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The Experience of Participating in DES

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THE EXPERIENCE OF PARTICIPATING IN DES

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Abstract

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The Descriptive Experience Sampling method (DES, Hurlburt, 1990, 1993) is designed to help researchers collect and describe participants' inner experience in a way that minimizes the impact of the participant's presuppositions and the researcher's worldview on the description of participants' inner experience. This study was an exploratory examination of the potential therapeutic effects of DES. It used three sources of data: pre and post-DES SCL-90-R questionnaires, observation of the process that unfolded during DES interviews, and a post-DES exit interview. Participants ($n = 14$) were drawn from the Psychology 101 Subject Pool. After five days of DES, there was a statistically significant improvement in reported psychological symptoms with a moderate effect size. Participant engagement was associated with symptom improvement. These findings suggest the desirability of further research into the potential ameliorative effects of DES.

Table of Contents

| | |
|---|-----|
| Abstract | iii |
| List of Tables | v |
| Chapter 1 Introduction | 1 |
| Chapter 2 Literature Review | 6 |
| Chapter 3 Method | 56 |
| Chapter 4 Results | 68 |
| Chapter 5 Discussion | 85 |
| Appendix I - Process Overview Raw Data | 95 |
| Appendix II - Exit Interview Raw Data | 134 |
| References | 166 |
| Curriculum Vitae | 184 |

List of Tables

| | |
|---|----|
| Table 1 SCL-90-R Subscale Scores..... | 70 |
| Table 2 SCL-90-R GSI Raw Scores..... | 72 |
| Table 3 Frequent Process Overview Codes..... | 74 |
| Table 4 Process Overview Code Frequency by Symptom Change Category..... | 76 |
| Table 5 Exit Interview Code Frequency..... | 78 |
| Table 6 Exit Interview Code Frequency by Symptom Change Category..... | 79 |
| Table 7 The Five Frequent Phenomena of Inner Experience..... | 80 |
| Table 8 Gender and Symptom Category..... | 82 |
| Table 9 Gender and Process Overview Codes..... | 82 |
| Table 10 Gender and Exit Interview Codes..... | 83 |

Chapter 1

Introduction

Descriptive Experience Sampling (DES, Hurlburt, 1990, 1993) is an idiographic method used to develop high-fidelity descriptions of inner experience. Inner experience includes the thoughts, feelings, sensations and other things that populate our ongoing awareness. This definition includes the conscious experience of internal and external events. For example, a muscle twitch, stomach growl, seeing a tree, hearing a siren, innerly seeing in imagination, innerly speaking, and so on can all be part of inner experience as long as the individual is directly aware of, thematically involved with, or consciously apprehending the experience at that particular moment. This definition of inner experience excludes unconscious processes, meanings, and essences. Inner experience is considered pristine when it occurs naturally in an everyday environment and is not affected by an attempt to apprehend it (Hurlburt, 2011).

Procedurally, DES unfolds in three sequential phases: participant orientation, sample collection, and expositional interview. During orientation, the researcher(s) meet with the participant to give instructions and discuss the process. The participant receives a small notebook and a device that produces a semi-random beep in an earpiece. During sample collection, the participants are “beeped,” cueing them to take stock of and write notes about the contents of their inner experience just before the beep disturbed it. This time point—the last undisturbed moment before the beep—is referred to as the “moment of the beep.” The participant is asked to go about the day normally while wearing the beeper. This enhances the ecological validity of the procedure; however, the participant is given the option of keeping any sample private and not discussing it with the researchers. The participant collects about six samples in one day and then participates in an expositional interview within 24 hours of sample collection.

During the expositional interview, the researchers ask the participant to describe his/her inner experience during each sample using variations of the question “What, if anything, was in your experience at the moment of the beep?” The researchers try to minimize their influence on the participant’s description as much as possible by taking a phenomenological, collaborative approach to the interview. The approach is collaborative because the researchers are considered experts on the method itself and participants are viewed as the sole apprehenders of their own inner experience. The phenomenological aspect of the approach includes avoiding assumptions and avoiding asking leading questions. Using this phenomenological, collaborative approach researchers and participant discuss each sample until they believe the sample has been described and apprehended with as much fidelity as possible. It generally takes an hour to complete an entire expositional interview.

This process of sampling and interviewing is repeated until roughly 24 to 48 samples are collected over approximately four to eight days of sampling. Because the DES method requires a certain level of skill from the participant, the first day of sampling is usually considered a training day and reports of inner experience from this day are rarely used. Participant training continues throughout the process with the goal of iteratively improving the fidelity of the report of each subsequent sample and on each subsequent sampling day. After the samples have been collected, the researchers work collaboratively to write an idiographic description of the participant’s inner experience.

The DES procedure is simple; however, it requires a considerable amount of skill to conduct expositional interviews and to produce high-fidelity descriptions. Avoiding making assumptions about the nature of a participant’s inner experience is much more difficult than it may initially seem. For example, during the expositional interview, a participant could state that during a

sample, she was watching a movie at the theatre. A less skilled DES researcher could take this description at face value and write a description of the sample based on the participant's report. A more skilled DES researcher is likely to inquire further while setting aside presuppositions about the participant's inner experience (this is called "bracketing presuppositions"). This inquiry could reveal that the participant's eyes were pointed at the movie screen, but the movie was not directly present in the participant's inner experience. What was directly present to the participant at that moment was an experience of the "butteriness" of the movie theatre popcorn she was eating at the time. In this example, the researcher had to "bracket" the presupposition that a person always has a visual inner experience of the object at which his/her eyes are aimed.

Not only do skilled DES researchers have to work to avoid the potentially distorting effects of presuppositions, but they also try to keep the language of their inquiry from framing the participant's description. For example, DES researchers avoid making an inquiries like, "Tell me more about what you saw on the screen" because this may lead the participant to describe the movie, which in our example not actually in the participant's inner experience during that sample. The differences in researcher skill can have a significant influence on the final description of a sample and the idiographic characterization of the participant's inner experience as a whole.

DES also involves skill from the participant. The participant from the example above is likely to describe her subsequent samples more skillfully as a result of the skilled researcher's inquiry. The participant may describe more faithfully aspects of inner experience that she previously overlooked (e.g., the experience of "butteriness") and she may avoid discussing aspects that she had incorrectly assumed were present (e.g., the visual experience of the movie). It is common for participants in DES to become more skilled at apprehending and describing

their inner experience as they experience more iterations of the DES procedure. This increase in skill is also likely to result in an increased self-awareness of inner experience.

Although DES was designed to explore inner experience, frequent casual accounts suggest that it may have a therapeutic impact on participants. The impact of DES on participants has not been the focus of any previous studies, but anecdotal evidence suggests participants have enjoyed and believe they have benefitted from participating (Hurlburt, 1993; Heavey, Hurlburt, Lefforge, 2010). Hurlburt (1993) describes how engaging in DES was beneficial for “Fran.” DES revealed that her inner experience had no figure/ground phenomena, and therefore was frequently overwhelming and included multiple (ten or more) unpleasant, confusing, dark, and sometimes suicide-oriented images. While participating in DES, her inner experience became more focused: her internal and external imagery now did have the figure/ground distinctions characteristic of most imagery, and was therefore less disturbing and less complex. Fran also reported using her newfound ability to notice when the disturbing images were starting and successfully stop them. In addition, she reported reaching a deeper level of understanding with her psychotherapist because she could communicate her inner experience to him more clearly and precisely. At first, Fran had difficulty explaining to her therapist why some tasks were so difficult for her to complete. After her inner experience became clearer, she was able to explain with greater precision and clarity the elements of her inner experience that overwhelmed her and made completing certain tasks (e.g., getting out of the house) extremely difficult for her. Fran has not been the only participant to benefit from taking part in DES.

Heavey, Hurlburt, and Lefforge (2010) discussed “Steven, a participant in a DES study. He initially was seeking treatment from a psychotherapist because he was tormented by nearly constant imaginary internal arguments with his wife, friends, and acquaintances. Steven

discovered through his sampling that the internal arguments were much rarer than he had originally believed. The researchers did not need to convince him that the internal arguments were less rare than he believed; his own experience with DES showed him that.

Although the intent of DES is discovery, it appears in at least a number of instances participants of DES have made important life changes consistent with the types of goals people have in psychotherapy. This presents two important questions: Does DES facilitate positive life changes of the type aimed for in psychotherapy? And, if so, how and why does DES have such an effect?

The goal of the present study was to investigate if and how DES impacted participants as they participated in an ongoing DES study. Each DES interview was videotaped and processes occurring during these interviews were studied. Changes in psychological symptoms over the course of sampling were measured and participants were interviewed about the impact DES did or did not have on them. Participants were drawn from a non-clinical sample, which may have affected the results of this study.

Chapter 2

Literature Review

Descriptive Experience Sampling

Descriptive Experience Sampling (DES; Hurlburt, 1990, 1993, 2011) was developed to explore and describe “pristine inner experience” (Hurlburt, 2011), which includes the experience of internal and external events that are directly and consciously experienced by the participant naturally in his or her everyday environment and unaltered by efforts to capture the experience. Heavey, Hurlburt, and Lefforge (2010) provide an example of pristine inner experience:

At 8:27:13 pm Julia is standing on a California beach with the Pacific Coast highway behind her. At that particular moment, Julia is seeing the sunset, noting the orange and gold and roundness and streakiness. She has, by our definition, an inner experience of the sunset. At that moment Julia is *not*, thematically, directly, explicitly in conscious awareness, hearing the traffic noise behind her, *not* (thematically, directly, explicitly in conscious awareness) feeling the cool breeze on her left cheek, *not* noting the pressure of her wristwatch on her wrist, *not* feeling the slight twist of her left leg as it digs into the sand, *not* noting the tickle in her right nostril as she inhales, and so on. She does not have, by our definition, an inner experience of the traffic noise, the breeze, the wristwatch, and so on. All those (and perhaps hundreds of others) are somehow present in the welter of her energy transducings at that precise moment, but it is the sunset that grabs her thematized attention, becomes her inner experience at that moment. (p.346)

The above example shows the type of experience that is the focus of DES researchers. However, apprehending moments like these with high fidelity is challenging. The challenge lies in coping with threats to DES’s validity and maximizing the fidelity of the inner experience

descriptions. Coping with these challenges is a primary focus of DES procedures including sample collection and expositional interviews (Hurlburt & Heavey, 2006).

Sample collection. The DES method collects samples in a way that enhances the fidelity and ecological validity of the samples. To enhance ecological validity, participants are asked to use the beeper while going about their day normally in their everyday environment instead of in a lab or other strictly prescribed situation. A device emits a semi-random 700-Hz “beep” through the earpiece. The first beep occurs randomly within a 60 minute time period. Each successive beep occurs randomly within 60 minutes of the preceding beep. The participant wears the beeper until approximately six samples are collected. Although wearing the earpiece may have some impact on participants’ behavior and the ecological validity of the procedure, most participants report becoming accustomed to wearing the beeper and no longer alter their behavior by the second day of sampling (Heavey, Hurlburt, & Lefforge, 2010).

When the participant hears a beep, he takes notes about what was in his inner experience at the last undisturbed moment *before* the beep. This is part of the DES procedure that aims at pristine inner experience. DES researchers recognize that the process of collecting the sample will always have some influence on the sample itself; however, the last moment before the beep seems likely to be more pristine than the moments during or after the beep because those have been disturbed by the beep itself.

Participants in DES are asked to take notes about their inner experience immediately after capturing each sampled moment in order to aid recall during the expositional interview and reduce retrospective memory errors. Participants refer to their notes during the expositional interview, which takes place within 24 hours of collecting all samples.

Expositional interviews. The expositional interview has two aims: data gathering and

iterative skill improvement. The participant and interviewers work together to faithfully apprehend the samples and iteratively improve the participant's skill. After the interview is completed, a researcher writes a description of the participant's inner experience for each beep (beep description). Although many types of inner experience have been observed in DES, there are five frequently occurring types of inner experience (Heavey & Hurlburt, 2008), which DES calls the five frequent phenomena (5FP; Kühn, Fernyhough, Alderson-Day, & Hurlburt, 2014): inner speech, inner seeing, unsymbolized thinking, feeling, and sensory awareness. Inner speech occurs when the participant innerly speaks to himself or herself without producing external sound or motion. Inner seeing is the seeing of something in imagination that is not actually present. Unsymbolized thinking refers to experiencing a particular, definite thought without that thought being conveyed in experienced words, images, or any other symbol. Feeling is the experience of emotion such as happiness, sadness, anxiety, etc. Sensory awareness is the attending to a particular sensory aspect of the environment where the sensory experience is a primary focus rather than a mere aspect of the instrumental or perceptual significance (Heavey & Hurlburt 2008).

The inner experience expositional interviews, experience descriptions, and 5FP ratings are considered and discussed with other DES researchers to ensure that the apprehensions of the participant's inner experience are high fidelity. This process can be challenging and labor intensive because there are several threats to the validity and fidelity of the experience descriptions and the reliability of the 5FP ratings.

Presuppositions. DES researchers begin the expositional interview with the question "What, if anything, was in your experience at the moment of the beep?" or some variation like "What was ongoing, if anything, in your experience at the moment of the beep?" These "open-

beginninged” questions (Hurlburt & Heavey, 2006; Hurlburt & Akhter, 2006) do not assume the presence or absence of any aspects of inner experience the way a question like “What were you feeling (or thinking) at the moment of the beep?” presupposes that feeling (or thinking) was present in the participant’s experience. Both interviewers and participants must avoid presuppositions. For example, a participant may presuppose that his inner experience consists only of feelings. This presupposition would result in his reporting only feelings and overlooking instances of sensation or inner speech present at the moment of the beep. Interviewers remain sensitive to clues that the participant may have a presupposition that is influencing his or her reports and work to overcome or bracket these presuppositions.

Embarrassment. Some DES participants may believe that their inner experience is odd. As a result, they may be reluctant to share it with the researchers for fear of embarrassment (Akhter & Hurlburt, 2006; Hurlburt, Heavey, & Lefforge, 2010). DES interviewers cope with this threat in several ways. First, the experiences to be discussed are a small number of random occurrences, Second, interviewers make it clear that the participant can choose not to discuss any sample (but that option is rarely exercised). Third, it is common for a participant to feel embarrassed about inner experiences that the interviewers do not find unusual. Often, the interviewers have seen similar inner experiences in other participants and genuinely do not find the participant to be atypical. The participant, however, may feel embarrassed because their inner experience is very different from what they expected. Fourth, participant samples are kept confidential unless the participant gives consent for the descriptions of their inner experience to be de-identified and made public. Lastly, because interviewers avoid presuppositions and treat participants as co-investigators, the interviewers adopt an accepting and nonjudgmental stance towards the participant’s inner experience (Hurlburt, Heavey, & Lefforge, 2010).

Direct apprehension vs. inference. Another challenge during expositional interviews is differentiating between inner experience that has been directly apprehended and that which is inferred but not apprehended. The kinds of things that have not been directly apprehended include subconscious processes and constructs (e.g., self-esteem). Participants often mistakenly believe that they can apprehend these types of things. For example, a participant could have a sample in which she reports learning that she earned an “A” in a difficult class while simultaneously feeling her self-esteem increase. The risk here is that she may be inferring that her self-esteem increased instead of directly experiencing it. To minimize this risk, DES interviewers focus on directly apprehend experiences and try to help participants become more skilled at differentiating between inner experience that was directly apprehended and all else. DES interviewers and participants not only have to grapple with this differentiation, but they also must come to terms with each participant’s potentially unique use of language, which poses another challenge to faithfully apprehending inner experience.

Language and meaning. DES interviewers and the participants collaborate to make the meanings of the terms used during the expositional interview as explicit as possible. A term like “thinking” can mean one thing to one participant and something different to another. For example, “thinking” can refer to a cognitive, affective, or perceptual experience depending upon the particular participant (Hurlburt & Heavey, 2001). Together, the interviewers and participant develop a shared understanding of the terms they use. For instance, a participant could report that during one sample his inner experience consisted of “thinking that something bad was about to happen.” This report could have several different meanings that could be discovered during discussion between the participant and interviewers. One potential meaning is that the participant was feeling his heart beating rapidly in his chest. Another possibility is that he was innerly

hearing the words “something bad is about to happen.” The participant could also have been very softly saying the words “something bad...” at the moment of the beep. Another possibility is that the participant was seeing the words “something bad is about to happen.” Yet another potential meaning is that the participant had a distinct and clear general impression that something bad was about to happen, but was not hearing, seeing, or saying any words nor was he feeling his heart beat rapidly. The interviewers must help the participant discern which of these seemingly limitless possibilities were present and try to keep their questions from influencing the participant’s description of his experience.

Iteration. Prior interviews with a particular participant can have an impact of the later interviews (Hurlburt, 2011). For example, in the first interview the participant may have given a report like the one described above and further discussion may have suggested that of all the possibilities, the participant was innerly seeing the words “something bad is about to happen.” Initially, the participant believed he was feeling that something bad was about to happen, but upon reexamining his memory of the moment he came to believe that he was actually innerly seeing those words. The honest struggle to differentiate between feeling and seeing, whether successful on the first day or not, may help the participant to improve the ability to differentiate among potential experiences in subsequent interviews. For example, if inner seeing is indeed a frequent but unrecognized experience, the participant may become more able faithfully to apprehend the details of his inner seeing (e.g., the perspective from which she sees the letters, the size, color, and texture of the letters) at the moment of the beep instead of reexamining his memory of the experience. In essence, he learns from the prior sampling and interview, subsequently becoming more skilled at apprehending his own inner experience. Because of this, DES researchers typically discard participants’ data until they seem to apprehend their inner

experience with adequate fidelity.

During the early iterations of sampling and interviewing, the participant and interviewer usually produce descriptions with lower fidelity than in later iterations. This is not to say that there are not exceptions, or that improvements in fidelity are strictly linear, but generally, fidelity at the end of sampling is better than at the beginning (Hurlburt, 2011).

Summary. Participants must learn the technical aspects of DES (e.g., how to wear the earpiece, what “moment of the beep means”) and improve their ability to attend to, apprehend, and faithfully describe their moments of pristine inner experience to the interviewers. While this is happening, the interviewers improve their ability to elicit and faithfully describe the participant’s inner experience with high fidelity. The participant and interviewers also develop mutual understanding regarding their idiographic use of language and the aims of DES. All of this takes time, substantial mental effort, tolerance, and considerable skill. The DES procedure requires iteration because it takes time to develop the skills and mutual understanding necessary for the apprehension of each participant’s pristine inner experience with high fidelity. These skills and understandings include discovering the particular meaning of the participant’s words, helping the participant differentiate directly apprehended experience from inferred mental processes, bracketing presuppositions about the participant’s inner experience, and cutting through the participant’s own presuppositions about his inner experience, all while refraining from using leading questions or statements (which are often the most direct) such as “Did you actually feel your heart beating?” or “Did you hear the words...?”

The DES method aims to apprehend pristine inner experience and produce descriptions of it; however, some of the tactics/techniques/procedures DES uses to enhance the validity and fidelity of DES data seem to have the fortunate side-effect of creating a nonjudgmental and accepting

environment in which participants repeatedly examine their inner experience and share it with others (i.e., the interviewers). While taking part in DES, many participants gain insight into how they experience the world, which may result in changes similar to some that happen in psychotherapy. Next, I discuss how the potential therapeutic impact of DES may be explained by person-centered therapy, therapeutic assessments, common factors models, and psychotherapy process research.

Models for Understanding Potential Impact of DES

DES and Person-centered Therapy

Carl Rogers, founder of person-centered therapy, believed that choice becomes real and effective, and that people are only mentally healthy, only when all elements of experience are valued and available to awareness (Rogers, 1958, 1961; Raskin & Rogers, 2005). Much like person-centered therapy, valuing inner experience and making it more available to awareness may be core processes underlying the psychological impact of DES. Although DES does not have a therapeutic intent, it may help participants move towards mental health as defined by Rogers because DES provides an environment in which the participant's inner experience is treated with unconditional positive regard, allowing participants to value their inner experience more and become more aware of it. For some participants, this awareness leads to more effective choices. For others, DES allows them to explore, value, and accept a previously unexplored part of themselves. This self-acceptance and self-awareness can have a therapeutic impact for some, as can the more effective choices they may make. All of these assertions are just my speculations about how DES may impact participants; however, I believe it is important for me to make them explicit so that when I write my analyses of qualitative participant data, the reader is aware of my preconceptions and can more easily judge if I am superimposing my preconceptions onto the

data.

Although DES and person-centered therapy are not equivalent, they do seem to have some commonalities. Both take a phenomenological approach and demonstrate empathy, congruence, and unconditional positive regard in their interactions with participants. In addition, DES meets many of person-centered therapy's explicit and implied conditions for effective therapy. The similarities between DES and aspects of person-centered therapy (e.g., phenomenological orientation, empathy, congruence, unconditional positive regard, and implied therapeutic conditions) are reviewed below.

Phenomenological orientation. Person-centered therapy, like DES, nonjudgmentally focuses on the experience of each individual client/participant. DES demonstrates this phenomenological approach by prioritizing the participant's perspective and nonjudgmentally attempting to understand the participant's inner experience in high fidelity. This can be seen in the steps DES takes to limit the interviewers' influence on participants' reports of their inner experience (e.g., open-beginninged question, relentless bracketing of presuppositions).

Empathy. According to Rogers (1958) a therapist is being empathic when he is experiencing an accurate, empathic understanding of the client's awareness of his own experience. DES often meets this definition because the interviewers aim to obtain an accurate or high fidelity understanding of the participant's inner experience. DES involves repeatedly eliciting participants' inner experience, checking with the participant to ensure that the interviewer's understanding of the participant's inner experience matches the participant's understanding, which seems to be a case of person-centered empathy, except for the samples of the participant's inner experience instead of the participant's inner experience during the interview. During this process, much like person-centered therapists, DES interviewers repeatedly check with the

participant to ensure that the interviewers' understanding of the participant's inner experience matches that of the participant. This process is similar to that used by person-centered therapists who repeatedly check with the client to ensure that the therapist's understanding of the client matches the client's understanding.

Congruence. DES partially meets the explicit person-centered condition of congruence. DES interviewers strive for congruence between their view of themselves as skilled interviewers (i.e., capable of bracketing presuppositions and apprehending the participant's inner experience with high fidelity) and their actual behavior and attitudes. Rogers (1957) believed that congruence can be measured empirically by comparing the therapists self-rating of his behavior and attitudes during a session with those of judges. This sort of comparison routinely takes place in DES. Multiple investigators are usually present during sampling, and recordings of interviews are sometimes reviewed by other DES researchers to assess how well the interviewers performed.

Unconditional positive regard. DES meets the explicit person-centered condition of unconditional positive regard. Although DES investigators may or may not have unconditional positive regard for the participant as a person, the investigators can be seen as striving for unconditional positive regard for the participant's inner experience. DES investigators' attitudes and behaviors towards participants are taken seriously and are consistently analyzed. In fact, one DES investigator's difficulty accepting a participant's description of his inner experience was also part of the published peer-reviewed journal article mentioned above (Hurlburt & Raymond, 2011).

