Hal Roth since 2000 at Brown University, so that students may experience the contemplative practices that they are learning about in class. This study aims to investigate the effects of these meditation labs on attention, emotion regulation and sleep in comparison to other forms of attention training (music, dance, language acquisition).

Publications

Heavey, C. L., Lefforge, N. L., **Lapping-Carr, L.**, & Hurlburt, R. T. (in press). Mixed emotions: Toward a phenomenology of blended and multiple feelings. *Emotion Review*.

O'Connor, S. S., Comotois, K. A., Wang, J., Russo, J., Peterson, R., **Lapping-Carr, L.**, & Zatzick, D. (2015). The development and implementation of a brief intervention for medically admitted suicide attempt survivors. *General Hospital Psychiatry*. doi:10.1016/j.genhosppsy.2015.05.001

O'Connor, S. S., Dinsio, K., Wang, J., Russo, J., Rivara, F. P., Love, J., McFadden, C., **Lapping-Carr, L.**, Peterson, R., & Zatzick, D. F. (2014). Correlates of suicidal ideation in physically injured trauma survivors. *Suicide and Life-Threatening Behavior*. doi: 10.1111/sltb.12085

Professional Presentations

Lapping-Carr, L., Barchard, K. A., Bartlett, A. B., Quiroz, J., & Martinex, N. (2016, February). *Teaching undergraduates to use SPSS: Assignments and rubrics*. Poster presented at the 19th Annual American Association of Behavioral and Social Sciences Conference, Las Vegas, NV.

Lapping-Carr, L., Oliver, T. L., Duckro, A., & Benning, S. D. (2015, September). *Central and reflexive measures of reactivity to human and primate erotica*. Poster presented at the 55th Annual Meeting of the Society for Psychophysiological Research, Seattle, WA.

Heavey, C. L., Lefforge, N. L., **Lapping-Carr, L.**, & Gunter, J. D. (2015, May). *Dysphoria is subtly present in the momentary experience of depressed individuals*. Poster presented at the Association for Psychological Science 27th Annual Convention, New York, NY.

Lapping-Carr, L., Brouwers, V., Hurlburt, R. T., & Heavey, C. L. (2015, April). Erotica and inner experience. In C. L. Heavey (Chair), *The inner experience of inner speaking, reading fiction, and reading erotica: What's really going on?* Symposium conducted at the Western Psychological Association 95th Annual Convention, Las Vegas, NV.

Moynihan, S. A., Turner, D., Brouwers, V., Kelsey, J., **Lapping-Carr, L.**, Heavey, C. L., & Hurlburt, R. T. (2015, April). Validating the Nevada Inner Experience Questionnaire through an inner speaking perspective. In C. L. Heavey (Chair), *The inner experience of inner speaking, reading fiction, and reading erotica: What's really going on?* Symposium conducted at the Western Psychological Association 95th Annual Convention, Las Vegas, NV.

Brouwers, V., Kelsey, J., Turner, D., **Lapping-Carr, L.**, Moynihan, S. A., Heavey, C. L., & Hurlburt, R. T. (2015, April). Inner experience while reading classical fiction. In C. L. Heavey (Chair), *The inner experience of inner speaking, reading fiction, and reading erotica: What's really going on?* Symposium conducted at the Western Psychological Association 95th Annual Convention, Las Vegas, NV.

Kelsey, J., Brouwers, V., Turner, D., **Lapping-Carr, L.**, Moynihan, S. A., Hurlburt, R. T., & Heavey, C. L. (2015, April). Inner experience and self ratings of self-talk. In C. L. Heavey

(Chair), *The inner experience of inner speaking, reading fiction, and reading erotica: What's really going on?* Symposium conducted at the Western Psychological Association 95th Annual Convention, Las Vegas, NV.

Lefforge, N., **Lapping-Carr, L.** (2014, April). *Beep here now: Descriptive experience sampling provides a structured path towards mindfulness.* Paper presented at the Toward a Science of Consciousness conference, Tucson, AZ.

O'Connor, S., Zatzick, D., Love, J., McFadden, C., **Ziembra, L.**, Peterson, R., Ali, N. (2013, April). *Pilot study of a brief intervention delivered to patients admitted to an acute care medical/surgical hospital setting following a suicide attempt.* Paper presented at the American Association of Suicidology 46th Annual Conference, Austin, TX.

Love, J., **Ziembra, L.**, Wang, J., Russo, J., Zatzick, D. (2012, November). *Using nationwide U.S. surveys to evaluate policy guided implementation strategies and PTSD in acute care medical settings.* Poster presented at the International Society for Traumatic Stress Studies 28th Annual Meeting, Los Angeles, CA.

Silverstein, R. G., **Ziembra, L.**, Devlin, K., Anderson, C., Rothamel, K., Coleman, C., Lepp, N., Britton, W. (2009, March). *Get out of your mind and into your body: The role of mindfulness in the treatment of female sexual dysfunction.* Poster presented at Brown University's Alpert Medical School Department of Psychiatry and Human Behavior Research Day, Providence, RI.