Implied therapeutic conditions. The DES method partially meets Rogers' (1957) implied therapeutic conditions: psychological contact between the therapist and client, a client experiencing anxiety or incongruence, and client reception of the therapist's unconditional

positive regard. Rogers (1957) defined psychological contact between a client and therapist as a “minimal relationship” in which psychological matters are discussed. DES meets this criterion as the investigator and participant have a short-term relationship in which the participant’s inner experience (i.e., psychological matter) is discussed.

The next condition, a client experiencing anxiety or incongruence is not always met in DES sampling, even when clinical populations are studied. For example, a person diagnosed with a psychological disorder like major depression may or may not be actively experience anxiety or incongruence at the time of sampling, and a participant from a non-clinical sample may be currently experiencing anxiety or incongruence despite the absence of a psychological disorder. Even if a participant was not experiencing psychological distress, the DES procedure may produce a mild incongruence or anxiety in some participants. Early in sampling, many DES participants may notice incongruence between what they believed their inner experience was like and what sampling reveals about their inner experience. For example, as discussed above, “Steven” believed that he had incessant imaginary internal argument in his inner experience (Heavey, Hurlburt, & Lefforge, 2010) and Ricardo Cobo maintained that when playing the guitar he had an inner visual image of his fingers playing (Hurlburt & Cobo, 2011); however, both of their beliefs were inconsistent with their actual inner experience. Another incongruence that DES can elicit is between a participant’s belief that she can easily apprehend and articulate her inner experience and her ability to do so during sampling and expositional interviews. For instance, one DES participant kept a log of her DES experience. The participant noted that apprehending and articulating her inner experience was much more difficult and worrisome than she had anticipated (Akhter & Hurlburt, 2010). Although DES triggers incongruence or anxiety in some participants, it seems likely that it does not do so in others. Thus, DES only meets the

incongruence/anxiety condition in some instances.

The last implied condition is that the client must experience the therapist as having unconditional positive regard. It is unknown how many participants view the interviewers as having unconditional positive regard for them; however, in one case study, the participant felt the interviewers had unconditional positive regard for her inner experience (Akhter & Hurlburt, 2010).

Conclusions. At the end of sampling, a participant is likely to have an increased understanding of his or her inner experience. This understanding may make it more likely that participants will value, attend to, and potentially rely more upon their inner experience. The person-centered definition of mental health states that “those who rely on organismic valuing processes as fully functioning people, able to experience all of their feelings, afraid of none of them, allowing awareness to flow freely in and through their experiences” (pg. 144) are considered mentally healthy (Raskin & Rogers, 2005). Overall, the supposed mechanisms of change espoused by person-centered therapy seem to provide a plausible explanation of the mechanisms of DES’ potential therapeutic impact and have helped frame my perspective.

Psychological Assessment

Psychological assessments, much like DES, were not intended to have a direct therapeutic impact on clients; however, some clinicians have shown that assessments can have a direct therapeutic impact on clients when a certain approach is taken. This approach is called collaborative, individualized assessment. These assessments use tools not designed to have a therapeutic impact (i.e., psychological tests) to therapeutic ends. This approach also has helped shape my preconceptions about DES’ potential therapeutic impact because I see many similarities between them. Because collaborative, individualized assessment approaches are not

widely used, these assessment approaches will first be contrasted with the traditional information-gathering approach with which most psychologists are familiar. Then, outcome research on collaborative, individualized assessments will be reviewed.

Information-gathering approach. The process of completing a traditional psychological assessment using the information-gathering approach (which is not believed to have a direct therapeutic impact on participants) has four steps Groth-Marnat (2009): evaluating the referral question, acquiring knowledge relating to the content of the problem, data collection, and data interpretation. During the first step, evaluating the referral question, the clinician determines if the referral question has adequate specificity and if it can be answered through psychological assessment. If the referral question does not meet these conditions, the referral source is contacted and the question is refined until these conditions are met or it is determined that an assessment is unwarranted. The referral source usually determines the questions addressed by the assessment. The client's questions regarding the assessment often play little if any role in the assessment process.

In the next step, acquiring knowledge relating to the content of the problem, the clinician selects tests that are appropriate for the client (e.g., age, ethnicity, educational background etc.) and the construct being evaluated (e.g., intelligence, depression, personality disorders, etc.). After selecting the tests, the clinician proceeds to the next step, data collection. During this step, data is collected from multiple sources of information (e.g., clinical interview, medical records, report cards, behavioral observation, parents). Once the clinician has collected this data, she moves to the final step, interpreting the data. In this step, the clinician develops inferences based on the data collected, evaluates and modifies these inferences, uses them to form a comprehensive description of the client, puts this description into the client's situational context,

and finally, makes specific predictions regarding the client's behavior and gives recommendations. This process should result in more than a simple categorization/classification of the client. Ultimately, the examiner strives to develop a deeper and more accurate understanding of the client's dynamics that is conveyed in the assessment report; however, this understanding is based solely on the evaluator's interpretation of the data (e.g., report from the client, behavioral observations, and test results).

Finn and Tonsager (1997) discussed the implicit model underlying the information-gathering approach. The goals of the information-gathering approach are to accurately describe clients using existing dimensions and categories (i.e., nomothetic descriptions), to help make decisions about clients (e.g., custody decisions, mental competency etc.), and to efficiently facilitate communication between professionals (i.e., answering the referral question).

In order to reach these goals, the information-gathering assessment approach has three steps: data collection, deductive interpretation of the test data by the clinician, and recommendations. Finn and Tonsager (1997) emphasized that this process is one-sided because the clinician excludes much of the client's perspective. For example, the client is interviewed and asked about his symptoms, but the clinician typically does not elicit the client's perspective of the test results or consult with him regarding the recommendations. The clinician's approach to interpreting the test data is similar to that taken by the medical model (Finn & Tonsager, 1997). In the medical model, a physician determines if a patient has an illness and prescribes a treatment. Similarly, in the information-gathering approach, the clinician determines if the client suffers from a mental disorder and prescribes treatment. In this approach, the assessor becomes an objective, semi-skilled technician who exhibits little influence on the data collected (Finn & Tonsager, 1997).

According to Finn and Tonsager (1997), the information-gathering model does not meet its

goals if the data collected is considered unreliable or invalid or the wrong decision is made about the client because of the assessment. Mistakenly diagnosing a client with Posttraumatic Stress Disorder based on the client's inaccurate report and biased test scores is an example of a failure according to the information-gathering model. The traditional information-gathering model is designed to make nomothetic categorizations that guide treatment. It is not designed to have a therapeutic impact on clients. It contrasts sharply with the collaborative, individualized approach to assessment that uses the same psychological tests as the information-gathering approach, but applies them in a more phenomenological and humanistic manner.

Collaborative individualized assessment. In Fischer's (1979, 2000) collaborative, individualized assessment approach the assessor and client work together to develop productive, idiographic "understandings" of the client. The approach considers test scores, categories, and related research to be secondary data and life events to be the primary data. The secondary data are used as tools or bridges into and idiographic understanding of the client's life (i.e., primary data). Fischer's (1979, 2000) assessment approach considers idiographic understanding and recommendations rather than nomothetic categorization to be the goal of assessment. These goals are met if the assessment helps the interested parties comprehend a situation similarly and results in specific individualized recommendations for change. Collaborative, individualized assessment has five tenets. Assessors are free to operationalize these tenets in their own way: collaboration, contextualization, intervention, description, and respect for complexity, ambiguity and holism. Although Fischer (1979, 2000) designed these tenets for assessment, I believe that DES employs all of these tenets with the exception of consistent and direct intervention.

Tenets. The first tenet, collaboration, occurs in collaborative, individualized assessment when the clinician and client discuss the purposes of the assessment and "co-labor" throughout

the assessment process. During this process, the client and clinician actively create, evaluate, and revise their hypotheses. Fischer (2000) gives an example of this type of collaboration from one of her assessments. Her client viewed himself as efficient and methodical; however, his supervisors consistently marked him down as being inefficient and unorganized. While her client was working on a test requiring him to copy a design, his body language made him appear lackadaisical and uninterested. He also copied the designs haphazardly with no apparent organization. Surprisingly, his design was completed quickly and precisely. She mentioned to him that he did not perform the task in a manner that seemed organized. He assumed that because she did not ask him to complete it a certain way all that mattered was how it was completed. Fischer (2000) explained to him that despite his excellent end-product, he gave the *appearance* of being unorganized and inefficient to his supervisor. He stated that when given boring tasks he makes sure that he does a good job, but often doesn't take it seriously, hence his lackadaisical and uninterested appearance. Fischer's (2000) collaboration with her client enabled him to develop a better understanding of his problems based on his experience during the assessment. A similar understanding is often developed in DES as DES participants are treated as "co-researchers." Participants develop a better understanding of their inner experience by collaborating with the DES interviewers and in some cases this increased understanding is helpful, as was the case with "Steven," the DES participant who discovered that he had obsessive thoughts much less frequently than he believed.

Contextualization, the next tenet, requires the assessor to prioritize an idiographic understanding of the client's problems over a nomothetic one. This means that in an assessment, it is less important to determine if a client qualifies for a diagnosis of major depressive disorder than it is to understand how the client experiences depression and the effects it has. This focus on

idiographic understanding is also an explicit goal of DES.

The next tenet, intervention, refers to making interruptions at natural breaks in testing (e.g., the end of a test or subtest) to help the client explore alternatives. After one of Fischer's (2000) clients had completed nine Thematic Apperception Test (TAT; Murray, 1943) stories, all of which involved characters being stopped from achieving their goals by outside forces; she brought this theme to the client's attention. In response, the client, who seemed to feel powerless, challenged Fischer to tell a story without this theme, which she did. Then the client tried to do the same, and not only developed an experiential understanding of her habitual interpretation of the others as dangerous and untrustworthy, but also received some practice in altering her worldview. Fischer (2000) was able to not only document her client's view of the world, but also her client's readiness for change based on their ensuing discussion of ways to "work through" this world view. Although DES was not designed to make clinical interventions, similar situations have occurred. For instance, DES interviewers used "Amy's" samples to show her that her relationship with her mother was better than she thought.

The next tenet, description, avoids nomothetic categorizations and reification and favors of using concrete representative actions of life events given in the client's own words. Fischer (1979, 2000) believes that this process makes the client articulate the meaning of their experience more deeply. For example, a client may say "public speaking makes me nervous." Fischer (1979, 2000) is likely to encourage the client to articulate his meaning of anxious more deeply. This could result in the client saying that when he gives speeches to senior business executives he experiences a "shaky, palm-sweating, disorientation." This helps the assessor develop more empathy for the client's world. The description tenet is explicitly included in DES; in fact, high-fidelity descriptions are what the method is intended to produce.

The final tenet, respect for complexity, holism, and ambiguity, means that assessors go beyond nomothetic categorization to embrace the complex bidirectional interrelations in their client's lives and understand that the assessors explanation of the client will always be at least partially incomplete. DES has respect for complexity, holism, and ambiguity as well. It can be seen in DES descriptions of participants' inner experience. In these descriptions, any ambiguity, complexity, or partial understanding is made explicit.

Alternatives. Fischer's (1979, 2000) collaborative, individualized assessment approach has inspired other variants to her approach including Therapeutic Assessment (Finn, 2007), collaborative therapeutic neuropsychological assessment (Gorske, 2008), and Therapeutic Assessment with children (Tharinger, Finn, Wilkinson, & Schaber, 2007; Tharinger, Finn, et al., 2009; Tharinger, Finn, Arora, Judd-Glossy, Ihorn, & Wan, 2012). All these approaches are mild variants of Fischer's model (1979, 2000) and share the same foundation (Finn, 2012).

Outcome research. Several studies have shown the therapeutic benefit these assessment approaches. Because DES and Fischer's (1979, 2000) assessment approach are similar, outcome research demonstrating the therapeutic benefit of her approach (Finn & Tonsager, 1992; Poston & Hanson, 2010; Aldea, Rice, Gormley, & Rojas, 2010; Newman & Greenway, 1997, Ougrin, Ng, & Low, 2008; Morey, Lowmaster, & Hopwood, 2010; Smith, Nicholas, Handler, & Nash, 2011; Ackerman, Hilsenroth, Baity, & Blagys, 2000; Smith, Handler, & Nash, 2010; Hilsenroth, Peters, & Ackerman, 2004), including a meta-analysis (Poston & Hanson, 2010), gives more support to my belief that DES can have a therapeutic impact on participants.

Summary

Collaborative, individualized psychological assessments strive to improve clients' self-awareness of their problems and find idiographic solutions to them through a

phenomenologically-oriented assessment procedure, which involves the assessor and the client collaborating as equals throughout the process. Similarly, DES increases participants' self-awareness of their inner experience and produces idiographic descriptions of participants through phenomenologically-oriented procedures. Further, research conducted on collaborative and therapeutic assessments provides support for their clinical utility and shows that although psychological tests were not intended to have a therapeutic impact, when used with a collaborative, individualized assessment approach, they can be clinically beneficial for clients. This, along with parallels between DES and person-centered therapy suggest that DES, although not designed to be therapeutic, may, in a manner similar to psychotherapy, be psychologically beneficial to participants.

DES and Common Factors

Initially, many researchers believed that technique and theoretical models were the most important factors in client improvement (Duncan, Miller, Wampold, & Hubble, 2010; Messer & Wampold, 2002), but meta-analytic research showed that there was no significant difference in outcome when different therapeutic techniques and theoretical models were compared (Wampold et al., 1997; Ahn & Wampold, 2000; Luborsky et al., 2002). Some have questioned these findings on the following grounds: the treatments compared were too similar; there was a lack of follow-up data; and effect sizes across different outcome measures were averaged (Crits-Christoph, 1997; Chambless, 2002). Despite these criticisms, many common factors models have been developed.

Common factors models. One of the earliest common factors models was developed by Frank (1971). His model included the following factors: an emotionally-charged, intense relationship with a helping person, an explanation for the causes of the client's problems, a

rationale for why the treatment will help, giving the client new information (e.g., training or self-discovery), an increase in positive expectation, successful experiences due to the treatment, and adequate emotional arousal for learning.

The Generic Model of Psychotherapy has five factors: the therapeutic contract, the therapeutic bond, openness and involvement, technical interventions, and therapeutic realizations (Orlinsky & Howard, 1987). According to this model, the stronger the therapeutic bond, the more open and involved the client becomes in treatment, and the more therapeutic realizations the client will experience, which lead to positive changes in the client. In addition, the therapeutic bond itself can positively influence the client (Orlinsky & Howard, 1987).

Weinberger (1995) completed a literature review of the common factors and he concluded that there were five categories of common factors: the therapeutic relationship, expectations of therapeutic success, confronting the problem, providing an experience of mastery or control over the problem, and giving the client credit for therapeutic successes.

Lambert (1992) completed a literature review and outlined four categories of common factors: extratherapeutic, common, expectancy/placebo, and technique. Lambert and Ogles (2004) proposed three categories of common factors: support, learning, and action.

There are quite a few common factors models (e.g. Frank, 1971; Orlinsky & Howard, 1987; Weinberger, 1995; Lambert, 1992; Lambert & Ogles, 2004; Duncan, Miller, Wampold, & Hubble, 1999, 2010), each with different labels and categorizations of factors, with significant overlap and redundancy between models. In fact, Grencauge and Norcross (1990) identified 89 common factor variables in their literature review with each article identifying anywhere from 1 to 20 variables. To focus the discussion and remove redundancies, Duncan, Miller, Wampold, and Hubble's (2010) popular common factors variable categories of working

alliance/relationship, client-extratherapeutic, therapist, theories/models/techniques will be used to organize the following discussion of research supporting common factors and the similarity between DES and common factors.

Working alliance/relationship. The working alliance is also called the therapeutic alliance or relationship by many therapists. The term generally refers to the quality of the relationship between the therapist and client (Horvath & Bedi, 2002). Researchers have explored the number of factors that compose this relationship and disagree on whether there should be one, two, or three factors (Bordin, 1989, 1994; Luborsky, 1976; McLeod & Weisz, 2005; Faw et al., 2005; Karver et al., 2008; Shirk & Saiz, 1992); however, research shows that the alliance is beneficial. The effect size of the impact of the working alliance on outcome ranges from $r=.14$ to $r=.36$ (Lambert, 1992; Horvath & Greenberg, 1994; Martin, Garske, & Davis, 2000; Horvath & Bedi, 2002; Shirk & Karver, 2003; McLeod, 2011).

Although DES sampling does not explicitly focus on the working alliance, participants and interviewers do conduct the *work* of DES sampling together. They work together towards the agreed upon goal of describing the participant's inner experience with high fidelity. Ideally, over the course of several sampling sessions the working alliance improves in DES through changes in trust and skill as discussed below.

A certain level of trust is required in DES sampling. This trust is similar to the kind needed in therapy. For example, when working with clinical samples, trust can be implied in a subtle way by the participant's willingness to discuss samples that may involve recounting psychologically painful, embarrassing, or highly personal experiences. Although participants have the option of not sharing these samples, many do so despite potential discomfort. Disclosing these kinds of

samples to the investigator implies that the participant trusts the investigator will not cause any harm through judgment, ridicule, rejection, or a breach of confidentiality.

Over the course of sampling, the investigators may also experience changes in their trust towards the participant. They may develop more trust in the accuracy of the participant's descriptions and his or her skill at describing inner experience. Although DES sampling may be beneficial for participants in part because of the working alliance, it lacks an explicitly therapeutic aspect that may or may not be necessary for therapeutic benefit.

Client-extratherapeutic. Many clients (18-67%) spontaneously improve without psychological treatment (Lambert, 1992), which suggests that factors outside of treatment, including the client's symptom severity, use of self-help literature, and social supports can influence outcome (Mann, Jenkins, & Belsey, 1981; Ogles, Lambert, & Craig, 1991).

Participants in DES have varying personalities, which could have an impact on whether or not they find a benefit to sampling beyond compensation for their time. For instance, a participant suffering from a depressive or anxiety disorder at the start of sampling may be more likely to find benefit from sampling than a participant lacking clinically significant distress. On the other hand, it is also possible that a participant may not obtain benefit because their initial distress level was too severe, too mild, or nonexistent. It also seems likely that the participant's personality at the start of DES will have an impact on how helpful they find the experience.

Therapist. Therapist attributes that have been found to be beneficial include empathy, caring, warmth, affirmation, understanding, competence, support, being accepting, and being personable (Najavits & Strupp, 1994; McCollum & Trepper, 1995; Bischoff & McBride, 1996). Just as the personality of the participant may affect the potential therapeutic value of DES, the style, personality, and training of the investigators seems likely to impact sampling. Currently,

DES interviews are conducted by individuals either training to become clinical psychologists or holding a Ph.D. in the discipline. Because of their clinical training, DES interviewers may be able to form a better working alliance with participants and this may positively impact the participants' experience.

Theories/models/techniques. Although there is debate about the relative influence of specific techniques, models, and theoretical orientation on outcome, Duncan, Miller, Wampold, and Hubble (2010) argue that because virtually all psychotherapies have a rationale and specific techniques, theories/models/techniques should be considered an overarching common factor. DES lacks a theoretical model for therapeutic change because it was not designed with therapeutic intentions; however, DES does take a phenomenological approach to the interaction between the participant and interviewer and phenomenology plays a major role in person-centered and existential theories of psychotherapy, (Rogers, 1957; Yalom, 1980; van Deurzen, 2010) which suggests that the DES method has some theoretical common ground with clinical approaches and may have therapeutic value.

Conclusions

The DES method was not designed to have a therapeutic impact on participants, but it seems likely that it may provide some benefit to participants (e.g., symptom reduction, improved overall well-being, increase in self-awareness or self-knowledge) because sampling is administered by individuals with a clinical background and in a manner which is similar to person-centered and common factors approaches to psychotherapy. Next, I review the parallels between DES and psychotherapy process that may help explain the potential therapeutic impact of DES.

Psychotherapy Process

As of 2004 there were well over 2,000 research findings about the psychotherapy process (Orlinsky, Ronnestad, & Wilutzki, 2004). Many of these studies report findings about the influence of specific technical therapeutic interventions that are not found in DES (e.g., analysis of transference, thought stopping, interpretation). In order to streamline review of this literature, I will only review findings on processes that have parallels in DES. The processes variables that I will review include engagement, interactive coordination, expressive attunement, affective attitude, and experiential congruence.

Engagement. The client's engagement, as measured by reports from observers or the client, has a positive correlation with outcome (Orlinsky, Ronnestad, & Willutzki, 2004; Huppert, Barlow, Gorman, Shear, & Woods, 2006; Simon & Siwiak-Kobayashi, 2008). Just as outcome is affected by engagement in the psychotherapeutic task, it seems likely that engagement in the DES task will impact any potential therapeutic benefit it may have.

Empathy and communicative rapport. Therapists' empathy for their clients has support as a factor that influences positive outcomes from two reviews on the topic (Bohart, Elliott, Greenberg, & Watson, 2002; Orlinsky, Ronnestad, & Willutzki, 2004) and one meta-analysis (Elliot, Bohart, Watson, & Greenberg, 2011) as does communicative rapport (Orlinsky, Ronnestad, & Willutzki, 2004). DES interviewers need empathy for participants when they struggle with the task. DES interviewers also tend to develop a communicative rapport with participants because they need to understand the participant's idiosyncratic inner experience.

Therapist immediacy. Therapist immediacy, as defined by Hill (2009), refers to the therapist's disclosures to the client about his or her feelings towards the client, how the therapist feels about himself or herself in relation to the client, and how the therapist perceives the therapeutic relationship. Research on the impact of immediacy on treatment outcome

consistently shows a positive relationship between these two variables (Foreman & Marmar, 1985; Rhodes, Hill, Thompson, & Elliot, 1994; Safran, Muran, Samstag, & Stevens, 2002; Hill, Kellems et al., 2003; Kasper et al., 2008; Mayotte-Blum, 2012). Immediacy does not seem to play a central role in DES interviews because the interviewers rarely disclose much about their feelings about the client, about himself or herself in relation to the client, or about the relationship between them. Interviewers tend to give supportive or affirming feedback to participants (e.g., “this task is difficult and you’re doing everything we’re asking of you.”), which encourages them to continue the task and can result in the participant gaining realizations about his or her inner experience. Affirmations and realizations, when they occur in psychotherapy, tend to have a positive impact on outcome.

Affirmation and therapeutic realizations. Providing affirmative instead of negating responses seems likely to have an overall positive influence on outcome regardless of whether these affirmations were directed from client to therapist or therapist to client. Orlinsky, Ronnestad, and Willutzki (2004) found a positive association between affirmation and outcome in 153 of 245 studies reviewed. Farber and Doolin (2011) completed a meta-analysis using 18 studies on positive affirmations/positive regard and found a moderate association ($r = .27$) between positive affirmations/positive regard and outcome. Therapeutic realizations also seemed to have a positive impact on outcome as 53 of 79 studies reviewed supported this view (Orlinsky, Ronnestad, & Willutzki, 2004).

Client self-understanding and therapist congruence. Several studies have demonstrated that clients can gain more self-understanding over the course of treatment with a range of different diagnoses (Hoglend, Engelstad, Sorbye, Heyerdahl, & Amlo, 1994; Connolly, Crits-Cristoph, Shelton, et al., 1999; Grande, Rudolg, Oberbracht, & Pauli-Magnus, 2003; Gibbons et

al., 2009; Kallestad et al., 2010), and that self-understanding/insight can precede an improvement in outcome (Kivlighan, Multon, & Patton, 2000). In DES, many participants develop more self-understanding as a result of observing their inner experience and communicating it to the interviewers.

With regard to therapist congruence or genuineness, the most recent meta-analysis on the topic suggests a positive relationship between congruence and treatment outcome. (Kolden, Klein, Wang, & Austin, 2011). It seems that interviewer congruence or genuineness is important in DES because participants are less likely to believe a disingenuous interviewer who attempts to give supportive or affirming feedback.

Measuring Change in Psychotherapy

There are many instruments designed to measure change in psychotherapy. Nearly 20 years ago there were well over 1,000 measures in existence (Froyd, Lambert, & Froyd, 1996). Many of these instruments were created to measure specific types of change (e.g., symptoms, personality structure, behaviors) because there are many factors that go into change. It is not just a matter of determining if change occurred, but also what type of change, from whose perspective, and how stable the change happens to be. This section will review important aspects of measuring change as well as several of the more commonly used instruments in psychotherapy outcome research.

Constructs. Researchers have to decide what constructs they would like to measure. Usually, the more constructs measured the longer the administration time. For example, the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989, 2000) measures over 10 different constructs and includes measures of test validity; however the instrument requires 60-90 minutes to administer, which can be a significant time commitment for many clients and researchers. On the other end of the administration time

spectrum is the Beck Depression Inventory - II (BDI-II; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), which takes only 5-minutes to administer and gives a rating of the client's current level of depression.

Validity. Researchers need to determine if an instrument measures the construct(s) it claims to measure. Another area that is important to consider is sensitivity to change. Once researchers select which construct(s) they want to monitor for change (e.g., depression, anxiety), they still need to determine if a given measure has been shown to be sensitive to change and what it means if scores on a measure change over the course of treatment. The constructs examined in psychology are difficult or impossible to measure precisely. As a result, psychology researchers have to use indirect methods to determine validity. For example, a newer measure can be compared to an older more established one. If client change scores on the new and more established measure have a strong enough correlation, then the newer measure is considered sensitive to change.

Vermeersch, Lamber, and Burlingame (2000) conducted a study that shows another way that sensitivity to change can be determined. They gave a self-report measure to clients before and after treatment. They also administered the measure to a nonclinical sample that was not receiving treatment. The researchers then selected the items from the measure that tended to change over the course of time for individuals in treatment, but not in those who were not receiving treatment.

Social validity. One important aspect of assessing change is determining how important the change is to society (Foster & Mash, 1999). Social comparison is one way to analyze social validity (Kazdin, 1977). Social comparison is examined by comparing pre- and post-treatment evaluations of a client receiving treatment with those of a normative sample. The normative

sample can be considered “normal” based on lacking mental illness, having optimal functioning, or being statistically “normal” (Offer & Sabshin, 1984). Using social comparison as the bar for meaningful change, a client will be considered to have changed if a evaluation of the client shows that after treatment he or she fits into the normative sample.

Clinical significance. Clinical significance builds upon the social validity definition of meaningful change by adding that the client’s categorization into the normative sample is statistically reliable (Ogles, Lunnen, & Bonesteel, 2001). Even if clients show socially valid change on outcome measures, it is still not clear if that change is reliable. Jacobson and Truax (1991) developed the reliable change index (RCI) to address this issue. The RCI rests on the notion that if a group of individuals were treated for a disorder, but on average experienced no improvement or deterioration, many of them would still show a change in scores from pre to post-treatment. The RCI puts change in scores in perspective by comparing them to the change score that is to be expected even if there was no change on average. To calculate the RCI, an individual’s change score is determined. Then this change score is compared to the standard error of difference. If the ratio between the change score and the standard error of difference is greater than 1.96, then client’s improvement is considered reliable. If this ratio is less than -1.96, then the client’s deterioration is considered reliable. In addition to statistical reliability, Jacobson and Truax (1991) add that the client must be more similar a normative sample than a disturbed sample as evidenced by the client’s scores being within two standard deviations of the normative sample or by being more than two standard deviations away from the disturbed sample.

According to Ogles, Lunnen, and Bonesteel (2001), the RCI is used more frequently than any other measure to analyze improvement. Some have criticized the RCI and suggested alternative

methods, but these methods are not much different from the original RCI in their ability to correctly classify clients as improved (Bauer, Lambert, & Nielsen, 2004).

Data sources. If a client's change is considered clinically significant and reliable, there is still the issue of whose perspective should be used to measure change. It is common for different sources of data (e.g., client, therapist, family member, trained rater, physiological test) to give different ratings of client change (Ogles, Lambert, & Sawyer, 1995). For example, Ogles, Lambert, and Weight, and Payne (1990) found that participants could show no change in physiological response to a fear-inducing stimulus after treatment, but give self-reports that show significant improvement. Findings like this one point out the importance of using multiple data sources to measure change.

Measures. This section reviews two of the most commonly used instruments for measuring meaningful change in treatment outcome studies: the SCL-90-R and the OQ-45.

Symptom Checklist 90 - Revised. The SCL-90-R (Derogatis, 1976, 1994) is a 90-item self-report scale, which measures psychological symptomatology. Participants rate how frequently they experience each symptom on a 5-point scale. The 5-points that can be selected are *not at all*, *a little bit*, *moderately*, *quite a bit*, and *extremely*. The measure has nine subscales and three indices. The nine subscales are Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. The three indices are the Global Severity Index, the Positive Symptom Distress Index, and the Positive Symptom Total. The Global Severity Index measures overall psychological distress. The Positive Symptom Distress Index measures the intensity of endorsed symptoms and the Positive Symptom Total is a count of the number of symptoms endorsed.

The SCL-90-R has acceptable internal consistency as demonstrated by coefficient alphas ranging from .79 to .90 (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988). Test-retest reliability coefficients ranged from .68 on the Somatization subscale to .91 on the Global Severity Index over a two-week testing interval (Derogatis, 1994). The SCL-90-R demonstrated convergent and discriminant validity when its scales and indices were compared with the MMPI (Derogatis, 1994; Schmitz, Kruse, Heckrath, Alberti, & Tress, 1999). In addition, the SCL-90-R is sensitive to change in psychotherapy (Kopta, Howard, Lowrey, & Beutler, 1994). The SCL-90-R has been used as a treatment outcome measure in many treatment studies (e.g., Howard, Kopta, Krause, & Orlinsky, 1986; Shapiro, Barkham, Hardy, & Morrison, 1990; Kirchmann, Schreiber-Willnow, Seidler, Strauss, 2011).

Outcome Questionnaire-45. The Outcome Questionnaire-45 (OQ-45; Lambert, Lunnen, Umphress, Hansen, & Burlingame, 1994) is a 45-item self-report scale. The client rates each item on a scale from 0-4 (0 = never, 1 = rarely, 2 = sometimes, 3 = frequently, and 4 = always). The questionnaire provides a total score and three subscale scores: subjective discomfort, interpersonal relationships, and social role performance. The OQ-45 has high internal consistency as demonstrated by a coefficient alpha of .93 (Lambert, Lunnen, Umphress, Hansen, & Burlingame, 1994). It has a test-retest reliability of .84 when a 3-week time interval between testing was used, and its concurrent validity scores range from .60 to .78 when correlated to the SCL-90-R, the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970), the Social Adjustment Scale (SAS; Weissman & Bothwell, 1976), the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988), the Zung Self-Rating Depression Scale (ZSRDS; Zung, 1965), or the Zung Self-Rating Anxiety Scale (ZAS; Zung,

1971). In addition, OQ-45 was designed to measure change due to treatment and has demonstrated sensitive to change in psychotherapy (Lambert, Lunnen, Umphress, Hansen, & Burlingame, 1994; Vermeersch, Lambert, & Burlingame, 2000).

Potential Impact of DES

Several DES case studies have indicated that engaging in DES has had a positive impact on the participant and support the notion that investigating this potential impact is a worthwhile endeavor. In this section, I review the relevant case studies.

Amy. For example, one participant, “Amy,” struggled with compulsive lying (Hurlburt & Heavey, 2006). Over the course of her participation in DES, she began to lie less frequently. Hurlburt and Heavey (2006) speculated that this happened, at least in part, because of her participation in DES. “Amy” was a 22-year-old female college student in psychotherapy at her university’s psychological services center for compulsive lying. Amy lied “all the time” despite trying to stop. She didn’t believe that she was trying to hide something by lying. She reported that even while she was actively trying to talk herself out of lying, she would do it anyway. Amy also worried about her lying obsessively, which was documented by her scores on the Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al., 1989). Amy also struggled with questions of identity such as “who am I?” and “am I bisexual?” Amy was unsure of what was true or untrue, especially with regard to her own experiences. She questioned her sexual orientation because some of her friends had questioned it. She did not seem to have any bisexual feelings and did not participate in any bisexual acts. Amy believed that she worried all the time about her frequent, compulsive lying, but she also doubted this belief. Essentially, Amy lacked a clear understanding of her own experience.

DES was initially difficult for Amy. By the fourth day of sampling, she still struggled with

what the interviewers meant by “the moment of the beep.” In addition, Amy and the interviewers lacked confidence in her descriptions of her experience, which can be seen in the following sample from her fourth day.

Amy is reading. She’s in the middle of paragraph: “In [beep] adopting the constitution....” She said she was speaking the words to herself in her own voice while reading the words. She said she was also concerned with the time, wondering how late it is, whether she has time to get to class, and thinking that she should look at her watch when she has finished reading this paragraph. This was describes as being a “jumble” of simultaneous thoughts, but Amy wasn’t confident about this – it might be just one thought with several aspects. (p. 17)

At the end of the fourth day, Amy noted that sampling was getting easier for her. On the next day of sampling, the interviewers developed more confidence in her descriptions because they were not only more definite and non-contradictory, but also because she shifted from reporting mostly thoughts to reporting mostly feelings. Here is a sample which shows the increased prominence of feeling and an increase in clarity. This sample is from her fifth sampling day.

Amy is studying in the living room with her roommate, who is helping her. Amy has read a sample problem and its multiple-choice answers, and is now confused, frustrated because the answers seem all the same. This frustration is felt as a pressure in her fingers. She is taking a deep, labored breath. She is also noting that her roommate is getting frustrated with her – her voice is becoming higher pitched and stronger, as if she’s nagging, “Aw c’mon, Amy!” but there are no words. [Notice the clear apprehension of bodily sensations (fingers, breathing), a first for Amy.] (p. 18)

Hurlburt and Heavey (2006) gave potential explanations for Amy’s increased clarity. 1) Amy

initially lacked any inner experience but now it exists. 2) She acquired the skill of observing her inner experience and acquiring the skill took longer than usual. 3) Her inner experience transformed in a way that made it easier to report. 4) Her inner experience had always been clear; she simply learned to communicate it more effectively to the interviewers. 5) She faked clarity in her descriptions because of pressure from the interviewers. The authors dismissed explanation (4) as being unlikely because Amy was intelligent and they had explained the task to her in too many different ways. The authors noted that explanation (5) was also implausible because she is unlikely to have the insight necessary to believably fake clarity and to suddenly switch to reports of feeling instead of thoughts.

At the start of the sixth day of sampling, Amy reported that her relationship with her roommate was better than ever, but her relationship with her mother had worsened. Amy began confronting her mother about problematic issues much more than before. Some of Amy's samples from the sixth day involved her confronting her mother or the aftermath of the confrontation with her mother. Here is a sample that occurs 20-25 minutes after Amy finished an emotional confrontation with her mother.

Amy is in her room by herself, and she feels good – at ease with herself – like a weight has been lifted off her shoulders. The center of awareness is in her shoulders but extends throughout her body where the weight had been (but is no longer) crushing down from her shoulders throughout her body. She feels like she can do anything. (p. 21)

Following is another sample that occurs later the same day.

Amy's mom stayed in Amy's apartment overnight. Amy is now in bed, lights off, and at the moment of the beep she's reflecting/rejoicing in the comfortableness. She feels comfortable in her body, and simultaneously she is liking that feeling. The feeling of

comfort is the same as in the previous beep except a little bit stronger, and now included the feeling of rejoicing in it. (p. 21)

At the end of this day of sampling, the interviewers told Amy that she seemed much clearer than before. Amy noted that she felt clearer not only while sampling, but also in her life in general. She added that she felt better about herself and her life. The interviewers also told Amy that they noticed a discrepancy between her belief that her relationship with her mother had worsened and her samples which showed that she seemed more comfortable with her mother even when the pair experience anger or sadness. Amy agreed that her relationship with her mother had improved. Hurlburt and Heavey (2006) did not attribute the discrepancy to Amy's characteristic lying; instead they gave it the following attribution:

As we shall see repeatedly in this book, people's general beliefs about themselves and their situations are *often* untrue.

This example gives some insight into why general beliefs can be false. Certainly Amy's recent relationship with her mother had been confrontational, and Amy certainly had the general belief that confrontations were bad. On that logic, her general belief that the relationship with her mother was worse makes sense. But that logic singles out only one characteristic of the relationship (the confrontation) and ignores the other contrary and compelling evidence (the comfortableness). In Amy's own judgment, the actual comfortableness with her mother far outweighed the confrontation, and yet her general belief had apparently followed from the confrontation. (pp. 21-22)

In the above example, the information from Amy's own observations of her inner experience were used to show her that her relationship with her mother had actually improved.

In the next day of sampling, Amy continued to have clear inner experience. Amy believed

that her increased clarity resulted from a change in her experience and not from a change in her way of apprehending it. Amy reported that her relationships with her mother and her roommate had improved due to her psychotherapy and conversations with her roommate and her mother. She reported that she still lied sometimes. She said that before she often did not know she had lied until someone pointed out to her that there had been a discrepancy. Now, she would notice while speaking that she was telling a lie. Sometimes she would correct herself, but sometimes it was too late. The interviewers were ready to stop sampling with Amy because they now had a good sense of her inner experience. Amy wanted to continue. She found sampling helpful and did not want to stop. The interviewers sampled with her for one more day.

One of Amy's samples on her final day of participation led the interviewers to believe that Amy acquired inner experience that allowed her to distinguish between the way she thinks she should feel and the way she truly feels. When Amy initially described the sample, she reported feeling both happiness at not being the target of her friend's curse and sadness for her friend's struggles with a paper. The interview, however, revealed that Amy was only happy/relieved for herself. Sadness for her friend was not in her awareness, but she believed that she *should* feel sad for her friend so she initially reported it. Hurlburt and Heavey (2006) used this sample to infer the cause of her compulsive lying. The author's inference was that Amy struggled to differentiate between her actual experience and what she thought she should be experiencing. Because of this, Amy could tell a lie and sincerely believe she was being honest because she struggled with distinguishing between what actually happened and what she believed should have happened.

Hurlburt and Heavey (2006) speculated about what caused Amy's improvement. The authors believe that by participating in DES Amy either gained more access to her inner experience or her inner experience changed from unclear or nonexistent to clear, which likely led her to

become a more accurate observer of herself and others. This ability to have experience resulted in her ability to communicate with others about her experience, and thence to communicate more effectively in general. In addition to making this speculation, Hurlburt and Heavey (2006) were able to use DES as an informational tool which helped change part of Amy's personal narrative (from believing her relationship with her mother had worsened to believing it had improved) and to make a clinically relevant inference about why Amy lied so frequently (i.e., her difficulty distinguishing between her actual experience and what she thought she should experience).

Fran. Another case study provides more anecdotal support for the therapeutic impact of DES. Hurlburt (1993) describes DES with "Fran," a 44-year-old woman diagnosed with Borderline Personality Disorder by her current psychotherapist. She believed that she functioned well at work because her job as a bank teller structured her time effectively. She often felt that she was falling apart when she was at home, especially on the weekends. As a result, she attempted suicide several times and was hospitalized on multiple occasions. She had tried antidepressant medication in the past but did not find it helpful. Although her psychotherapist believed that antipsychotic medication would help her alleviate the symptoms of Borderline Personality Disorder, she declined taking it because she feared the side effects and believed agreeing to take it would prove that she was psychotic. She collected 82 samples over the course of 9 days of sampling distributed over a three-week period.

The nature of her inner experience changed dramatically over the course of sampling. During the first seven sampling days, Fran's inner experience involved uncontrollable, rapidly recurring, self-destructive, and derogatory ideas. For example, in one of her samples, she experienced two distressing inner seeings simultaneously. The first was a visual and auditory experience of her father shaking his finger at her and saying to her, "You're no good—you're a failure!" The

second inner seeing was visual and auditory and had a similar theme as her first one. She saw her 16-year-old daughter shaking her finger at Fran and saying “I wish you had succeeded when you tried to kill yourself the first time.” Then, she saw the daughter throw a hairbrush at her. Fran reported that both images simultaneously used the same visual space, but that they were distinct and one did not affect the visual characteristics of the other. Fran reported that this memory was present in her experience constantly for an entire morning and, in fact, her later samples that morning supported her report.

A person unfamiliar with DES research may doubt the accuracy and honesty of Fran’s reports of multiple simultaneous and distinct images and voices. Although one can never be completely certain that a report of inner experience is accurate, Hurlburt (1993) believed her. Initially, he had some skepticism about Fran’s unusual claim that the same image remained in her awareness constantly for days or weeks; however, she was credible for three reasons. First, over the course of sampling, he found that her reports did in fact contain the same image across consecutive samples. Second, Hurlburt was able to verify that Fran could recall and report accurately about exterior perceptions. Third, relatively nonspecific cues from Fran during their extended sampling conversations suggested that she was accurately reporting her inner experience. In addition, inner experiences very similar to Fran’s were later found to be common in participants suffering from Bulimia Nervosa (Jones-Forrester, 2009).

As Fran progressed from the early to middle stages of her sampling, her distress increased and she described herself as “coming unglued.” Her inner experience now consisted of even more simultaneous inner events, and all of them were condemning or derogatory. Her inner experience moved so rapidly that she struggled to report all of it clearly. She felt as if she was forced to simultaneously listen to all the conversations at a crowded cocktail party and give each

conversation equal attention. In one sample, a typical one for her in this stage, she experienced the following thoughts rushing through her experience: What a mess I've made/it's my fault/I mess up everything I touch/he's (my father) right, I'm worthless/I want to die/Yes, I want to die/No I don't, etc. These inner experiences were occurring so rapidly that Fran could not tell if they were innerly experienced seeings, hearings, or unsymbolized thoughts.

By the end of her DES participation, Fran experienced a remarkable change (which lasted for at least one year) in her inner experience and psychological distress. DES revealed that her inner experience initially had no figure/ground phenomena, and therefore was frequently overwhelming and included multiple (ten or more) unpleasant, confusing, dark, and sometimes suicide-oriented images. While participating in DES, her inner experience became more focused: her internal and external imagery now did have the figure/ground distinctions characteristic of most seeing. She was able to use her newfound focus to choose the focus of her inner experience. Although she described her inner experience as being more peaceful, she also began to feel anxiety (e.g., shakiness, physical and psychic uneasiness, racing thoughts, intense restlessness). In fact, almost all of her samples during this time included reports of anxiety; however, her inner experience was much less distressing overall than before. Hurlburt (1993) provides an example typical of her inner experience near the end of her participation.

Fran was getting ready to work, and was looking at her spools of thread, deciding which one to use to crochet a basket. She said to herself in Inner Speech, "What color?" At the same time she was seeing an Image of herself sitting on her bed crying. This Image was seen in full color, viewed from Fran's side so that Fran in the image was in profile. The Image was accurate in detail, color, etc., except that she was wearing a white blouse when in reality she didn't own a white blouse. Also at the same time Fran was

feeling anxious, a shaky feeling in her body and her mind. (pp. 216)

Although it is unclear if Fran's improvement can be attributed to her participation in DES, Hurlburt (1993) provided several speculations on the reasons for Fran's improvement. First, he speculated that the immediate cessation of her multiple images after they clarified the details of her darkest images (i.e., suicidal, etc.) was not a coincidence. He attributed the cessation to either her facing the worst her inner experience could offer or to the emotionally charged interaction that facing this experience brought forth.

His second speculation was that DES impacted Fran's psychotherapy because she reported that her newfound clarity of inner experience helped her reach a deeper level of understanding with her psychotherapist. Now, she was able to better explain to her psychotherapist why she was unable to perform certain tasks that he had suggested like leaving her home when she felt low. She found the tasks extremely difficult because her overwhelming inner images made performing the task extremely difficult for her.

Hurlburt's (1993) third speculation was that developing clearer inner experience made it easier for her to control it. Before, her distressing inner experiences could last for hours or days even if she tried to stop them. Now, she could notice when many of her distressing inner experiences were starting and then stop them.

His final speculation was that the nonspecific interpersonal aspect of DES may have contributed to the impact DES had on her; however, he added that this aspect was probably not as important as the clarity of her inner experience because she was already experiencing nonspecific interpersonal factors with her psychotherapist.

Fran developed an increased ability to choose the focus of her inner experience instead of being overwhelmed by multiple simultaneous inner experiences, but there are likely many ways

that participants can benefit from DES. For other participants, simply observing the content of their inner experience can be clinically useful. This can be seen in the next case study.

Steven. “Steven,” a participant in a DES study of depression, had sought out psychiatric treatment because he experienced incessant imaginary internal arguments between himself and others (Heavey, Hurlburt, & Lefforge, 2010). He reported that in his imagination he argued nonstop for hours or days with his wife, his friends, his professors and other people in his life. Steven’s psychotherapist believed that he may have been suffering from depression and obsessive-compulsive disorder. Steven collected 56 samples over the course of 10 weeks. He sampled for one day each week and collected roughly 6 samples per day. At the start of sampling, much like Fran, Steven was convinced that elements of his inner experience (i.e., nonstop imaginary arguments), lasted for hours or days; however, unlike Fran, his sampling contradicted his belief. Overall, less than 4% of Steven’s samples included imaginary internal arguments. By the end of sampling, Steven gave up the notion that he had frequent and long-lasting imaginary internal arguments because *his own* observations showed him that these arguments occurred much less frequently than he initially believed. Heavey, Hurlburt, and Lefforge (2010) do not mention the impact of sampling on Steven’s psychiatric treatment; however, it seems likely to have had some influence since his incessant internal arguments were the reason he sought psychiatric treatment. Without DES, Steven and his psychotherapist would have had to rely on Steven’s retrospective reports of the frequency of his imaginary arguments. Steven very likely would have been correctly, but misleadingly diagnosed with Obsessive-Compulsive Disorder. The diagnosis would have been correct because it relied on the only available data source for Steven’s obsessions and compulsions, Steven himself, and because it met the DSM-IV-TR criteria. The diagnosis would have been misleading because although

Steven believed that he had incessant imaginary arguments in his mind, he did not. For Steven, it seems that DES impacted him clinically by allowing him to observe the true frequency of the arguments. Although DES seems to have been clinically beneficial for Steven and other participants as well, it seems that DES can have benefits which are not related to psychological symptoms.