Published Teaching Resources

Barchard, K. A., & **Lapping-Carr, L.** (2016, January). Power for the Single-Sample t-test: Assignment and Grading Rubric. *TeachPsychScience* [a peer-reviewed website of resources for teaching research and statistics in psychology, supported by a grant from the Association for Psychological Science]. Retrieved from TeachPsychScience.org

Teaching Experience

Graduate/Teaching Assistant

8/2014-present

Introduction to Statistical Methods, Psychometrics

Responsibilities: Guest lecture, manage online grading and course organization, grading weekly homework assignment, creating grading rubrics for homework assignments, and editing assignments for future classes.

Professor: Dr. Kim Barchard

University of Nevada, Las Vegas

Graduate/Teaching Assistant

8/2013-5/2014

Foundations of Social Psychology, Motivation and Emotion, and Personality

Responsibilities: Proctoring and grading exams.

Professor: Dr. Jane Powell

University of Nevada, Las Vegas

Classroom Coordinator

1/2009-5/2009

Peer HIV/AIDS and Sex Education (PHASE)

Brown University; The Metropolitan Regional Career and Technical Center High School

Teaching Assistant

1/2009-5/2009

Behavior Modification

Professor: Dr. John Wincze

Brown University

Clinical Experience**Student Clinician**

8/2015-12/2015

Conduct intake assessments and provide individual psychotherapy in the university counseling center under the supervision of licensed psychologists.

Supervisor: Ann Allen, Ed.D.

Counseling and Psychological Services, Student Wellness Center, UNLV, Las Vegas, NV

Student Clinician

8/2014-8/2015

Provide individual and couple psychotherapy and psychodiagnostic assessment in the university based training mental health clinic under the supervision of licensed clinical psychologists.

Supervisors: Noelle Lefforge, Ph.D. (individual psychotherapy); Chris Heavey, Ph.D. (couple psychotherapy); Stephen Benning, Ph.D. (psychodiagnostic assessment)

The PRACTICE, UNLV, Las Vegas, NV

Summer Treatment Specialist

5/2008-8/2008

Evidence-based cognitive-behavioral therapies in special education school

Supervisor: Amy Plouffe, M.E.

The Groden Center, Inc., Providence, RI

Didactic Trainings

Introduction to Couples Therapy. Treatment of Infidelity, and Enhancing a Couple's Sexual Connection: A Gottman Research Based Approach

Training Length: Three 2-hour sessions including video review and case discussion in Fall 2015.

Instruction: Scott Wolfe, Ph.D, Certified Gottman Therapist and Trainer

10-Day Comprehensive Training in Dialectical Behavior Therapy, Part I: Theory, Structure, Targets and Treatment Strategies; Part II: DBT Skills, Skill Training, and Coaching

Training Length: Each Part consists of 3 days of learning about DBT, role play to practice skills, and case consultation in February and April 2015.

Instruction: Alan Fruzzetti, Ph.D.

Hot Topics in Ethics and Risk Management in Psychological Practice

Training Length: One day intensive training and discussion on current ethical issues in the practice of psychology in Fall 2014.

Instruction: Eric Harris, J.D., Ed.D

Motivational Interviewing and Engagement

Training Length: Intensive training in 2010 as it applies to recruitment of patients in a clinic setting.

Instruction: Nancy Grote, PhD, MSW

Problem Solving Therapy (PST)

Training Length: Intensive training in 2010 as it applies to recruitment of patients in a clinic setting. Training was followed by observation of PST delivery in clinic by the

depression care manager with the study, providing ability to accurately describe kind of treatment offered as part of study.

Instruction: Evette Ludman, PhD; Anna LaRocco-Cockburn, MSW

Mindfulness Based Cognitive Therapy (MBCT)

Training Length: Summer internship in 2008 on MBCT as used for family therapy at Brown University; Supervisor/Mentor: Willoughby Britton, Ph.D.

Service

2014-present: Campus Representative, Nevada Psychological Association. Be a liaison between graduate students at UNLV and the Nevada Psychological Association.

2014-present: Member, American Psychological Association.

2014-present: Member, American Association of Sexuality Educators Counselors and Therapists.

2014-present: Member, Western Psychological Association.

2014-present: Outreach Undergraduate Mentoring Program, Mentor underrepresented students in psychology at the University of Nevada, Las Vegas as they prepare for and apply to graduate school in psychology or psychology-related fields.

2015-present: Member, Society for Psychophysiological Research.

2009: Planning Committee, Sex.Religion@Brown: Panel on the impact of religion on Brown students' sexuality

2008-2009: Member, Contemplative Studies Initiative, Brown University – build contemplative community through practice, research and workshops.

2006-2007: Meiklejohn Peer Advisor, Student-run organization for the mentoring of incoming students at Brown University

Research and Professional Certification

CITI: Human Subjects Protection	2013
Nonviolent Crisis Intervention	2011
Health Insurance Portability and Accountability Act (HIPAA)	2010
Professional Assault Crisis Training; including Restraint Certification	2008