Cobo. Hurlburt and Cobo (2011) discuss a case in which sampling seems to have resulted in non-clinical benefit for the participant. Ricardo Cobo is an expert guitar player. He won the prestigious Guitar Foundation of America International Guitar Competition, debuted as a professional musician at age sixteen on a telecast watched by over nine million viewers, and has a successful career as a guitarist. Cobo also happens to have given guitar lessons to his coauthor, Russell Hurlburt, for five years. Cobo taught Dr. Hurlburt to first visualize his fingers next to the frets and then move his fingers to match the image. Dr. Hurlburt struggled with this for years and wanted to know all the details in Cobo's images so that he could make sure that his own mental images contained the same details. Dr. Hurlburt became frustrated because Cobo's answers did not satisfy him because Cobo was unable to answer questions like "Do you see just your fingertips or your whole fingers?" and "Do you see steel frets on ebony?" This exchange eventually led to Cobo agreeing to participate in DES.

It took Dr. Hurlburt nine days of sampling (instead of the typical three or four) before he had even a modicum of confidence in his ability to apprehend Cobo's experience with high fidelity. After these nine days of mostly of non-guitar playing samples, Cobo began collecting samples while practicing the guitar and performing at a concert. These samples revealed that Cobo's belief about his inner experience (i.e., "seeing" his fingers) was largely incorrect. In none of his samples did he clearly see his fingers playing. He did have a handful of samples in which he

described a vague seeing, but it definitely was not clear, and it could not be determined if the seeing was a sensory experience or if it was felt. Cobo noted that his experience as a DES participant changed his perspective on his inner experience and how to best teach his students:

I've learned that I don't actually see notes but rather experience or feel them and how they strike me...As a result of my participation here, I've come to accept that the differing ways that musicians talk about visualizing is probably not a difference in terminology or jargon but rather a difference in their experience. I see that I now have to revise and clarify my way of describing a technique or process to a student: I cannot assume that a student will "see" what I "see," even if we both agree we are seeing the same thing. I can confirm specifically that when I am learning very tricky ornamental figures (as in Baroque and contemporary music) I first, before I play anything, hear them internally. Then, when I start to play, I begin by looking in reality at my fingers on the fingerboard, as if I am videotaping where they go; during that playing I listen for the desired connection and result. Eventually I can execute almost any passage with my eyes closed and my focus guided by an internal experience...I have revised my thinking on how I describe visualization and what I actually ask my students to do. I now accept that students initially may have actually to look at their left hand while they play, and that as more highly automated and skilled playing develops, they will rely less and less on actually looking at their hands." (pp. 289-290)

Unlike the previous case studies, Cobo's sampling did not seem to have any impact on him clinically, but it did change the way he teaches students and his belief concerning his inner experience. He attributed these changes to his experience as a DES participant. DES, in addition to having clinical and nonclinical benefits for individual participants in case studies, it also has

proved to be a useful research tool with clinical potential for some clinical populations as a whole.

Descriptive Experience Sampling Research with Clinical Populations

DES research on clinical populations has provided valuable insights into several disorders and suggests that DES may have had a therapeutic impact on many participants. DES research on individuals suffering from the following clinical disorders/symptoms will be reviewed:

Depressive Disorders, Bulimia Nervosa, Posttraumatic Stress Disorder, and Schizophrenia.

Depression. The notion that DES has a therapeutic impact on participants suffering from depression has been discussed by Hurlburt (1993) and Gunter (2011). Both believed that participating in DES may explain the improvement in their participants' depressive symptoms. Hurlburt (1993) speculated that participating in DES results in a clarity of inner experience, which leads to a reduction in symptoms. Gunter (2011) attributed the decline in depressive symptoms in his study to an increase in self-awareness and the common curative factor of nonjudgmental attention. He also speculated that participants suffering from depression experienced depressive symptoms less often than they believed. Participating in DES simply showed them that this was the case.

Hurlburt (1993) used DES with individuals suffering from depression. He recruited two participants suffering from depression, one with dysphoria, and one that experienced "slight hypomania." He sampled each participant during periods of depressed/dysphoric mood as well as periods of euthymia. Hurlburt (1993) discussed his tentative conclusions about the experience of depression and then contrasted his findings with Beck's cognitive theory of depression.

Participating in DES seems to have a therapeutic impact on participants. Hurlburt (1993) found that three of his four participants (two suffering from depression, one experiencing

hypomania, and one experiencing dysphoria) became less depressed over the course of sampling. Gunter (2011) had similar findings. He noted that the group suffering from depression evidenced a decline in self-reported depression from severe to moderate over the course of the sampling. This decline was especially noteworthy because the participants took an average of only sixteen days to complete sampling. These findings, however, were not conclusive given that changes in depressive symptomatology was not the focus of these studies and neither employed a control group.

Bulimia Nervosa. People suffering from bulimia nervosa tend to have an inner experience that is very similar to that of “Fran,” their attention is composed of many distinct and simultaneous fragments of inner experience (Jones-Forrester, 2009). This phenomenon is called fragmented multiplicity (Jones-Forrester, 2009). Each participant suffering bulimia nervosa experienced fragmented multiplicity at a rate at least ten times more frequent than the average DES participant from a normative sample. Participants suffering from bulimia nervosa also lacked a coherent inner experience and did not have a clear focus on the important aspects of their environment (Jones-Forrester, 2009). One participant’s experience of fragmented multiplicity is given below to help illustrates the seemingly chaotic inner experience of people suffering from bulimia nervosa:

Vicky was pushing open the door of the library, and at the moment of the beep she was simultaneously noticing that the door she was pushing was heavy, and noticing that the automatic door beside her was open, and knowing that she could have gone out that door. This “noticing” included the ideas that she could have gone out the other door or could have avoided the heavy door, that she could have saved herself the hassle, which

were apprehended as multiple thought/feelings, not in words, but all smashed together, which if in words would have been “why did I do it,” “could have avoided it,” “why bother with the hassle.” These multiple thought/feelings were simultaneously apprehended as multiple thoughts all smashed together, intertwined with a feeling of disappointment that was apprehended as a subtle feeling of reprimanding herself and a bodily feeling of her shoulders dropping. At the moment of the beep she also had a separate, simultaneous bodily sensory awareness of pushing against the heavy door, and that she had to give more force to it, and an external sensory awareness of the bright blueness of the sky reflected in the bottom of the doorway. Additionally, she had a separate, simultaneous unsymbolized thought that was not in words, but if it was would be “wow it’s nice outside”. She was also innerly seeing the word “UGH” in neutral grey on a grey background, with spiky edges, appeared in big, 3-dimensional, cartoon-like lettering, which took up most of her head space, occupying the size of her forehead. (p. 196)

This sample represents less than one-second of Vicky’s inner experience, yet it displays a seemingly overwhelming number of inner experience fragments. The largest number of distinct simultaneous aspects of inner experience Jones-Forrester (2009) found was 30. This number could have been higher, but some participants experienced so many simultaneous aspects of inner experience that they may not have been able to report them all due to the constraints of memory and the fleeting nature of their inner experience (Jones-Forrester, 2009).

Besides having many aspects of inner experience, all of the participants either struggled with the experience of emotion or lacked feeling experiences altogether. Jones-Forrester (2009) described the participants’ inner experiences of emotion as “strikingly unclear, complex,

frequently distressing, and often profoundly ambiguous” (pg. 382). She also stated that all participants had difficulty with “clearly and directly *feeling* their emotions” (pg. 340). Thus, the participants’ were, at times, partially and seemingly unintentionally disconnected from their emotions. In other instances, the participants tried to intentionally exclude part of their experience.

This conscious attempt to control or dissociate from intense and often disturbing cognitive, affective, or sensory experiences related to food, weight, shape, appearance, or bulimia nervosa related behaviors is called interfering phenomena (Jones-Forrester, 2009). Interfering phenomena occurred in 10 of the 13 participants. The frequency of the phenomena was bimodal as seven participants displayed it in approximately 13% of samples; whereas, the remaining three experienced it in roughly 60% of samples. One of “Monica’s” samples provides an example of interfering phenomena. In this sample, she is experiencing multiple simultaneous overlapping instances of inner speech:

“Why am I at the movies?” “she’s thin, I wish I was like that,” “I should be studying,” “can’t wait until I finish school so I can relax,” “I don’t have time for the movies,” “I need to lose weight,” “can’t wait to go home to have the pound cake,” “what are you thinking? You just finished popcorn, you shouldn’t be eating for like a year.” At the same time, a new set of inner speakings had been added to this chaotic jumble of inner speech. These new inner speakings, which were also apprehended as simultaneously being said to herself in her own voice, included “I have to stop these thoughts,” “I have to concentrate on the movie,” “I’ve got to get this under control,” “Am I ADHD?” “I have to go to a therapist,” “This is irrational,” “I have to get this under control,” “I’m exhausted just from thinking,” and “I can’t stay focused.” These

new competing inner speakings were apprehended as being somehow stronger than the set of thoughts that had continued from the previous beep, but all are still simultaneously ongoing in her awareness at the moment of the beep. She was still at the movies, but that was not at all in her attention. (p. 304)

This example highlights Monica's inner struggle to silence the disturbing portion of her inner experience. Jones-Forrester's (2009) findings are very similar to those in an earlier study by Doucette and Hurlburt (1993). As a whole, the DES research on Bulimia Nervosa suggests that these individuals lack a coherent inner experience or are burdened with overwhelming, fragmented inner experience. Although neither Jones-Forrester (2009) nor Doucette and Hurlburt (1993) explored the impact of DES on the participants, it seems possible that DES could potentially have had an impact on their symptoms because increases in self-knowledge are often viewed as a beneficial part of therapy by clients (Werbart & Johansson, 2009) and because "Fran," who was mentioned above in a case study, had an inner experience that is similar to those found in individuals suffering from Bullimia Nervosa and found DES beneficial.

Posttraumatic Stress Disorder. DES research has provided a qualitative account of the experience of emotional numbing in individuals suffering from combat-related PTSD. For these individuals, inner experience of feeling was unusually low. Excepting one participant outlier who accounted for 73% of the total feeling samples, the experience of feeling occurred in only 4% of samples. Even when it seemed apparent to an outside observer that ongoing emotions were present, the participant rarely had an inner experience of "feeling" any emotion (Raymond, 2011).

In fact, in the few instances when participants experienced clearly apprehended feelings, the emotion was most commonly anger or another negatively valenced emotion. For example, one

participant, “Jacob,” lacked an experience of emotion in all but one of his samples; however, he either displayed the affect representing that emotion or his experience seemed almost unquestionably one of a certain emotion (e.g., anger). In one sample, he wanted to throw his computer out of the window because of problems with a software update, but reported no feelings of anger in his awareness at the moment of the beep. Another participant, Peter, experienced instances of inner seeing in which he envisioned himself perpetrating violence, yet he did not feel emotion.

Because the focus of Raymond’s (2011) study was on describing inner experience and not on exploring the impact of DES on participants, we do not know how these participants were affected by participating in DES.

Schizophrenia. Hurlburt (1990) completed sampling with four participants suffering from schizophrenia and seven normal participants. He found that transference and countertransference occurred earlier and more powerfully in DES than in his work as a psychotherapist. He asserted that DES had a therapeutic or growth-promoting impact on every participant in this study and every DES study he conducted before it (Hurlburt, 1990).

Summary. Previous DES studies generally speculate, suggest, or outright state that participating in DES has a therapeutic impact on participants (Hurlburt, 1990; Hurlburt, 1993; Hurlburt & Heavey, 2006; Gunter, 2011). DES researchers have made the following speculations regarding the impact of DES: 1) that it has an informational impact (e.g., increased awareness of inner experience which informs participants of the frequency and nature of their symptoms), 2) that it has an inner experience creation or clarifying impact (i.e., DES helps participants have inner experience that initially did not exist or improves the clarity of their already present inner experience) 3) that it has an indirect impact (i.e., the newfound existence of inner experience or

the increased clarity of inner experience leads to better communication with others) and 4) that it provides a nonspecific, beneficial interpersonal influence (Hurlburt, 1990, 1993; Hurlburt & Heavey, 2006; Heavey, Hurlburt, & Lefforge, 2010; Gunter, 2011). I believe that all of these speculative explanations play a part in the potential therapeutic impact of DES. Additionally, I view the core of these speculations as being consistent with the mechanisms of change posited by person-centered therapy, common factors, and the psychotherapy process literature.

Present Study

The present study was an exploratory examination of whether or not DES appears to have a therapeutic effect on participants. It investigated the results of five days of participation in an ongoing, nonclinical DES study on reading and self-talk. The present study also explored factors that may have influenced or moderated any observed therapeutic effects. To determine if DES had a therapeutic impact on the participants as a whole, participant symptoms before and after completing DES were measured using the Global Severity Index from the Symptom Checklist 90 – Revised (SCL-90-R; Derogatis, 1994), which was used to measure self-reported psychological symptomatology.

To examine the factors that may have influenced therapeutic effects, we used two methods: process overviews and exit interviews. The process overview consisted of an observer's responses to a set of questions related to the process of each DES interview (e.g., what was it like to interview the participant, was any change noticed in the participant?). The purpose of the process overview was to provide an outside perspective on the process of each DES expositional interview. These process overviews could then be related to any observed impacts as a means of potentially understanding the reasons for the impact. I took the role of observer and wrote these process overviews after participating in the DES interview, watching a video of the interview, or

both.

The exit interview was a semi-structured interview created for the present study that asked participants how DES affected them (e.g., Did DES have an impact on you, positive or negative?), and elicited their experiences during DES (e.g., What was it like to collect samples/beeps?). Interviewers were free to ask follow-up and clarification questions as needed. These interviews were recorded via video or audio and transcribed.

To analyze the exit interview and process overview data, I assigned codes to the data that reflected themes that emerged throughout the exit interviews and the process overviews. The coded exit interview transcripts and process overviews were given to a second rater who reviewed these documents and the coding. This rater noted where she believed a code should be added, deleted, or modified. These differences in coding were resolved through discussion between the raters. When there was coding disagreements that could not be resolved through discussion, it was noted in the exit interview or process overview data.

After SCL-90-R raw scores were analyzed to determine if there was a statistically significant reduction in self-reported psychological symptoms post-DES, participants were grouped into four categories: improved, worsened, unchanged, and drop-outs. These groups were compared based on their exit interview and process overview codes to develop tentative hypotheses about the reasons for any observed changes in psychological symptomatology.

Chapter 3

Method

Participants

The participants in this study were part of an ongoing, non-clinical research project with two components: one that investigated inner experience while reading fiction and one that explored the everyday inner experience of individuals who reported either a high or low frequency of self-talk (i.e., talking to themselves either out loud or carry on an internal conversation with themselves).

As part of this combined research project, we recruited participants through the psychology department subject pool and screened them based on their Self-Talk Scale (STS; Brinthaup, Hein, Kramer, 2009) scores. Participants whose scores were categorized as reflecting either high self-talk (highest quartile) or low self-talk (lowest quartile) were recruited to participate in DES. There were 10 participants from the high-self talk category and 4 from the low-self talk category.

Participants were given Subject Pool credit for the screening, \$5 for each of the first four DES interviews, and \$20 for the final DES interview. A total of 14 participants were recruited for the present study, two of whom withdrew from the study early because they found participating unpleasant. One of these participants completed one DES interview and the exit interview. The other participant attended two DES interviews and did not complete the exit interview; however, this participant approached one of the researchers and explained her reasons for withdrawing, which was that participating in DES made things worse for her because it caused her to ruminate on her inner experience for a couple hours after the beep. Neither participant who withdrew from the study completed a post-DES SCL-90-R. The data from the participants who withdrew were included because it would be misleading to explore the

therapeutic effects of DES, yet ignore the data collected on participants, who despite being compensated financially and with class credit, dropped-out because they found DES too unpleasant.

There were 11 female participants (79%) and 3 males (21%). Due to a lapse in the data collection procedures, the demographic questionnaires for four participants (Isobel, Alana, Maddi, and Liz) were missing. Demographic information for the remaining 10 participants is as follows: age ($M = 20.0$; $SD = 3.7$); race (3 Hispanic; 3 African-American/Black; 2 White; 1 Hawaiian/Multi-racial; 1 Filipino).

Measures

Self-Talk Scale. The Self-Talk Scale (STS; Brinthaup, Hein, Kramer, 2009) is a 16-item self-report questionnaire designed to measure the frequency and functions of a person's self-talk. The measure assesses four functions of self-talk (social-assessment, self-reinforcement, self-criticism, and self-management) and the frequency of self-talk (i.e., overall self-talk score). Each item begins with the stem "I talk to myself when..." Example items include "I talk to myself when something bad has happened to me" and "I talk to myself when I need to figure out what I should do or say." For each item, the participant selects *never*, *seldom*, *sometimes*, *often*, or *very often*. The STS demonstrated acceptable 3-month test-retest reliability with correlations ranging from .50 for the Self-Reinforcement subscale to .71 for the Social Assessment subscale. Internal consistency was acceptable as demonstrated by Cronbach alpha coefficients ranging from .79 to .89 (Brinthaup, Hein, Kramer, 2009). The convergent and discriminant validity of the measure has not yet been evaluated.

Symptom Checklist 90 - Revised. The SCL-90-R (Derogatis, 1976, 1994) is a 90-item self-report scale that measures psychological symptomatology. Participants indicate how frequently

they experience each symptom on a 5-point scale (0 = not at all; 1 = a little bit; 2 = moderately; 3 = quite a bit; and 4 = extremely). The measure provides scores on nine subscales and three indices. The nine subscales are Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. The three indices are the Global Severity Index, the Positive Symptom Distress Index, and the Positive Symptom Total. The Global Severity Index measures overall psychological distress. The Positive Symptom Distress Index measures the intensity of endorsed symptoms, and the Positive Symptom Total is a count of the number of symptoms endorsed.

The SCL-90-R has acceptable internal consistency as demonstrated by coefficient alphas ranging from .79 to .90 (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988). Test-retest reliability coefficients ranged from .68 on the Somatization subscale to .91 on the Global Severity Index over a two-week testing interval (Derogatis, 1994). The SCL-90-R demonstrated convergent and discriminant validity when its scales and indices were compared with the MMPI (Derogatis, 1994; Schmitz, Kruse, Heckrath, Alberti, & Tress, 1999). In addition, the SCL-90-R is sensitive to change in psychotherapy (Kopta, Howard, Lowrey, & Beutler, 1994). This study used only the Global Severity Index, as it measures overall psychological symptomatology.

Exit interview. This semi-structured interview was created for this study. It was used to elicit participants' accounts of what it was like to participate in DES and what impact they believed DES has had on them. It contained the following seven questions: What was it like to collect samples? What were the interviews like for you? Did DES have an impact on you, positive or negative? Did DES have an impact on your life outside of sampling, your thoughts, or your feelings? Is there anything you do differently because of your participation in DES? Has DES influenced the way you view yourself or anything else? Do you have any other thoughts or

reactions about participating in this study? Interviewers asked follow-up questions to clarify participant responses or to explore topics in greater depth as needed. The exit interview was videotaped and later transcribed.

Procedure

The study procedure had four phases: screening, DES in the participants' everyday environment, DES while-reading, and the exit interview.

Screening. We recruited participants by placing a notice on the psychology department subject pool website, which advertised the study and offered research credit. We met potential participants in the Descriptive Experience Sampling Lab, explained the screening procedures, and obtained written consent for screening before continuing. Participants consenting to screening completed four questionnaires: a brief demographic questionnaire, the SCL-90-R, the Self-Talk Scale, and the Nevada Inner Experience Questionnaire. Although participants completed the Nevada Inner Experience Questionnaire, the data from it are not discussed here because it was not relevant to the current study. It took participants approximately 30 minutes to complete the four questionnaires.

Participants with Self-Talk Scale scores categorized as being in the top or bottom quartile were invited to the Descriptive Experience Sampling Lab for recruitment into the DES portion of the study. We explained the remaining study procedures, and participants who declined to give consent took no further part in the study. Throughout the study, all interviewers were blind to whether participants were in the high or low self-talk category.

DES in the everyday environment. Participants who agreed to participate in DES began with an orientation to the DES procedures. In the orientation phase, we showed participants how to operate the beeper and the attached earpiece, and we told them about the random nature of the

timing of the beeps. We asked participants to go about their day normally while wearing the beeper. We instructed participants to take notes about whatever was in their experience just before the beep interrupted it (i.e., the moment of the beep). We did not tell participants what types of experiences to attend to at the moment of the beep. Instead, we asked them to take note of whatever was directly present in their experience at the moment of the beep. We told participants that they could decline to discuss a sample with us if they preferred for privacy reasons. We asked them to collect additional sample(s) to replace any private sample(s) that were skipped. We gave participants a small notebook for taking notes about their inner experience and explained that they could refer to these notebooks as needed during the expositional interviews. We informed the participants that these notebooks were private and that we would not collect them or ask to see them. At the end of the orientation meeting, we scheduled the expositional interview.

During the sample collection phase, each participant wore the beeper until s/he had taken notes on six samples. This takes approximately 3 hours and is considered one day of sampling. Within 24 hours of collecting these six samples of inner experience, the participant took part in an expositional interview. During this interview, we discussed the samples with the participant. Between two and five researchers conducted the expositional interviews, which lasted approximately one hour. Dr. Hurlburt was present for almost all of the interviews; Dr. Heavey was present for many of the interviews; and one to several graduate students were also often present for the interviews. The goal of the interview was to apprehend the participant's "pristine inner experience" with high fidelity. "Pristine inner experience" (Hurlburt, 1990, 1993, 2011) is the experience of internal and external events that are directly and consciously experienced by the participant naturally in his or her everyday environment and unaltered by attempts to capture

the experience.

Apprehending a participant's inner experience with high fidelity is challenging for both interviewers and participants. Some of the common pitfalls we try to avoid are asking leading questions, inferred apprehension, presuppositions about inner experience, and differences in meaning between participants and interviewers. We aimed to minimize our influence on the participants' descriptions by avoiding leading questions. As a result, we began expositional interviews with some variant of the question, "What, if anything, was in your inner experience at the moment of the beep.

We also worked to avoid inferences, which is when participants infer that they had some sort of inner experience, but actually that experience was not directly present to them. An example of this would be a participant reporting that s/he felt hungry at the moment of the beep when in fact; the participant inferred s/he felt hunger because s/he was innerly seeing bacon at the moment of the beep. In this example, the feeling of hunger was inferred and the inner seeing of bacon was directly experienced.

DES interviewers aim to minimize the influence of presuppositions on apprehension of inner experience. Presuppositions are potentially rational, but incorrect beliefs that are held to be true so firmly that their veracity goes unconsidered (Hurlburt, 2011). For example, a participant may believe that it is impossible to experience a thought that is not symbolized in words (e.g., innerly heard, innerly spoken, inner seeing of words or images). We attempted to limit the influence of our presuppositions and those of the participant by setting aside or "bracketing" these presuppositions (Hurlburt, 2011).

We dealt with differences in meaning between participants and interviewers by exploring with the participant the possibilities concerning the meaning of the language used by the

participant and the interviewers. For example, in most situations, if a person said to a friend, “I was looking at my computer screen,” the friend would assume that s/he knew what the person meant. In DES interviews, we would question what the person meant by “looking at the computer screen.” We would explore possible meanings of this statement with the participant (e.g., were the participant’s eyes pointed at the computer screen, but the participant was attending to something in the periphery of his/her vision? Was the participant noticing a color on the screen? Was the participant innerly hearing the words s/he planned to type? Was the participant having any inner experience at all? etc.).

Keeping in mind the potential pitfalls of leading questions, inferences, presuppositions, and differences in meaning, we began the expositional interviews with some variant of the question, “What, if anything, was in your experience at the moment of the beep?” We discussed each sample until we believed the sample has been described and apprehended with as much fidelity as possible. Because attaining fidelity of apprehension of each sample and iterative training for future samples can take substantial time, sometimes we were not able to discuss all six samples during the one hour interview. The expositional interviews were videotaped from two simultaneous perspectives, so that the participant could be viewed in high visual fidelity from one perspective and the interviewers could be viewed from the second perspective. The aim was to combine these two recordings into a split screen video for each interview; however, this was abandoned midway through the study for two reasons. First, the interviewers could not be viewed with enough detail to adequately discriminate the interviewers affects. Second, there was less visual detail of the participants in the smaller, half-screen video than in full video, which made it somewhat more difficult to perceive the participants’ affects.

The same day as the expositional interview, one interviewer wrote an initial draft of

descriptions of each moment of experience. These sample descriptions were forwarded to the other interviewers, beginning a collaborative process of reviewing and perhaps refining the written descriptions. Edits were suggested and revisions were made until the research team was satisfied with each description, or until disagreements were clarified but not resolved, in which case the written descriptions reflected both or all sentiments. Participants received \$5 and one-hour of subject pool research credit at the conclusion of each of expositional interviews.

We asked participants to respond in writing, after each expositional interview, to the three following questions located in the back of the notebook we had given them: What was it like to collect the samples? What was the interview like for you? and Do you have any thoughts or reactions about participating in this study so far? We told them that we were interested in their account of what it was like to participate in DES. We explained that they could write their answers to these questions in their notebooks after they left the lab if that was more convenient or comfortable for them. We told participants that they could use these notes as a memory aid during the exit interview, but we would never ask to view their notes nor would we collect their notebooks. After participants left the expositional interview, we sent an email reminding the participant to answer these questions in case they had neglected to do so. After each expositional interview, I completed the process overview for the participant. If I had not been present for the sampling interview, I wrote the process overview after watching a videotape of the interview. The videotape was either a split screen video that simultaneously showed both interviewers and the participant, or it was two separate videos of the interviewers and the participant synchronized and played simultaneously on two different screens. This procedure of collecting samples, conducting an expositional interview, and writing a process overview was repeated on three additional days.

DES While-Reading. Inner experience while reading was the focus of one component of the larger ongoing, non-clinical DES research project, which the present study was a part of. This component examined individuals' inner experiences while completing a controlled reading task that occurred on the fifth day of sampling. Participant's while-reading inner experiences were compared with inner experiences in everyday environments. We did not collect process questions or perform the process overview for the reading-day expositional interview, so these data were not analyzed in the current study.

Participants were asked to read two short stories ("Big Two-Hearted River" by Ernest Hemingway, and "Winter Dreams" by F. Scott Fitzgerald) on a website. The website presented each story via a series of text slides. When participants finished reading a slide, they selected "next" on the screen. This process was repeated until they had read both stories. Participants were free to complete this task in any natural setting with a computer, such as their home or in a library.

At quasi-random times while reading, they received a DES beep through an earpiece or through computer speakers. The beep cued them to attend to their inner experience at the moment before the beep occurred and then to jot down some notes about the experience. It took participants roughly one hour to complete the reading task.

Within 24 hours of completing the reading task, participants completed an expositional interview. This interview used the standard DES procedures for conducting the expositional interview and writing descriptions of the participant's inner experience as outlined in the DES in the everyday environment section above. I did not prepare a process overview for the final expositional interview because the exit interview occurred immediately after the expositional interview and thus created a risk that the participant's responses during the exit interview might

influence my perspective of the process of the final expositional interview.

Process overview. After either participating in each DES interview or watching the videotape of it, I prepared a “process overview” by answering the following questions: What was it like to interview the participant? Were there any moments or interactions with the participant that seemed important or noteworthy? Did I notice any change in the participant? What do I believe caused this change or lack of change? And do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

The process overview allowed me to give my observations concerning the process that unfolded during the DES expositional interview for each participant. Because DES is unscripted and highly variable across participants, attending to this process at the individual level was done as a possible means to gain insight into the nature and reasons for any observed impact or changes. Each process overview was completed before I participated in or viewed a recording of the next expositional interview.

Exit interview. Immediately after this final expositional interview, we asked participants to complete the SCL-90-R and take part in the exit interview. During the exit interview, the interviewers who conducted the DES expositional interview used the semi-structured exit interview script to elicit the participant’s reactions to DES. The exit interviews lasted approximately 5 to 15 minutes. After this interview, participants received \$20 and subject pool research credit for their participation. We thanked them for participating in the study and answered any questions they had about the process or the study.

Coding of process overviews and exit interviews

To analyze process overview data and exit interviews, I transcribed the exit interviews, and then reviewed the process overviews and exit interviews that I had prepared. All process overviews were completed before I participated in or viewed the respective exit interview. The process overviews were not changed after they were written except to correct obvious typographical errors. This was done in an attempt to preserve the original communication and meanings of the author.

I created codes that reflected themes that emerged from the process overviews and exit interviews using a modified version of grounded theory (Strauss & Corbin, 1998; Glaser & Strauss, 1968). I applied these codes when they recurred in the data, and created new codes as needed until I believed I had captured the dimensions and nature of the data.

To provide some support the reliability of my process of assigning codes to the process overviews, a second rater reviewed the process overviews and the codes I had assigned. This second rater was a fellow graduate student who had also participated in this research project and thus had been present for many of the expositional interviews that were the basis for the process overviews. When the second rater disagreed with my coding, we resolved the discrepancy through discussion. When there were coding disagreements that could not be resolved through discussion, it was noted in the process overview data.

The same second rater who had reviewed the process overview coding also reviewed the exit interview transcripts and my assigned codes. We discussed instances in which the rater believed a code should be added, edited, or deleted. Out of a total of 379 codings, the second rater suggested a total of 16 changes: 14 codes added to the exit interviews and 2 added to the process overviews. These changes were reconciled through discussion in all but one instance. This lack of agreement occurred in Zelda's exit interview. The second rater believed the code *Interested in*

pursuing inner experience research/affected career interests should have been given in an instance where I believed the more appropriate code was *More curious about inner experience*.

This difference in coding is noted in Zelda's exit interview data.

Chapter 4

Results

The goal of the present study was to explore any potential therapeutic effects of DES and develop tentative hypotheses about the factors that may have influenced or moderated these potential effects. Participants who withdrew from the study likely influenced the results of this exploration so, before I review the results, I briefly discuss the influence of drop-outs on this study.

Of the 14 participants, 12 completed a pre- and post-DES SCL-90-R, and 2 participants withdrew from the study without completing a post-DES SCL-90-R because they found DES unpleasant. Although the drop-outs could not be included in analyses of symptomatology change because they did not complete a post-DES SCL-90-R, these participants' data were included in other analyses because they could be a valuable source of data concerning what factors may influence participant drop-out. For this reason, we chose to gain as much data from these participants as they would allow. One of the drop-outs agreed to complete an audio recorded exit interview, and the other informally approached one of the researchers to explain her reasons for withdrawing. This was not recorded; however, the researcher's account of the discussion with this participant was audio recorded. Both audio recordings were transcribed and coded using the exit interview coding procedures.

To achieve the goal of exploring the potential therapeutic effects of DES and developing tentative hypotheses about the factors that may have influenced or moderated these potential effects, we conducted data analyses that addressed the following questions: On average, did reported psychological symptoms decrease over the course of DES participation? And what, if any, factors (e.g., level of self-talk, process overview themes, exit interview themes) were

associated with the types of participant response to DES (e.g., decrease or increase in reported symptoms, withdrawing from the study)?

Did self-reported symptoms decrease post-DES?

To address this question, we performed a directional dependent-samples *t* test on participants' raw scores from the Global Severity Index (GSI) of the SCL-90-R. A directional test was chosen for two reasons. First, preserving power was paramount due to the small sample size. Second, there is anecdotal evidence (Hurlburt, 1993; Hurlburt & Heavy, 2006) and research on participants suffering from depression (Gunter, 2011), which suggests that DES may reduce psychological symptomatology. Thus, the a priori hypothesis of the study was directional—that there would be a decrease in reported symptoms from pre to post-sampling.

There was a statistically significant decrease in SCL-90-R scores after participation in DES, $t(11) = -2.01, p = 0.03$. The mean change score was $-19.92 (SD = 32.83)$. The mean SCL-90-R score pre-DES was $77.00 (SD = 53.29)$. After participation in DES, the mean was $57.08 (SD = 57.46)$. The magnitude of this decline in SCL-90-R scores was moderate, Cohen's $d = -0.61$ (Cohen, 1988). Thus, for the 12 participants for whom we had both pre and post-sampling SCL-90-R scores, on average there was a moderate decrease in reported psychological symptomatology across their span of their participation in the study.

We also performed a directional dependent-samples *t* test on participants' SCL-90-R subscale scores. These indicated that there was a statistically significant decrease in reported symptoms on the Somatization, Interpersonal Sensitivity, and Depression subscale. Because of the small sample size and the measurement error in the SCL-90-R subscales, the one-week test-retest reliability of these scales was used to determine if on average, these statistically significant decreases met the criteria of the Reliable Change Index. The average raw score decrease required

to meet the RCI with 95% confidence for the Somatization, Interpersonal Sensitivity, and Depression subscales was 6.55, 3.77, and 7.09 respectively. The average raw score decrease for the Somatization (3.83), Interpersonal Sensitivity (3.58), and Depression (5.58) subscales failed to meet the RCI criteria. Thus, these statistically significant decreases were not deemed reliable based on the RCI criterion. The results are reported in the Table 1 below.

Table 1

SCL-90-R Subscale Scores

| Subscale | Pre Mean | Pre SD | Post Mean | Post SD | Mean Change | Change SD | t-value | p-value |
|---------------------------|-----------------|---------------|------------------|----------------|--------------------|------------------|----------------|----------------|
| Somatization | 8.67 | 10.07 | 4.83 | 8.07 | -3.83 | 1.30 | -2.94 | 0.01 |
| Obsessive-Compulsive | 10.67 | 6.62 | 9.92 | 7.95 | 0.75 | 1.07 | -0.70 | ns |
| Interpersonal Sensitivity | 9.92 | 6.25 | 6.33 | 6.38 | -3.58 | 1.91 | -1.87 | 0.04 |
| Depression | 15.00 | 10.10 | 9.42 | 9.11 | -5.58 | 2.09 | -2.67 | 0.01 |
| Anxiety | 6.50 | 5.25 | 5.42 | 6.82 | -1.08 | 1.88 | -0.57 | ns |
| Hostility | 3.75 | 4.36 | 2.75 | 4.57 | -1.00 | 0.71 | -1.41 | ns |
| Phobic Anxiety | 2.33 | 2.56 | 1.75 | 3.24 | -0.58 | 0.80 | -0.73 | ns |
| Paranoid Ideation | 5.67 | 4.64 | 5.42 | 5.11 | -0.25 | 0.81 | -0.31 | ns |
| Psychoticism | 6.33 | 5.59 | 4.58 | 4.87 | -1.75 | 1.46 | -1.20 | ns |

ns: not statistically significant

What factors were associated with GSI score decrease?

Given that there was an average decrease in reported symptoms, we explored the relationships between symptom change and the following factors: level of self-talk, the process overview codes, exit interview codes, the five frequent phenomena of inner experience, and

gender. We also will discuss the individual results of the outliers in regard to symptom change.

Self-talk. To determine if a participant's level of self-talk was related to their symptom change, we performed a point-biserial correlation between self-talk category and SCL-90-R raw change scores. There was not a statistically significant correlation between self-talk category and change scores, $r(10) = -.04, p = .89$.

Process overview codes. We examined the relationship between symptom change and process overview codes by first categorizing participants based upon their SCL-90-R change scores and then searching for process overview coding trends between these categories. We grouped participants into symptom change categories by looking for natural breaks in participants' raw score changes on the Global Symptom Index of the SCL-90-R. This resulted in four groups: decrease in reported symptoms, no substantial change in reported symptoms, increase in reported symptoms, and drop-outs. Following were the ranges of raw score changes for each group: potentially substantial decrease in reported symptoms (n=6, scores from -33 to -65), no substantial change (n=5, scores from -11 to 11), potentially substantial increase in reported symptoms (n=1, score 42), and drop-outs (n=2, no scores). The pre-DES, post-DES SCL-90-R GSI scores for each participant are shown in Table 1, along with change scores, symptom change category, and level of reported self-talk.

Table 2

SCL-90-R GSI Raw Scores

| Name | SCL-90-R GSI Raw Scores | | | Symptom Change | Self-Talk |
|----------|-------------------------|----------|--------|----------------|-----------|
| | Pre-DES | Post-DES | Change | | |
| Adele | 68 | 3 | -65 | Decreased | High |
| Bailey | 101 | 38 | -63 | Decreased | High |
| Jenni | 141 | 89 | -52 | Decreased | High |
| Maddi | 53 | 15 | -38 | Decreased | Low |
| Olivia | 50 | 16 | -34 | Decreased | Low |
| Pamela | 106 | 73 | -33 | Decreased | High |
| Lance | 14 | 3 | -11 | Unchanged | Low |
| Deana | 188 | 186 | -2 | Unchanged | High |
| Isobel | 89 | 92 | 3 | Unchanged | High |
| Zelda | 11 | 14 | 3 | Unchanged | High |
| Kevin | 18 | 29 | 11 | Unchanged | Low |
| Harrison | 85 | 127 | 42 | Increased | High |
| Alana | 65 | Missing | N/A | Drop-out | High |
| Paula | 166 | Missing | N/A | Drop-out | High |

Mean 77.00* 57.08 -19.92

*pre-DES mean does not include drop-outs as they were not included in the final analysis

To find trends in coding based on participant symptom change, we counted how frequently a code occurred in process overviews. To avoid redundancy, we counted a code only once for each participant regardless of how many times that code appeared in a participant's process overview. We decided that a code needed to be in the process overviews of at least three participants for it to be worthwhile to search for trends between the code and symptom change categories. Table 2 lists these codes. The code "Nothing Noteworthy" was not included in these counts. Although this code occurred in every participant's process overview, it was always in a subsection of the process overview in which it preceded or followed a noteworthy code. For example, in the

process overview for Bailey's first sampling day, she received the code *Participant discomfort/distress* in response to the question asking if any change was observed in the participant during the interview, but she was given the code *Nothing noteworthy* in response to the question that asked if the observer had any other thoughts or reactions about the interview.

Table 3

Frequent Process Overview Codes

| Process overview codes | Definition | Frequency |
|---|---|-----------|
| Participant discomfort/distress | Participant appeared in discomfort or distress | 13 |
| Participant self-discovery | Participant seemed to learn something interesting about their inner experience | 8 |
| Participant increased skill at DES task | The participant seemed better at apprehending their inner experience or communicating it to the interviewers | 8 |
| Participant re-experiencing | During the interview, the participant seems to have an experience that is similar to the sample they are discussing | 7 |
| Challenging interview | The interviewers seemed to find interviewing the participant difficult. | 7 |
| Participant increased interest | Participant appeared more interested in DES | 6 |
| Participant (more) relaxed/comfortable | The participant seemed relaxed or comfortable | 5 |
| Participant has enjoyable experience | The participant appeared to have an enjoyable experience. | 4 |
| Participant increased understanding of DES task | The participant seemed to show an increase in their knowledge about the DES task | 4 |
| Easy interview | The interviewers seemed to find interviewing the participant easy | 4 |
| Easier interview | The interview seemed easier to conduct than the previous one. | 4 |
| Participant feels weird/negative self-evaluation/wondering about negative self-evaluation | Participant made a comment that suggests s/he believes or suspects that they are weird, abnormal, or “messed-up.” | 3 |

After counting these codes, we examined the relative proportion of process overview codes across symptom response groups to see which codes may have been related to participant symptom change across sampling. Table 3 shows the percentage of participants within each category of degree of symptom change who received each frequent process overview code. Because only one participant experienced increased symptoms after sampling, process overview code percentages for that group are either 100% or 0%, but little confidence can be placed in

those percentages. It is also difficult to interpret the codes for the dropout group because they participated in so few DES expositional interviews and thus had many fewer opportunities to receive each code. Thus, the main focus was on differences in the proportion between those in the Decreased and Unchanged groups. Because of the small sample size, exploratory nature of the study, and lack of statistical power, we looked for what appeared to be relatively large differences (40% or greater) between the Decreased and Unchanged groups instead of analyzing the data using inferential statistics.

The following process factors met this criteria: : *Participant re-experiencing, Participant increased interest, Participant (more) relaxed/comfortable*, and a lack of pleasant codes (e.g., *Participant has enjoyable experience, Participant self-discovery, Participant increased skill at DES task, Participant increased interest, Participant (more) relaxed/comfortable, Easy Interview, Easier interview*, etc.). Additionally, it was noted that the process factor *Participant discomfort/distress* was assigned to every participant except the one in the Increased group.

Table 4

Process Overview Code Frequency by Symptom Change Category

| Process overview frequent codes | Overall Frequency | Decreased (n = 6) | Unchanged (n = 5) | Increased (n = 1) | Dropout (n = 2) |
|---|-------------------|-------------------|-------------------|-------------------|-----------------|
| Participant discomfort/distress | 13 | 100% | 100% | 0% | 100% |
| Participant self-discovery | 8 | 67% | 60% | 100% | 0% |
| Participant increased skill at DES task | 8 | 50% | 80% | 100% | 0% |
| Participant re-experiencing | 7 | 33% | 80% | 100% | 0% |
| Challenging interview | 7 | 33% | 60% | 0% | 100% |
| Participant increased interest | 6 | 83% | 20% | 0% | 0% |
| Participant (more) relaxed/comfortable | 5 | 67% | 20% | 0% | 0% |
| Participant has enjoyable experience | 4 | 17% | 60% | 0% | 0% |
| Participant increased understanding of DES task | 4 | 33% | 40% | 0% | 0% |
| Easy interview | 4 | 50% | 0% | 100% | 0% |
| Easier interview | 4 | 33% | 40% | 0% | 0% |
| Participant feels weird/negative self-evaluation/wondering about negative self-evaluation | 3 | 33% | 20% | 0% | 0% |

Participant discomfort/distress. Paradoxically, Harrison, the sole participant in the increase in symptomatology group, was the only participant whose process overviews did not indicate that distress or discomfort was observed during one or more of his DES interviews. Every other participant was assigned this code at least once. It is difficult to know what to make of this finding given that it is based on only one person, but it was surprising that the one person who reported an increase in symptoms was never observed to be uncomfortable during the expositional interviews.

Participant re-experiencing. This code was used when the participant showed evidence during the interview of having an experience that is similar to the sample they were discussing (e.g., signs of embarrassment when discussing an embarrassing sample, signs of excitement when discussing an exciting sample, etc.). It was given more frequently in the unchanged symptoms group (80%) than in the decreased group (33%). Although noteworthy, this finding is difficult to interpret.

Participant increased interest. A greater proportion of participants in the decreased group than the unchanged group received this code (83% vs. 20%). This code was assigned when a participant seemed to become more interested or invested in exploring their inner experience.

Participant (more) relaxed/comfortable. This refers to participants appearing relaxed/comfortable or appearing to become more relaxed/comfortable during the expositional interview. Participants in the decreased group received this code more frequently than those in the unchanged group (67% vs. 20%).

Absence of pleasant codes. Participants who withdrew from the study did not receive any codes in their process overviews that seemed pleasant. Alana's *discomfort decreased over time* code may seem like it could be a pleasant code, but it was not. It indicated that her discomfort lessened, but was still present. In other words, she experienced less of something unpleasant instead of having a pleasant experience.

Exit interview codes. We examined the relationship between reported symptom change and exit interview codes using the same procedure that was used for the process overviews (e.g., counting frequent codes and examining the relative proportion of those codes across the four groups of symptom change). The frequent exit interview codes are given in the Table 4.

Table 5

Exit Interview Code Frequency

| Exit interview frequent codes | Definition | Frequency |
|---|---|-----------|
| Enjoyable experience | Participant reported enjoying participating in DES | 10 |
| Increased awareness of inner experience | Participant comments suggested s/he learned something interesting about their inner experience and/or became more aware of their inner experience | 10 |
| More curious about inner experience | Participant comments suggested more curiosity about his/her inner experience and/or the inner experience of others | 9 |
| DES difficult until skill improves | Participant reported that DES was difficult until they became more skilled | 7 |
| Impromptu self-sampling/thinking about inner experience | Participant reported examining his/her inner experience or another person's inner experience | 4 |

Table 5 shows the proportions of exit interview codes present within each symptom change group. Because of the small sample size, low statistical power, and exploratory nature of the study, we examined this data by looking for trends between symptom change groups. Our examination of the relative proportions of the process overview codes across groups pointed to the variability in the code *Impromptu self-sampling/thinking about inner experience*. This code appeared in 66% (4 out of 6) of the exit interviews of participants in the decrease in reported symptoms group. This code was not present in any other group. Perhaps noteworthy, though difficult to interpret, the participant who reported an increase in reported symptoms received all codes except *Impromptu Self-Sampling/thinking about inner experience*. As was found in the process overview coding, participants who withdrew from the study did not receive any codes in their exit interviews that seemed pleasant. They received the following codes: *Undesirable rumination on inner experience*, *Discomfort decreased over time*, *Beep obnoxious*, *Beeper*

irritating, Beeper frightening, Specificity of interview questions irritating, DES was awkward, Private person, Does not like being told what to do, Believes she has heinous thoughts, Uncomfortable around cameras. Alana's discomfort decreased over time code was not a pleasant one because it indicated that she experienced less of something unpleasant instead of having a pleasant experience.

Table 6

Exit Interview Code Frequency by Symptom Change Category

| Exit interview frequent codes | Overall Frequency | Decreased (n = 6) | Unchanged (n = 5) | Increased (n = 1) | Dropout (n = 2) |
|--|-------------------|-------------------|-------------------|-------------------|-----------------|
| Enjoyable experience | 10 | 67% | 100% | 100% | 0% |
| Increased awareness of inner experience | 10 | 83% | 80% | 100% | 0% |
| More curious about inner experience | 9 | 50% | 100% | 100% | 0% |
| DES difficult until skill improves | 7 | 50% | 50% | 100% | 0% |
| <i>Impromptu self-sampling/thinking about inner experience</i> | 4 | 67% | 0 | 0% | 0% |

Five Frequent Phenomena of inner experience. In order to determine if there were trends in the relationship between symptom response and the five most frequent phenomena of inner experience (Heavey & Hurlburt, 2008; i.e., inner speech, inner seeing, unsymbolized thinking, feeling, and sensory awareness), we compared the average frequency of each type of experience with symptom response categories. Due to a small sample size and a lack of adequate power to perform a MANOVA, we examined the relative proportions across the three groups for each of

these phenomena of inner experience. Because there were so few samples from the two participants who dropped out of the study, we did not include them in this examination. These proportions are shown in Table 6. We did not find any apparent relationship between symptom change groups and average frequency of each of the five frequent phenomena of inner experience, except for perhaps that the one participant in the Increased group having a noticeably higher proportion of moments with sensory awareness than participants in the other two groups.

Table 7

The Five Frequent Phenomena of Inner Experience

| Category | Inner Speaking | Inner Seeing | Unsymbolized Thinking | Feeling | Sensory Awareness |
|-------------------|----------------|--------------|-----------------------|---------|-------------------|
| Decreased (n = 6) | 16.6% | 18.8% | 9.1% | 15.0% | 19.9% |
| Unchanged (n = 5) | 4.8% | 29.2% | 8.6% | 20.1% | 36.0% |
| Increased (n = 1) | 27.8% | 5.6% | 2.8% | 22.2% | 66.7% |

Gender. A greater percentage of women than men reported a decrease in symptoms (55% vs. 0%), and withdrew from the study (18% vs. 0%). Women were assigned the following codes that men were not: *Impromptu self-sampling/thinking about inner experience* (36% vs. 0%), *Participant enjoyable experience* (36% vs. 0%), and *Participant feels weird/negative self-evaluation/Participant wondered if weird* (27% vs. 0%). All men received the code *Enjoyable experience* in their exit interviews. The tables below display these findings. Table 8 shows the

percentage of men and women in each symptom change category. Table 9 displays the percentage of men and women receiving each frequent process overview code. Table 10 shows the percentage of men and women being assigned each of the frequent exit interview codes.

Table 8

Gender and Symptom Category

| Category | Women (11) | Men (3) |
|-----------|------------|---------|
| Decreased | 55% (6) | 0% (0) |
| Unchanged | 27% (3) | 66% (2) |
| Increased | 0% (0) | 33% (1) |
| Drop-out | 18% (2) | 0% (0) |

Table 9

Gender and Process Overview Codes

| Code | Women | Men |
|---|-------|------|
| Participant discomfort/distress | 100% | 33% |
| Participant self-discovery | 55% | 66% |
| Participant increased skill at DES task | 45% | 100% |
| Participant re-experiencing | 36% | 100% |
| Challenging interview | 36% | 33% |
| Participant increased interest | 55% | 33% |
| Participant (more) relaxed/comfortable | 36% | 33% |
| Participant has enjoyable experience | 36% | 0% |
| Participant increased understanding of DES task | 27% | 33% |
| Easy interview | 27% | 33% |
| Easier interview | 27% | 0% |
| Participant feels weird/negative self-evaluation/wondering about negative self-evaluation | 27% | 0% |

Table 10

Gender and Exit Interview Codes

| Code | Women | Men |
|---|-------|------|
| Enjoyable experience | 64% | 100% |
| Increased awareness of inner experience | 73% | 66% |
| More curious about inner experience | 55% | 100% |
| DES difficult until skill improves | 45% | 66% |
| Impromptu self-sampling/thinking about inner experience | 36% | 0% |

Outliers

Harrison evidenced the largest increase in reported symptoms, and Adele showed the greatest decrease in reported symptoms. Both participants made statements during their exit interviews that were unexpected based on these changes. Harrison reported enjoying DES, and Adele implied that DES did not have a therapeutic impact on her. We reviewed these participants' process overviews and exit interviews for plausible explanations for each discrepancy.

Harrison. Harrison, the only participant who showed a potentially substantial increase in reported psychological symptoms (SCL-90-R raw score change = +45), asked if he could continue participating in DES after the scheduled conclusion of the study, which would be unexpected if DES made him feel worse.

Harrison's process overviews provide a potential explanation for this discrepancy: an increase in sensitivity and gentleness. In the process overview for his third sampling day, he

seemed to display a more sensitivity and gentleness than in previous days, which may have resulted in his more frequently noticing and/or more deeply experiencing his sensations, including those related to psychological symptomatology.

Adele. Adele evidenced the largest drop in symptomatology in the study (SCL-90-R raw score change = -65); however, in her exit interview, she reported that her participation could have been therapeutic if it had been more frequent. This implies that she believed DES had not have a therapeutic impact on her. It is difficult to know what to make of her comment that it “could have been therapeutic” except to speculate that the changes in her symptoms may have occurred outside of her awareness and without her noticing the difference.

Chapter 5

Discussion

Limitations

I discuss the limitations of this study before interpreting the data because this study was exploratory in nature and the findings need to be interpreted cautiously. The major limitations of this study occur in two major methodological areas: participants and procedures.

Participants. This study was limited by several factors related to the participants: the small sample size, the lack of a control group, the two drop-outs, and the selection of participants. The sample size of this study resulted in too low a level of power for conducting inferential statistical analyses on the coding data. As a result, this investigation's findings regarding coding differences between symptom change groups are exploratory and may be due to chance. The lack of a control group precluded finding a causal link between DES and symptom reduction. A correlational relationship was all that could be inferred from the data.

Drop-outs from this study cast doubt on that finding that self-reported symptoms decreased because drop-outs reported withdrawing from the study because they found it unpleasant, which makes it possible that they would have reported either an increase in psychological symptoms or no change in psychological symptoms. If these participants had completed a post-DES SCL-90-R, it may have changed the results in this small sample from statistically significant to nonsignificant.

The selection of participants was another limitation of the study. We recruited participants from the Psychology Subject Pool, which is not representative of the general population. As a result, this limited the external validity of the findings. In addition, we screened for participants that were categorized as being in either the highest or lowest quartiles of self-talk frequency.

This screening excluded participants from the middle two quartiles, which also negatively impacted the representativeness of the sample. Further, the selection of participants who self-reported either high or low levels of self-talk may have resulted in a sample of participants with stronger than normal presuppositions about their inner speech or a sample that was unrepresentative in other unknown ways. This may have resulted in at least some participants reacting to DES with an atypical trajectory.

Procedures. The procedures used for DES interviews was another factor that limited interpretation of the findings. Participants completed five days of DES, which may have limited any potential impact of DES on psychological symptoms because it may have been too short of a time period to reach maximum symptom reduction. In addition, more days of sampling might reveal some participants responding differently to DES in later interviews as they became more comfortable with the DES procedure, their inner experience, and the interviewers.

The coding procedure was another factor that limited interpretation of the findings. The first limitation of the coding procedure for the process overviews was that it was based on the perspective of just one observer, myself. If multiple interviewers had written process overviews, there may have been a wider range of codes that were created and potentially other differences in coding as well (e.g., codes omitted or changed). In addition, the second rater reviewed the process overviews and the transcripts from the exit interviews with my codes already in the documents. This may have framed the data from my perspective, making it more likely that the second rater would agree with me than if the second rater had written codes from scratch.

The drawback to the exit interview procedure was that they lacked some of the data that may have been more consistently elicited had closed-ended questions like, “Did you feel better or worse after the DES interviews? Or Did you think about your inner experience when you weren’t

wearing the beeper?” been included at the end of the interview.

Tentative Conclusions

Keeping the above limitations in mind, I made some speculative conclusions concerning the possible reasons for reported symptom decrease and the patterns observed in the study.

Overall symptom improvement. Of the 12 participants completing DES, 50% reported a potentially substantial decrease in symptoms, 42% showed no substantial change in reported symptoms, and 8% reported a substantial increase in symptoms. There was a statistically significant reduction in self-reported psychological symptoms, and the effect size of the overall reduction was moderate (Cohen’s $d = -0.61$). The magnitude of this effect size nears that of psychotherapy, which is between 0.73 and 0.85 (Smith, Glass, & Miller, 1980; Landman & Dawes, 1982). Comparing effect sizes should be done with caution due to methodological differences between studies (e.g., the inclusion of a control group); however, finding an effect size that is close to that found in therapy is surprising given that participants only completed five days of DES.

Factors associated with symptom decrease. Participants who reported a decrease in symptoms seemed to show signs of being engaged in DES. This potential engagement is suggested by the findings that the following codes were associated with the decrease in reported symptoms group: *Impromptu self-sampling/thinking about inner experience*, *Participant increased interest*, and *Participant (more) relaxed/comfortable*. The code *Impromptu self-sampling/thinking about inner experience* was assigned to 67% of participants in this group and 0% in all others. It seems that participants in the decrease in reported symptoms group may have explored inner experience even when not doing so for the study. This informal exploration of inner experience suggests that these participants may have found value in exploring inner

experience because they chose to do so even when it was not part of the study. This appears to be a sign of engagement in DES and a significant one because all participants who reported this behavior also reported a decrease in symptoms. An alternate interpretation is that other participants who reported a symptom increase, possibly engaged in informal exploration of inner experience, but did not report it during the exit interviews because they were not asked directly, and the experience was not as memorable to them as it was to the group with improved symptoms.

Another potential sign of engagement was that compared to the unchanged group, a greater proportion of participants in the decrease in reported symptoms group were observed as having an increased interest in DES (83% vs. 20%) and as appearing more comfortable (67% vs. 20%) based on the frequency with which the codes *Participant increased interest* and *Participant (more) relaxed/comfortable* were assigned to them. These codes suggest the possibility that participants in the decrease in reported symptoms group were not only more engaged and interested in DES, but also more comfortable with the process.

The findings that participants in the decrease in reported symptoms group may have been more engaged in DES parallels treatment research showing that client engagement in therapy, whether measured by self-report or observer reports is correlated with positive outcomes (Orlinsky, Ronnestad, & Willutzki, 2004; Huppert, Barlow, Gorman, Shear, & Woods, 2006; Simon & Siwiak-Kobayashi, 2008). However, it remains to be seen if engagement would have preceded the reported change in symptoms or occurred after engagement. It is also possible that there is a reciprocal relationship between the decrease in reported symptoms and engagement instead of a linear one.

Participant self-discovery, which was observed in 67% of the decrease in reported symptoms

group and 60% of the unchanged group, was not differentially associated with a decrease in reported symptoms. Therapeutic realizations have been found to have a positive impact on treatment outcome (Orlinsky, Ronnestad, & Wilutzski, 2004); however, DES is not therapy and it seems likely that many of the realizations participants have are not as tightly related to changes in symptom report as they are in psychotherapy. An alternative interpretation is that whether or not it is observed or spontaneously reported, the overwhelming majority of participants discover something about their inner experience because of the unique nature of DES, but many of these realizations are not therapeutic insights. Thus, they do not impact reported symptoms.

Factors associated with drop-outs. All of the process overview and exit interview codes for the drop-outs were either neutral or unpleasant. It seems fair to speculate that the drop-outs may have decided to end their participation because their experience of DES was largely unpleasant, and there was nothing positive that made it worthwhile to them, whereas the participants who did not withdraw from the study had some positive experiences in addition to their unpleasant ones. However, drop-outs are not unique to DES; they occur in therapy as well. The 15% drop-out rate in this study is similar to the drop-out rate 20% found in Swift and Greenberg's (2012) meta-analysis.

Factors associated with reported increase in symptoms. Harrison, the only participant who reported a substantial increase in symptoms, seemed to enjoy DES. During his exit interview, he asked if he could continue participating in DES and described it as being "fun." In addition, he was the only participant that was not observed to be in discomfort or distress at some point during his DES interviews. This lack of observed distress and his reported enjoyment of DES was unexpected from someone who reported an increase in symptoms. A potential explanation for his reported increase in symptoms is related to him having a higher proportion of

moments of sensory awareness than the other groups of participants and to him receiving the code *Possibly discovering an inner sensitivity/gentleness about himself* in his process overviews. If he became more sensitive during his participation in DES, this increased sensitivity may have led to him becoming more aware of not just his inner experience, but also his psychological symptoms. However, unlike the drop-outs, he may have found enough enjoyment and benefit from DES to remain in the study.

This speculation about Harrison's enjoyment of DES aligns with Rogers' definition of mental health, which is that people are only mentally healthy, only when all elements of experience are valued and available to awareness (Rogers, 1958, 1961; Raskin & Rogers, 2005). It seems that Harrison, despite his reported symptom increase, may have become more mentally healthy based on Rogers' (1958) definition because he valued at least part of his experience more (his sensations), and this seemed to become more available to his awareness over the course of his participation. This also suggests the possibility that, even if DES is generally helpful to those who participate, it is not necessarily helpful in a linear manner such that it leads to consistent positive changes in psychological health and symptoms. In other words, some participants may potentially get "worse" as part of their path toward improved psychological health. This is consistent with research findings showing that a worsening of symptoms often precedes an improvement in some treatments for anxiety and depression (Heimberg & Becker, 2002; Nishith, Resick, & Griffin, 2002; Hayes, Beever, Feldman, Laurenceau, & Perlman, 2005) in the same way that a child experiences more pain while learning to walk because s/he is taking more risks and will fall more frequently initially.

Gender differences. Each of the three males reported that DES was an enjoyable experience; however, none of them were observed to have an enjoyable experience during the DES

interviews. This suggests that the males were either dishonest during their exit interviews or gave less outward indication of their emotional state. A lower level of expressivity in the males would also explain why none of them were observed making comments during the DES interviews that suggested they were struggling with negative self-perception (i.e., *Participant feels weird/negative self-evaluation/wondering about negative self-evaluation*) because even if they had felt this way, they may have been less likely to show or say it than the females. This interpretation is supported by research showing that women are more emotionally expressive than men, but do not necessarily experience more emotion than men (Kring & Gordon, 1998).

Common experiences. Although participants seemed to respond to DES differently. There seem to be some experiences that occur frequently enough to be characteristic of DES. For example, DES seems to be both distressing and pleasant. Discomfort or distress was observed in all but one participant during the process overviews and 71% of participants reported that DES was enjoyable.

Another common experience is re-experiencing the inner experience being described during the DES interview (e.g., becoming excited when discussing an exciting inner experience or sad when discussing a sad one). Re-experiencing was observed to occur in 50% of participants. If participants had been asked specifically about re-experiencing during the exit interviews, more participants may have reported it. Re-experiencing could make DES more pleasant for participants with predominately pleasant inner experiences. It also could have made DES unpleasant for participants with mostly unpleasant inner experiences and may thus account for some participants withdrawing from DES.

The next common experience is a gain in self-knowledge. Seventy-one percent of participants reported having an increased awareness of their inner experience, and 50% were

observed to have at least one moment of self-discovery during DES interviews. Gains in self-understanding are associated with positive outcomes in therapy (Orlinsky, Ronnestad, & Willutzki, 2004), which suggests that the self-knowledge gained in DES was rewarding for at least some of the participants; however, a gain in self-knowledge was not differentially associated with a decrease in reported symptoms. Although gains in self-knowledge did not seem related to symptom change, it remains plausible that it could be associated with non-symptom related therapeutic improvements (e.g., improved quality of life, better job performance, etc.). It is also plausible that self-discovery alone may be a desirable outcome for some participants. Although many of the common factors variables were not directly measured in this study, it seems possible that common factors variables (e.g., working alliance, openness, and successful experiences) were also a common experience for participants and influenced their response to DES.

Five Frequent Phenomena of DES. None of the Five Frequent Phenomena of DES (i.e., inner speech, inner seeing, feeling, unsymbolized thinking, and sensory awareness) had an apparent relationship with symptom change, except for sensory awareness, which may have been noticeably more frequent in the participant who reported an increase in symptoms. However, there was only one participant in this category, which made it more likely that this finding could have been due to chance.

Conclusions. Despite the small sample size, the findings of this exploration into the therapeutic impact of DES provides preliminary support for the notion that DES has a therapeutic impact on participants. Although DES was not associated with a decrease in reported symptoms for all participants, most participants who completed the five days of DES showed a moderate decrease in self-reported psychological symptoms. Definitive support for the

mechanism(s) of this reported decrease was not found; however, this decrease seemed more likely for participants who “bought-in” to DES as evidenced by engaging in informal exploration of inner experience or appearing to become more interested and invested in DES. In order to make more firm conclusions about DES’ impact on psychological symptoms, more research is needed.

Suggestions for future research

Future research exploring the therapeutic impact of DES could benefit from changes to the methodology employed in the current study. I make six suggestions for future research. The first suggestion is that more coders should be used. This would give more perspectives on the DES interview process, and any discussions concerning coding may also generate more hypotheses about the impact of DES on participants.

The second suggestion is that the exit interview scripts employ closed-ended questions, but only at the end of the interview. This way data could be collected on the most memorable or salient aspects of participant experience of DES, and interviewers would get to collect data about hypothesized influences on any therapeutic impact of DES (e.g., the frequency of *Impromptu self-sampling/thinking about inner experience*).

The third suggestion is that when obtaining consent from participants, researchers encourage participants to agree to complete exit interviews and post-DES questionnaires even if they withdraw from the study. In addition, researchers could make it easier for drop-outs to complete these tasks without entering the lab (e.g., Skype and online questionnaires).

The fourth suggestions is that researchers conduct DES for more than the 5 days used in the present study. This could help reveal if a dose-response relationship exists between DES and any potential therapeutic effects.

The fifth suggestion is to incorporate a diverse set of measures of therapeutic effect and therapeutic alliance because symptom change is only one aspect of therapeutic effect. In addition, measures of therapeutic alliance may reveal mediators and moderators of therapeutic effects, if any are found.

The sixth suggestion is that researchers conduct DES with participants from a clinical population. Doing this could reduce or eliminate any potential floor effects on reported symptoms. Further, using a clinical population could shed light on the DES as a therapeutic intervention.

Appendix I - Process Overview Raw Data

The process overview data was not changed after it was written, except to correct obvious typographical errors. This was done in an attempt to preserve the communication and meanings of the author.

The code “practice” was excluded from analyses because it was essentially the same as saying “participating in DES,” which could not add to the analyses.

Bailey

Day 1

1. What was it like to interview the participant?

There was nothing especially noteworthy. [**Nothing noteworthy**]

2. Did I notice any change in the participant?

She seemed a little uncomfortable and mildly distressed at times. [**Participant discomfort/distress**]

She seemed more invested or more interested in DES after beep 1.6, the 75 MPH one described below. [**Participant increased interest**]

3. What do I believe caused this change or lack of change?

Realizing that beep 1.6 is the reason the interviewers ask such detailed questions. [**Participant increased understanding of DES task**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

In 1.6, she seemed amazed or perplexed that she had thought that she saw “75” on her speedometer, but during the interview realized that her speedometer only has the numbers 70 and 80. [**Participant self-discovery (learning that she can be totally convinced that she saw something that was not there); Discovered that her seeing can differ from reality**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No [**Nothing noteworthy**]

Day 2

1. What was it like to interview the participant?

It seemed the same as the previous interview. [**No change**]

2. Did I notice any change in the participant?

No. She still seemed uncomfortable. [**Participant discomfort/distress**]

3. What do I believe caused this change or lack of change?

N/A [**No change**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No. [**Nothing noteworthy**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No [**Nothing noteworthy**]

Day 3 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed pretty much the same. [**No change**]

2. Did I notice any change in the participant?

She seemed a little bit more relaxed. After the interview was completed, she said that she now understands what the moment of the beep means and that she will exclude information from during and after the beep. She said she would make it clear what was background context and what was happening at the moment of the beep. [**Participant more relaxed/comfortable; Participant increased understanding of DES task**]

3. What do I believe caused this change or lack of change?

I think she is getting more comfortable with the interviewers and the information they are looking for. [**Participant more relaxed/comfortable**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No. [**Nothing noteworthy**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

She seemed to get a little flustered when Dr. Hurlburt was trying to get Jason to stay with her experience (10:45, 3.2). [**Participant discomfort/distress**]

Day 4

1. What was it like to interview the participant?

The same as the previous interview. [**No change**]

2. Did I notice any change in the participant?

No [**No change**]

3. What do I believe caused this change or lack of change?

N/A [**N/A**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No [**Nothing noteworthy**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No [**Nothing noteworthy**]

Alana

Day 1

1. What was it like to interview the participant?

It was a challenge because she thought the moment of the beep was a much longer period than how we conceptualize it, and because she seemed emotionally fragile. [**Challenging interview; Participant emotionally fragile**]

2. Did I notice any change in the participant?

She seemed to become sad near the end of 1.1, it was almost like she was holding back tears. This holding back seemed to continue throughout the interview. [**Participant discomfort/distress; Participant sadness; Participant trying not to cry**]

3. What do I believe caused this change or lack of change?

I think that there was something sad about the experiences she talked about or something that was happening around the time of her samples. [**Sadness in sampled moments/Sad experience temporally near the moment of the beep**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

Yes, 1.1, as mentioned above. [**Participant discomfort/distress; Participant sadness**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

I had a sense that she was holding some information back or not being completely honest during the interview, like she was protecting herself from being exposed or something. [**Participant withholding/protecting herself**]

Day 2

1. What was it like to interview the participant?

It was difficult again because she seemed so fragile and I thought she needed some support, but that is not part of the DES process. [**Challenging interview; Participant emotionally fragile**]

2. Did I notice any change in the participant?

She seemed to become sad again and to hold back tears. This started with her very first beep description and seemed pretty constant throughout the interview. She seemed embarrassed when she spoke about reading 50 Shades of Grey, in beep 2.1. [**Participant discomfort/distress; Participant sadness; Participant trying not to cry; Participant embarrassment**]

3. What do I believe caused this change or lack of change?

The same as my description from the last interview, “I think that there was something sad about the experiences she talked about or something that was happening around the time of her

samples.” [**Sadness in sampled moments; sadness temporally near the moment of the beep**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy? In 2.6, when I asked the participant if she had any feelings of sadness during the experience because she seemed to display sad affect while describing it. [**Interviewer asking if sadness was present.**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No. [**Nothing noteworthy**]

Harrison

Day 1

1. What was it like to interview the participant?

I found it intriguing, especially when he shifted towards describing some of his inner sensations. The interview seemed to flow easily for the most part. We were able to understand each other early-on. [**Easy interview; Descriptions shifted to sensations; Ease of communication**]

2. Did I notice any change in the participant?

Harrison seemed to not only understand what we meant by “in his experience” at the moment of the beep pretty quickly and when he did his reports changed to sensation experiences. [**Learned quickly; Quick increase in skill at DES; Descriptions shifted to sensations**]

3. What do I believe caused this change or lack of change?

Harrison having a mild re-experiencing of his inner experience [**Participant re-experiencing**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

When he described feeling warm. He seemed to realize that there was more to his experience than he thought, and he seemed to re-experience the warmth. [**Participant re-experiencing; Participant self-discovery** (*More complexity to his sensations than he thought before*)]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No [**Nothing noteworthy**]

Day 2

1. What was it like to interview the participant?

I found it enjoyable. He seemed to grasp what was in his experience quickly and communicated it well. [**Easy interview; Ease of communication**]

2. Did I notice any change in the participant?

He seemed to have developed an understanding of how challenging participating in DES can be. He made a few comments that made me believe that he expected our questions to be difficult to answer. Harrison seemed better able to describe his inner experience. [**Participant increased skill at DES task**]

3. What do I believe caused this change or lack of change?

Practice. [**Participant increased skill at DES**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

There were none that stood-out to me. [**Nothing Noteworthy**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

Harrison seemed to have picked-up the task quickly and he had a confidence in his reports that made him seem believable and reliable as a reported of his inner experience, especially so for the second day. It seemed to me that the interviewers enjoyed interviewing him more than most other participants I have seen. I think this happened because he made our job less challenging and he gave us what we tend to find interesting more easily. [**Easy interview;**]

Learned quickly]

Day 3

1. What was it like to interview the participant?

It was much easier. He seemed to have a better grasp of his inner experience. It seemed like less work. He seemed to have the big picture down and we were getting into more and more fine details. [**Easier interview; Fine details of his experience more salient**]

2. Did I notice any change in the participant?

He seemed to have a sensitivity/gentleness to him. He seemed more grounded. [**Participant increased comfort; Participant sensitivity/gentleness**]

3. What do I believe caused this change or lack of change?

I think he experienced himself differently than he did before. I think there was something about noticing his inner sensations or maybe an inner gentleness/sensitivity more that influenced him. [**Participant re-experiencing; Participant self-discovery (His sensitivity); Discovering his sensations; Possibly discovering an inner sensitivity/gentleness about himself**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

None at this moment. [**Nothing Noteworthy**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

None that I can think of right now. [**Nothing Noteworthy**]

Day 4

1. What was it like to interview the participant?

Harrison seemed slightly more confident and believable and skilled at reporting his inner experience than before. It was not difficult to interview him, but there seemed to be more details in his experience than there were before. It was interesting, but it seemed like I could have asked him many more questions about all the fine-grained details of his experience and he would have been able to answer most of them believably. I felt as if the questioning for each beep could have gone on for a very long time. [**Easier interview; Participant increase in skill at DES task; More fine-grained details of experience emerged**]

2. Did I notice any change in the participant?

Not much since the last interview. He was maybe slightly more calm than in the last interview, but I'm not confident in that. He did seem to make less comments and insinuations about how challenging the interviews were. [**Possible increase in participant comfort; Possible increase in participant calmness**]

3. What do I believe caused this change or lack of change?

I'm not sure why he seemed slightly more calm than the previous interview. As far as him making less comments or insinuations about the challenge of being interviewed, I think that resulted from him becoming even more skilled at DES and becoming more comfortable with the procedure. [**Participant increased skill at DES task; Possible increase in participant comfort**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

There was not one individual moment that stood out, but in general there seemed to be many questions that he found easy to answer and his response to our first question about each beep seemed easier for him to give and more detailed than before. [**Easier interview; Participant increase in skill at DES task; More fine-grained details of experience emerged**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No [**Nothing Noteworthy**]

Maddi

Day 1

1. What was it like to interview the participant?

It felt less like an interview and more like an introductory course to DES. At first she thought we were looking at what happened in her experience after the beep when we wanted the moment before the beep. She seemed a little judgmental and somewhat dismissive as a way of handling her frustration/feelings of insecurity about her difficulty with answering our questions.

[Challenging interview; More time than usual spend teaching DES method; Participant discomfort/distress; Participant seemed judgmental and dismissive; Participant seemed frustrated/insecure]

2. Did I notice any change in the participant?

Not much **[Nothing Noteworthy]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

Not especially **[Nothing Noteworthy]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing Noteworthy]**

Day 2

1. What was it like to interview the participant?

She seemed uncomfortable and self-conscious at times when she was describing her inner experience. She also seemed excited about being able to provide the kinds of detail we ask about (e.g., in beep 2.3 when she said that she was reading and then added something like “and by reading I mean the words were in my head and not out loud.” She seemed to wonder if she was weird, especially when she asked if she was weird during 2.4. **[Participant discomfort/distress; Participant excitement; Participant self-conscious/anxious; Participant wondered if she was weird]**

2. Did I notice any change in the participant?

She seemed to develop a better grasp of how to answer our questions and she seemed to embrace being better able to answer our questions. She seemed more disturbed/uncomfortable and more excited and engaged in DES. **[Participant increases skill at DES task; Participant increase in distress/discomfort; Participant increase in excitement; Participant increase in interest]**

3. What do I believe caused this change or lack of change?

I think it was because she became more skilled at the DES task, developed a better understanding of it throughout the interview, and cared about our implicit reactions concerning how well she was doing. **[Participant increased skill; Participant concerned with implicit responses of interviewers]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

Beep 2.1, when she talked about innerly seeing a character from a book she was reading as if, obviously, that was all there was to it. Dr. Hurlburt asked her if she saw the character from a perspective (e.g., side, front). At this point, Maddi seemed to realize that there was more to inner seeing that she had previously thought.

At the end of the interview, she asked us if there was anything abnormal about her experience. **[Participant increased understanding of DES task; Participant wondered if she was abnormal]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

She seemed a little more sincere/authentic during this interview than in the previous interview.

She only discussed 4 of 6 beeps. She didn't have notes the notes in her notebook. At first she thought she just didn't take notes, but later it seemed like she wasn't sure if she collected all 6 samples. **[Participant increase in sincerity/authenticity; Participant confused about number of beeps she collected]**

Day 3

1. What was it like to interview the participant?

She still seemed a little uncomfortable and self-conscious when answering some of the questions. She still seemed worried about being weird. **[Discomfort; Self-conscious; Worried about being weird]**

2. Did I notice any change in the participant?

She seemed slightly less uncomfortable and self-conscious. **[Participant decrease in discomfort/distress; Participant decrease in self-consciousness]**

3. What do I believe caused this change or lack of change?

I think it may be because she is more skilled at DES and feels that she is better able to answer our questions. **[Participant increased skill at DES task]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

In 3.4, she made a comment about Dr. Heavy making a weird face and she seemed worried about having odd experiences. Dr. Hurlburt reassured her that this was not the case. This interview seemed a little rushed to me. **[Participant concerned with implicit responses of interviewers; Participant wondered if she was weird; Rushed interview]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

Before the interview started, she said that she needed to leave the interview early. **[Participant needed to leave early; Rushed interview]**

Day 4

1. What was it like to interview the participant?

It seemed easier to interview her today. The process seemed smoother and more streamlined.

[Easier interview]

2. Did I notice any change in the participant?

She seemed even more skilled at DES and maybe more comfortable and slightly less self-conscious. **[Participant increased skill at DES; Participant increased comfort; Participant decrease in discomfort/distress; Participant decrease in self-consciousness]**

3. What do I believe caused this change or lack of change?

I think it was just practice. **[Practice]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No **[Nothing Noteworthy]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

This interview seemed faster and easier to me. She seemed better at DES and her inner experience for these beeps was less complex and easier to describe than in previous beeps.

[Easier interview; Faster interview; Participant inner experience easy to describe]

Pamela

DAY 1

1. What was it like to interview the participant?

Although Pamela seemed mildly uncomfortable or embarrassed answering some of our questions, she was a pleasure to interview because she tended to smile and nod even when uncomfortable and she seemed to adapt to the DES task quickly relative to most participants. Beep 1.2 (the beard beep) is a good example of the above. **[Participant discomfort/distress; Participant embarrassment; Easy interview; Participant learned task quickly; Participant anxiety-related smiling and nodding]**

2. Did I notice any change in the participant?

No **[No Change]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No **[Nothing Noteworthy]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing Noteworthy]**

DAY 2

1. What was it like to interview the participant?

She seemed slightly more confident in her descriptions of her experience. **[Participant increase in confidence]**

2. Did I notice any change in the participant?

Yes, Pamela seemed perhaps slightly more comfortable than the previous interview. Her nervous smiling and nodding appeared less often. **[Participant increased comfort; Participant anxious smiling and nodding less frequent]**

3. What do I believe caused this change or lack of change?

Practice and getting more comfortable with us. **[Practice; Participant increased comfort]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

2.2, she experienced the notion that she had to calculate her study abroad costs. The notion was partially outside of the back of her head. She seemed embarrassed. **[Participant embarrassed by her inner experience]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing Noteworthy]**

DAY 3

1. What was it like to interview the participant?

To me, it seemed more fun and exciting than before, but it was enjoyable even before this day. **[Interview exciting; Interview fun; Enjoyable interview]**

2. Did I notice any change in the participant?

Yes, she seems to be excited during some points of the interview instead of being predominately nervous/anxious. Her smiling seemed more about excitement and less a cover for her discomfort than before. **[Participant excitement; Participant anxiety-related smiling and nodding reduced; Participant excitement-related smiling and nodding; Participant decrease in discomfort/distress; Participant decrease in nervousness/anxiety]**

3. What do I believe caused this change or lack of change?

She seems more comfortable with her inner experience. **[Participant increase in comfort]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

Yes, before 3.4, she talks about noticing that when she looked back at some of her older notes, she had a hard time remembering what she was talking about then. Dr. Hurlburt tries to normalize her experience.

Another moment was after discussion of her beeps had ended. She comments about DES being interesting and how she realized that she doesn't experience things the way she thought she did before. She also noted that she has a hard time remembering what happened during her beeps and Dr. Hurlburt told her that she seemed to be confident during the interview today.

[Participant increase in interest; Participant self-discovery (what she learned was unclear); Participant difficulty remembering beeps]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

DAY 4 - TAPE REVIEW

1. What was it like to interview the participant?

There seemed to be less energy/excitement from the participant and from the interviewers. Pamela seemed slightly less comfortable than the previous day, but her level of confidence in her descriptions of her inner experience seems unchanged. There were more of her uncomfortable smiles/nods than the previous day, but it is still less than the first day. **[Participant decrease in energy/excitement; Interviewer decrease in excitement; Participant decrease in comfort; Participant plateau in confidence; Participant anxiety-related smiling and nodding increased but below initial interview level]**

2. Did I notice any change in the participant?

There seemed to be less energy/excitement from the participant. **[Participant decrease in energy/excitement]**

3. What do I believe caused this change or lack of change?

It may have been that the interviewers were less energetic, but I can't say for certain because the participant seemed less energetic from the start. **[Participant potentially started with less energy; Interviewers potentially less energetic]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

Yes, beep 4.4, which was imageless seeing, it seemed distressing for her to describe, more so than her previous imageless-seeing-ish beep about a train. **Participant distress while describing imageless seeing**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **Nothing noteworthy**

Deanna

DAY 1

The recording for this day was lost due to a camera malfunction. Thus, this day could not be reviewed and coded.

DAY 2 - TAPE REVIEW

1. What was it like to interview the participant?

Deanna seemed to struggle to answer our questions at times and seemed frustrated by the interviewers questions and not being understood. [**Challenging interview; Participant discomfort/distress; Participant frustration; Participant not feeling understood by interviewers**]

2. Did I notice any change in the participant?

No [**No change**]

3. What do I believe caused this change or lack of change?

N/A [**N/A**]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

2.2, when she struggled to understand how to describe her experience of guilty. She didn't seem to understand what was being asked of her. She appeared lost and frustrated. [**Participant discomfort; Participant frustration**]

2.3 When she was feeling betrayed and getting a text from her friend that she was too fragile/too weak. It seemed to me a painful moment to remember and she went from a metaphor of feeling like she had been stabbed to an understanding that she was actually feeling bodily sensations of her limbs feeling drained and her chest felt stepped on/crushed. [**Participant re-experiencing; Participant self-discovery (the complexity of the bodily component of her feelings)**]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No [**Nothing noteworthy**]

DAY 3 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed easier than the prior interview. There seemed to be a better flow and understanding between her and the interviewers. **[Easier interview; Improved communication]**

2. Did I notice any change in the participant?

She seemed more comfortable with the process and less frustrated and more happy when discussing her experiences. **[Participant increased comfort; Participant frustration decreased; Participant happiness]**

3. What do I believe caused this change or lack of change?

Gaining more experience with DES and perhaps becoming more comfortable with her experience. **[Practice; Increased comfort with her own inner experience]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

Beep 3.5, when she discussed her loving experience about her friend and his cutout face. It seemed to be slightly embarrassing, but mostly uplifting experience to recall and discuss. **[Participant embarrassment; Participant re-experiencing; Participant has enjoyable experience]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing Noteworthy]**

DAY 4 - Tape Review

1. What was it like to interview the participant?

It was very similar to the previous sampling day. She seemed settled and confident regardless of who interviewed her. **[No change]**

2. Did I notice any change in the participant?

None **[N/A]**

3. What do I believe caused this change or lack of change?

N/A [N/A]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No [Nothing noteworthy]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No [Nothing noteworthy]

Isobel

DAY 1

1. What was it like to interview the participant?

She seemed unsure and nervous and had very short verbal responses. It felt to me like we had to work hard to pull responses from her and that we had to give her more examples of possible inner experiences for her to choose from than most participants. [Participant discomfort/distress; Participant nervous; Challenging interview]

2. Did I notice any change in the participant?

No. [No change]

3. What do I believe caused this change or lack of change?

N/A [N/A]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

None in particular. [Nothing noteworthy]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewer?

Nothing additional. [Nothing noteworthy]

DAY 2

1. What was it like to interview the participant?

Her descriptions of her experience seemed simple and short, which made it less interesting than it was with other participants. She also had a quiet, mousy demeanor, which often did not match the verbal confidence she had in some of her description about her inner experience.

[Interviewer less interested; Participant had quiet demeanor; Participant confident in her descriptions]

2. Did I notice any change in the participant?

She seemed more confident about her experience. [Participant increased confidence]

3. What do I believe caused this change or lack of change?

I believe it was just practice and getting accustomed to the type of questions we ask.

[Practice]

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

At the end of the interview, when she was receiving her \$5 compensation, she said that people always want her to “talk like this,” meaning that others wish she would tell others more about what it going on “inside her head.” **[Participant seems to be a private person]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewer?

I think it is possible that because she is pauses and thinks for a while when answering many of our questions that it sends us the message that we should “take it easy” and not ask as many questions, which may have made us slightly less likely to ask her more detailed or as many questions. **[Participant’s slow responses possibly led to interviewers asking less detailed questions]**

DAY 3

1. What was it like to interview the participant?

I found it especially difficult because I was the only interviewer present for this interview and she tended to give short responses, so I found it hard to tell if her experience could just be summed up quickly or if I was missing something. **[Challenging interview; Interviewer unsure of fidelity]**

2. Did I notice any change in the participant?

She seemed more confident in her experience this time than last. **[Participant increase in confidence]**

3. What do I believe caused this change or lack of change?

I think she learned what we were looking for. **[Participant increase in understanding of DES task]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

None at all. It was hard to infer what she was experiencing. **[Participant gave few nonverbal cues]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewer?

No **[Nothing noteworthy]**

DAY 4

1. What was it like to interview the participant?

I found it challenging because it was difficult for me to tell when her inner experience was simple versus when she was just not giving much detail about her experience. With participants who talk more, I find more clues in their responses about which areas seem likely to lead us to pristine inner experience, so when she gave very short responses it was difficult for me to determine what areas to explore. **[Challenging interview; Interviewer unsure of fidelity]**

2. Did I notice any change in the participant?

She seemed to find it easier to answer our questions. She seemed to enjoy talking about her inner experience more than I recall in previous meetings. She smiled more often when speaking about her inner experience and it seemed to be more of a genuine smile than an anxious smile.

[Participant increased skill at DES task; Participant enjoyable experience; Participant smiled more often]

3. What do I believe caused this change or lack of change?

Gaining more experience at DES. **[Practice]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No **[Nothing noteworthy]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

Olivia

DAY 1 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed pretty straightforward. She seemed to pick-up the task easily. She seemed pretty comfortable and relaxed with the process. It seemed that she understood the interviewers easily and they understood her. **[Easy interview; Participant increased skill at DES task;**

Participant relaxed/comfortable; Ease of communication]

2. Did I notice any change in the participant?

No **[No change]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No **[Nothing noteworthy]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewer?

Just that she seemed very calm. **[Participant relaxed/comfortable]**

DAY 2 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed the same as the day before. She seemed calm and willing to explore with the interviewers without getting frustrated. **[No change]**

2. Did I notice any change in the participant?

No **[No change]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

At beep 2.3, there was disagreement between the interviewers and she seemed willing to continue to explore with them without getting frustrated. It's a good example of my answer to question 1 above. **[Participant relaxed/calm]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewer?

No **[Nothing noteworthy]**

DAY 3 - TAPE REVIEW

1. What was it like to interview the participant?

The same as before. **[No change]**

2. Did I notice any change in the participant?

Yes, she seemed to learn that she could have an experience that did not seem possible to her before. She started to use some of the words we tend to use, like “inflection” and “presented itself...” which she did not use before the interviewers started using them. She seemed to show more facial expressions, and they tended to be quick flashes of expressions. **[Participant self-discovery (that she can have a seemingly impossible/contradictory inner experience: a voiceless worded thought with inflection and emphasis on one of the words in the thought); Participant using interviewers terminology; Participant showed more facial expressions]**

3. What do I believe caused this change or lack of change?

I think the interviewers helped her by leaving the possibilities of inner experience open, and helping her explore it. **[Interviewers were open]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

At 3.1, she learned that she can and did experience something she probably never thought was possible, a voiceless, worded thought with an inflection and an emphasis on the “IS” in the thought. She scrunched her mouth and showed a more clear facial expression than I noticed at any point before this. **[Participant self-discovery (that she can have a seemingly impossible/contradictory inner experience: a voiceless worded thought with inflection and emphasis on one of the words in the thought); Participant showed more clear facial expression than previously]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewer?

No **[Nothing noteworthy]**

DAY 4 - TAPE REVIEW

1. What was it like to interview the participant?

The same as before **[No change]**

2. Did I notice any change in the participant?

No. She was the same as the previous day. **[No change]**

3. What do I believe caused this change or lack of change?

I think her continued exploration and comfort/freedom with the interviewers. **[Participant relaxed/comfortable/more free; Interviewers were open]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

In 4.3, she seemed to re-experience the sadness and welling up as she explained/explored an experience with her boyfriend present. This was especially interesting because in the next beep, we don't know how long it was after the previous beep, but she “She experiences a block, like a vertical wall or barrier that divides the front half of her mind from the back half, that is located in the middle of her head, mostly internally. This block serves to prevent her from thinking deeply and keeps her thoughts superficial. The block is somehow experientially present (that is, is not merely

metaphorical), but is not innerly [or outerly] seen or physically felt. Her mind is jumping between thoughts, and she does not experience any of the specific thoughts at the moment of the beep – simply her attempt to keep the thoughts superficial.” She seemed to have some lingering sadness during this beep and the rest of the interview. I wondered if she would have had an inner experience of an internal wall and an attempt to keep her thoughts superficial. **[Participant re-experiencing; Participant sadness; Participant discomfort/distress]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewer?

I found 4.3 and 4.4 very interesting. It sounds very psychoanalytic because she literally experienced a physical internal wall/defense against her sadness. **[Participant experience interesting]**

Kevin

DAY 1 - TAPE REVIEW

1. What was it like to interview the participant?

He showed some flashes of frustration when asked questions that he was not sure how to answer (e.g., 1.1, when Leiszle asked him about being absorbed in the show vs. Thinking about it, (time 6:15) **[Participant frustration; Participant discomfort/distress]**

2. Did I notice any change in the participant?

He seemed to become genuinely interested in the task after Dr. Hurlburt asked him a question about how words/utterance could be present (12: 40). **[Participant increase in interest]**

3. What do I believe caused this change or lack of change?

Learning about the process and the possibilities for what inner experience can be. **[Practice]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

I found it interesting when he warned the interviewers that his inner experience was “boring” because he was just sitting, thinking, and watching TV. **[Participant likely self-conscious]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

In 1.1, the way he said the beep interrupted the TV show. He seemed like he may have felt a bit frustrated by the beep because he was immersed in the show. He seemed to dislike the DES process at this point because he finds it bothersome. **[Participant frustration; Participant disliked DES process]**

He rested the side of his face on his hand, like he was tired. This only happened once during the interview day, and it happened when he described an inner experience about being tired. **[Participant re-experiencing]**

DAY 2 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed slightly easier than the day before. He did not seem to show much, if any frustration during the interview. He seemed more relaxed and laughed some. He even seemed relaxed while speaking about how hard it is to collect samples given that he has to think back a few seconds to before the beep. **[Interview easier; Participant relaxed/comfortable]**

2. Did I notice any change in the participant?

He seemed a bit more relaxed. **[Participant more relaxed]**

3. What do I believe caused this change or lack of change?

Becoming more comfortable with the interviewers and the interview process. **[Participant increase in comfort]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

In 2.3, he seems to make a face that is like he is focusing when he speaks about being “pretty deep into the TV trying to think about these comedic jokes” (8:30). It seems like he is trying to get pretty deep into something again, perhaps trying to recreate/re-experience the experience of “trying” as he speaks about it. He said, “trying” several times, but this “trying” was not part of the beep write-up and may not have been part of his experience. **[Potential participant re-experiencing]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

DAY 3 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed the same as the prior interview, except he seemed more confident in his descriptions. **[Participant increased confidence]**

2. Did I notice any change in the participant?

He seemed to be more confident in his inner experience and more accurate at reporting it. He seemed to become more genuinely interested in what he learned about his inner experience during beep 3.5, which is described in more detail below. **[Participant increase in confidence; Participant increased skill at DES task; Participant increase in interest]**

3. What do I believe caused this change or lack of change?

Practice and learning more about what his inner experience is like. **[Practice]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

27:45 - Beep 3.5 - The participant realized that he was innerly seeing a plastic cup that was somewhere in the room and he was trying to find the cup so he could put water in it. He saw it not in the way it is typically found, with a straw and lid, but in the way he had left it next to his sink, without a straw and lid. The participant made a “mind blown” gesture with both of his hands. It seemed to me that this was significant to him because he was realizing that he was finding what he was looking for as it was, topless and strawless and ready to have water put in it,

instead of seeing the cup as it typically is. **Participant self-discovery***(learned that his inner seeing can be different from the object's typical state)*

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **Nothing noteworthy**

DAY 4 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed the same as the day before. **No change**

2. Did I notice any change in the participant?

No. He seemed the same as at the end of the previous interview. **No change**

3. What do I believe caused this change or lack of change?

N/A **N/A**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No **Nothing noteworthy**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **Nothing noteworthy**

Lance

DAY 1 - TAPE REVIEW

1. What was it like to interview the participant?

There seemed to be a struggle to get to the client's inner experience. **[Challenging interview]**

2. Did I notice any change in the participant?

He seemed to understand more about the kinds of information that was wanted from him as the interview progressed. **[Participant increased understanding of DES task]**

3. What do I believe caused this change or lack of change?

Practice/going through the process. The client said that he had a better understanding at the end of the interview **[Practice]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

In 1.3, the participant seemed to re-experience some of the emotions he experienced when he was showing an ultrasound video of his unborn child to his mother. **[Participant re-experiencing]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

The participant seemed to show mild anxiety. **[Participant discomfort/distress; Participant anxiety]**

DAY 2 - TAPE REVIEW

1. What was it like to interview the participant?

It was slightly easier. He seemed to have a better understanding of the moment of the beep and what kind of information the interviewers wanted to know. **[Participant increased understanding of DES task]**

2. Did I notice any change in the participant?

See above **[Participant increased understanding of DES task]**

3. What do I believe caused this change or lack of change?

Practice **[Practice]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

At the start, the participant said that he has better notes than he did the last time. This seemed true in the sense that this confidence played out in him being better at describing his inner

experience. **Participant increased skill at DES task; Participant increased confidence**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **Nothing noteworthy**

DAY 3 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed challenging and it was difficult trying to get to pristine inner experience.

Challenging interview

2. Did I notice any change in the participant?

No. Other than seeming to have a harder time than before. **Challenging interview;**

Participant decrease in skill at DES task

3. What do I believe caused this change or lack of change?

This may be because he is moving closer to pristine inner experience. His learning curve may have been different than usual because his first interview was with only one interviewer.

Participant moving closer to pristine inner experience; Participant decrease in skill at DES task possibly due to initial interview with only one interviewer

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No **Nothing noteworthy**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

The participant seemed to struggle during this interview, but I did not notice any visible signs of anxiety or frustration. In the last minute of the interview, he stated that DES was hard to do and figure out every little thing because “you don’t normally think like that,” but he liked doing it. **Challenging interview; Participant increased understanding of DES task***Second code suggested by Leiszle. She said, “being able to identify what makes it difficult, especially compared to usual way of talking about inner experiences, suggests a better understanding of the task to me.”

DAY 4 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed easier. He seemed to have a better grasp on his inner experience than in the last meeting. **Participant increase in skill at DES task**

2. Did I notice any change in the participant?

He seemed more skilled at answering the questions. He usually did not give good explanations of his inner experience initially, but he was usually able to convincingly answer the follow-up questions asked by the interviewers. **Participant increased skill at DES task; Participant benefited substantially from structure provided by interviewer questions**

3. What do I believe caused this change or lack of change?

Practice. **Practice**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No. **Nothing noteworthy**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **Nothing noteworthy**

Zelda

DAY 1

1. What was it like to interview the participant?

It was challenging to understand her inner experience. It was not clear if she found the interview exciting, anxiety provoking, or frustrating. It may have been both exciting and anxiety provoking because in beep 1.2 (34:25), she agreed that during this beep she felt an “excited nervousness” so she is capable of having this experience. **[Participant excitement/anxiety/frustration]**

2. Did I notice any change in the participant?

She seemed to go from mildly frustrated with the interview to enjoying it. **[Participant decline in discomfort/distress; Participant has enjoyable experience]**

3. What do I believe caused this change or lack of change?

Getting closer to her pristine inner experience that was enjoyable. **[Participant increased skill at DES task]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

I thought she seemed embarrassed or slightly uncomfortable when talking about the a sensation she had while texting her love interest as the sensation that she said had a genital component. She later said that she was “a little embarrassed.”

At 1.2; 25:50, she leaned forward after commenting on the process being “so cool.” It seemed to me that she seemed to become more engaged in the process, perhaps because she re-visited a pleasurable sensation and enjoyed it. She later said, “this is interesting.” It seemed to me that the interviewers were getting close to her pristine inner experience.

She said that the “experience of Zelda” is such a good experience, adding that the interviewers were “missing out.” This suggests to me that she was communicating that she enjoys her inner experiences and hinted that there is more to her inner experience than the interviewers currently apprehend.

Near the end of the interview, she said that she enjoyed being around people who like to think and that she is a thinker, which made it hard for her in her small town. **[Participant discomfort/distress; Participant embarrassment; Participant has enjoyable experience; Potential participant re-experiencing; Participant inviting more exploration of her inner experience]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

1.1, when she said that she can get overwhelmed by all the things in her mind and she can't talk about one specific thing and give it enough attention to have a clear and concise report of it. She said she had many things in her experience that she was switching back and forth between at a fast pace. This may have been something that she learned about her inner experience that she

did not know before or she may already have known this.

(1.1; 12:30) When she silenced the interviewers by saying she needs one second to think, she may have been re-experiencing the overwhelming number of parts of her inner experience and she needed time to sort them out.

(1.1; 15:40) When she said, “this is fun. I must be messed up,” may suggest that she has some negative thoughts about herself. **[difficult to apprehend inner experience; participant re-experiencing; Participant enjoyable experience; Participant negative self-evaluation]**

DAY 2 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed challenging, but enjoyable. Her experience seemed hard to pin down, but the challenge was enjoyable. She smiled frequently and it seems to be a mix of enjoyment and a little bit of anxiety. **[Challenging interview; enjoyable interview; Difficult to apprehend inner experience; Participant enjoyable experience; Participant discomfort/distress]**

2. Did I notice any change in the participant?

She seemed to remain engaged in the process and enjoying it. She seemed to enjoy struggling to explain and understand her inner experience. She seemed to speak slightly less about her experience in generalities and more as it directly presented itself to her. **[Participant enjoyable experience; Participant increase in skill at DES task]**

3. What do I believe caused this change or lack of change?

Perhaps practice and also getting better at describing her experience instead of having to infer it based on how she thinks she is because she struggled to apprehend all of her inner experience. **[Participant increased skill at DES task]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

She started the interview. Most people wait for the interviewers to ask a question or take charge. This is another sign that she is invested in and enjoying this process.

2.1, Dr. Hurlburt asked her about how she experiences the beep and she said that it takes her a little while to unwind from her thoughts and come back to reality and this leads to some confusion about when the beeper actually goes off.

2.1, when Dr. Hurlburt summarized part of the participant’s inner experience by saying that the grandmother in the participant’s inner experience had some of the participant’s feelings and some of the possibilities of the participant’s feelings. The participant said that she was glad that Dr. Hurlburt was able to help her come to that because she was trying to explain that. She said that talking about her experience was complicated and interesting and awesome. **[Participant confusion about timing of beep; Participant felt understood; Participant enjoyable]**

experience]

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

I noticed that she would sometimes seem to take notes during the interview.

She seemed to enjoy the beeps that involved Mr. X, her love interest more than the others, which suggests to me that she enjoyed the thought of him or the thought of an experience he was part of.

I wondered if when she used the term, “they” when referring to him, that she may have experienced him as more a set of possibilities in addition to him being someone she is less attached to.

I think she had some sort of attraction to Dr. Hurlburt. There was something flirtatious about her interactions with him, and near the end of the interview, she joked about taking him to a concert. **[Participant invested in DES; Participant potentially complex inner experience; Participant flirted with interviewer]**

DAY 3 - TAPE REVIEW

1. What was it like to interview the participant?

She seems uncomfortable with not knowing the exact details of her inner experience. She seemed to work hard and infer answers instead of saying, “I don’t know” or “I’m not sure” or “maybe” when she wasn’t clear on the details of her inner experience. **[Participant discomfort/distress; Participant unwilling to express uncertainty]**

2. Did I notice any change in the participant?

There seemed to be another decrease in her making inferential or general statements about what her experience is like and more about what her experience was like at the moment of the beep. **[Participant increased skill at DES task]**

3. What do I believe caused this change or lack of change?

Practice and getting more comfortable with the process. **[Practice]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

3.1, when Dr. Heavey had moved on to talking about another part of her experience, she wanted to go back to what they had talked about before and she did. This to me indicates a genuine curiosity in her inner experience and in wanting to understand it. **[Participant interested in process]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

In 3.1, she seemed to experience some frustration with Dr. Hurlburt when she called him “Mr. Smart Alec” after he made a comment that just because something is physically large does not mean that it has to be taking up a large portion of inner experience. She had just said that a video screen was taking up a large part of her experience because of its size. **[Participant flirted with interviewer]**

DAY 4 - TAPE REVIEW

1. What was it like to interview the participant?

The same as the previous day, except she seemed to be a little sad, but she still showed some excitement during the interview. **[Participant enjoyable experience; Participant mild sadness]**

2. Did I notice any change in the participant?

Nothing substantial. **[Nothing noteworthy]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

No **[Nothing noteworthy]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

Jenni

DAY 1 - TAPE REVIEW

1. What was it like to interview the participant?

She seemed committed to the interview and she was willing to say when she did not know the answer to a question. **[Participant willing to express uncertainty]**

2. Did I notice any change in the participant?

No. She seemed mostly comfortable with mostly neutral affect and a few flickers of anxious affect. **[Participant mild discomfort/distress; Participant mild anxiety]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

Yes, that she immediately wondered if it was possible to “think” about more than one thing as this seemed to be part of her experience during the first beep. I thought she picked up on the task pretty quickly. **[Participant increased skill at DES task; Participant self-discovery (that she can “think” about more than one thing at a time)]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

DAY 2 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed that the interviewers were not convinced that the inner experiences she described were well apprehended and well communicated by her. **[Challenging interview]**

2. Did I notice any change in the participant?

No **[No change]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

2.3 (the first beep of the interview), she seemed to display mild sadness when speaking about

feeling guilty about having to balance time between studying and spending time with her family.

In 2.4 (the second beep of the interview), she smiled slightly more and seemed slightly more animated than in the previous beep, but her affect was mostly neutral. **[Participant re-experiencing; Participant discomfort/distress; Participant mild sadness; Participant enjoyable experience]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No. **[Nothing noteworthy]**

DAY 3 - TAPE REVIEW

1. What was it like to interview the participant?

The same as the day before, maybe a bit easier. **[Easier interview]**

2. Did I notice any change in the participant?

She seemed more animated and displayed more affect. She seemed to be slightly more confident in her experience. **[Participant more expressive; Participant mild increase in confidence]**

3. What do I believe caused this change or lack of change?

I think it had something to do with becoming more practiced and more comfortable with the interviewers. She may have become more animated and displayed more affect because she described beeps that were more positive than in previous days. **[Participant increase in comfort; Participant beeps more enjoyable]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

In 3.1, she seemed to perk up a bit when Dr. Heavey described what she said was, “basically going on.” A similar thing happened in 3.3, when Dr. Hurlburt described her seeing an empty box on her schedule and in 3.4, when Dr. Heavey described her as being absorbed in a TV show.

In 3.5, she seemed to get happy when speaking about being secure/happy at the moment of the beep when she was looking at her boyfriend on Skype.

In 3.6, when she spoke about feeling tired at the moment of the beep, she yawned and even rubbed her eyes, like she was feeling sleepy again. **[Participant felt understood; Participant re-experiencing]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No. **[Nothing noteworthy]**

DAY 4 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed easier or more fluid than before. The interviewers seemed to have more faith in her descriptions because they accepted her descriptions with less questioning than before. **Easier interview**

2. Did I notice any change in the participant?

She seemed even more confident than before in her inner experience. She seemed to pick up on some of the interviewers terms. **Participant increased confidence; Participant adopting interviewer terminology**

3. What do I believe caused this change or lack of change?

Practice and getting more exposure to the interviewers terms and what was expected of her. **Practice**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

In 4.2, she seemed to pick up on the idea that the interviewers often want her to differentiate between cognitive and feeling experiences because she quickly described her experience as cognitive. She said this without any prompting from the interviewers.

In 4.4, she used Dr. Hurlburt's words from a beep on an earlier day when she was talking about a TV show when she said that she was following "the storyline."

She seemed comfortable even when there was disagreement between the interviewers about her inner experience (4.5). **Participant adopting interviewer terminology; Participant relaxed/comfortable**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **Nothing noteworthy**

Adele

DAY 1 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed pretty straightforward. She seemed a little more suggestive than usual and lacked the nonverbal signs of anxiety/discomfort that many participants show. **[Easy interview; Participant suggestible; Participant relaxed/comfortable]**

2. Did I notice any change in the participant?

No **[No change]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

Beep 1.2, when she was asked about her remembering experience related to her father saying "101." Her nonverbal reaction made it seem that there was something about her inner experience that she was unsure of and perhaps surprised by. **[Potential participant self-discovery (unclear what/if she learned something)]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

DAY 2

1. What was it like to interview the participant?

She seemed less anxious than most participants seem and needed less supportive comments. **[Participant relaxed/comfortable]**

2. Did I notice any change in the participant?

She seemed to have a slightly more playful attitude towards her inner experience. **[Participant playful]**

3. What do I believe caused this change or lack of change?

Getting a chance to take a look at her pristine inner experience. **[Practice]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

In beep 2.6, there was something about this moment, perhaps the meta- part of it that amused her.

Before the interview started and she said that she hoped her thoughts were “rich” enough, which made me think that she may have felt that her inner experience was too simple or that maybe she wasn’t doing a good job on the interview and that she may be biased towards giving what she considers to be more complex inner experience. **[Participant negative self-evaluation]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

DAY 3 - TAPE REVIEW

1. What was it like to interview the participant?

It continued to be pretty straightforward. She still did not seem to show the discomfort or anxiety that most participants show. **[Easy interview; Participant relaxed/comfortable]**

2. Did I notice any change in the participant?

No **[No change]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

She commented again that she thought she should have more exciting thoughts. In the previous interview, I thought this may bias her to try to give more exciting beeps. That did not happen.

In 3.4, she said she found Dr. Hurlburt’s question interesting. His question was about if in beep 3.2, she wondering was like her experience in 3.4 or if there was something different about 3.4. **[Participant negative self-evaluation; Participant increase in interest]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

DAY 4 - TAPE REVIEW

1. What was it like to interview the participant?

It seemed the same as before. **[No change]**

2. Did I notice any change in the participant?

No **[No change]**

3. What do I believe caused this change or lack of change?

N/A **[N/A]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

She said that one of her beeps might be interesting. Her inner experience not being interesting enough suggests that she may have been more nervous/anxious about performing than I thought before.

In 4.3, she seemed uncomfortable talking about an experience related to her reading about how women in a certain culture lay on their back with their clothes on during sex. At the time, people were going into and coming out of the lab, which may have made her feel even more uncomfortable and potentially influenced how she responded to the interviewers. **[Participant negative self-evaluation; Participant discomfort/distress]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

Paul

DAY 1

1. What was it like to interview the participant?

It was a challenge because it seemed upsetting and difficult for her to answer our questions. I thought that she handled this by giving us answers, even if they were tangential and hard to believe. I also found her eye twitch and laugh unsettling. **[Challenging interview; Participant discomfort/distress; Participant gave tangential, hard to believe responses; Interviewer found eye twitch and laugh unsettling]**

2. Did I notice any change in the participant?

She seemed to get more frustrated as the interview progressed. **[Participant frustration increased]**

3. What do I believe caused this change or lack of change?

She continued to struggle with answering our questions and this didn't improve over the course of the interview, which appeared to frustrate her. **[Participant did not increase skill at DES task; Participant frustration]**

4. Were there any moments or interactions with the participant that seemed important or noteworthy?

She claimed to have a photographic memory. This seemed hard for me to believe because she had a hard time remembering the beeped moments. **[Interviewer found participant hard to believe]**

5. Do I have any other thoughts or reactions about the participant, the interviewers, or the interactions between the participant and interviewers?

No **[Nothing noteworthy]**

Appendix II - Exit Interview Raw Data

Bailey

What was it like to collect the samples?

It was interesting especially since it was unexpected. At first, I was nervous, but it got better after a while. I enjoyed it. **Enjoyable Experience;**

What was it like to be interviewed?

At first, I was nervous. I was really nervous for the first one. They got interesting after I while. I got confused by the questions. I wondered if I was doing it right. Sometimes it was a little bit hard to explain. **DES difficult until skill improves;**

What impact did it have on you? Positive, negative, or neutral?

Positive, especially after the 75 MPH thing. **Enjoyable experience;**

Any impact outside of sampling?

Positive. On my thoughts. Even when I wasn't having the beeps I was asking myself what it was I just thinking or what was my experience on my own. **Enjoyable experience; Impromptu self-sampling/thinking about inner experience;**

Any other thoughts?

I told everybody else about it too. It was fun to do. It was one of my best experiments. At first I was really nervous. And then the second day I was kinda nervous and then on the third and fourth day it got better. I wasn't as nervous it was a little bit hard still. I would still get confused. **Enjoyable experience; DES difficult until skill improves;**

Do you feel like you left feeling tired, happier, or worse?

Happier, I would go and tell people about it. It was not something that I just came here and did and left. I kept looking forward to. **Enjoyable experience;**

So there was something about the experience that left you feeling better?

Yeah, happier. Just thinking about it a lot. Very interested.

It was a very positive thing. Would sometimes ask myself about my experience. **Enjoyable experience; Impromptu self-sampling/thinking about inner experience; More curious about inner experience;**

Alana

Dr. Hurlburt was approached by Alana, one of his students, and she discussed her reasons for withdrawing from the study.

Dr. Hurlburt: Her first question was something like, “was my participation in your study totally useless?” That’s my recollection of her question. And my recollection of my answer was, “there were two aspects of your participation of this study. One has to do with training of graduate students in the technique and your participation was totally worthwhile as far as that was concerned, the other had to do with the data that we’re trying to collect and we didn’t get enough to collect that, so it was not worthwhile from that perspective.” So half worthwhile half not worthwhile was my answer to her question for better or worse. And she seemed sort of slightly relieved at that, like it wasn’t totally worthless, like she hadn’t let us down entirely. And so, I said or she said, I’m not exactly sure how the conversation went, maybe she volunteered that the reason... She said, (I’m not exactly sure how the conversation went) that the reason she discontinued was, the sampling made her inner experience worse for her. In the sense that she had to think about it a lot, when she was collecting the beeps, she would get a beep and then she’d have to think about what that experience was like and then she would go on thinking about what that experience was like for an hour or so maybe a couple hours afterward. **Undesirable rumination on inner experience;** And she had said in her initial interview with me or us or whoever that she was sort of ‘OCD,’ she called herself ‘OCD.’ I don’t know whether she deserves that as a definition, but that’s her self-characterization. So, what she said was during the beep and for some number of hours after the beep, she felt like she was concentrated on that, consumed is not her word, but it’s in that direction, and she didn’t particularly like that. The second interview was less bad than the first interview substantially, in the sense that she didn’t feel like she had to think about this stuff as much after the second interview as after the first interview **Discomfort decreased over time;**

Dr. Heavey: You said that she had to think about it after the beep, but now we’re talking about inaudible - he may have said “the interview”;

Dr. Hurlburt: It’s both and the conversation was sort of like this, we jumped back and forth. But it’s both. Wearing the beeper made her focus on her experience in a way that she found undesirable and participating in the interview made her also feel like she was concentrating on her thoughts more than she wanted to and there was nothing that she was blaming us or about the process or whatever. **Undesirable rumination on inner experience;** This is the way she is, she says, and it made it worse and class is coming up and I didn’t feel like I had the five hours to spend consumed with this kind of experience. And so I of course, was supportive of the fact that we were fine with her leaving and happy that she was telling me what was going on and stuff like that and along the way I asked, we had a pretty long conversation as student faculty member conversations go, a 5 minute or so conversation, about this topic and more or less towards the end of it I said, “I would like to ask you a particular question about that if it’s OK with you. I’ll ask.” She said, “sure.” Dr. Hurlburt continued, “I’ll ask it and if you don’t want to answer it you can feel free not to answer it.” She agreed that I could ask it and she said, “ I’ll bet I know what the question is.” I said “I’ll tell you what. I’ll ask the question and then you can tell me if you’re right.” We went forward and I said something like, “Dio asked you a question at the end of sampling about that you felt sad and you looked to me like you were sort of distressed by the question and I wanted to know what your reaction to that was.” She remembered the question. She didn’t think you were right about her feeling sad. She didn’t think that that question had any

impact on her decision to discontinue sampling. She thought you were on the wrong track. She told you you were on the wrong track and that was sort of it, I gathered from her point of view. I told her that was sort of a non-standard DES question, and she was concerned about hearing more questions like that, that isn't what is going to happen, but that didn't seem to be. As far as I could tell, that was not the focus of her issues with the process. She did say that she would be happy to participate again when she felt like she had less pressure, which is to say I think, after summer session 2 is over. She talked about that like it was in the fall. I don't know whether she has classes in summer session 3 or whatever and didn't want to do it then.

Dio: What did she think the question was that you were going to ask her?

Dr. Hurlburt: I didn't ask her. That would have been a long way away from what I think our contract was, so I didn't ask that question. It would have been an interesting question to ask and I considered asking it and I declined to ask it.

Some conversation about the recording of this audio and who was present for the participant's interview.; Somewhere in there, I did say that I thought it was possible that additional experience in this thing might ease this problem for her, this focusing, over-focusing problem, I thought it was possible that getting her experience out onto the top of the table might make her thinkings have less control over her or something like that, I don't remember exactly what I said. She allowed as how that was possible and that it was easier for her the second time around than the first part around. So, I don't think she understands her participation as having been a net negative. I think she understands her participation as having heightened for a time stuff that is not pleasant for her. I told her I didn't have any right to make any claim to her thinking processes getting better as a result of DES, but the fact of the matter is that's my personal thing [inaudible]...Conversation continues about potential therapeutic effects and mechanisms of DES.

Harrison

What was it like to collect the samples?

It was strange at first because you...I didn't really know what you guys were looking for. It was kind of fun at the same time. Beginning with it you kind of just were waiting for the beeps to happen. The first day I was collecting I was kind of just waiting for the beep and then as the meetings kept going you just kind of went on doing what you normally would do. You actually kind of had fun with it afterwards when you're recording exactly what happened because it makes you think. It makes you think about things you've never really given any thought so it's really entertaining in that aspect. But it's fun. It's fun I enjoyed it. **Enjoyable experience;**

What was it like to be interviewed?

At first they were pretty hard like I was being grilled but as the meetings kept going it became more fun. I knew what exactly to record so it was easier to keep going back and forth. The interviews became less scary everyday. They were for the most part pretty fun for me. Don't know about you guys, but for me, yeah. **DES difficult until skill improves; Enjoyable experience;**

What impact did it have on you? Positive, negative, or neutral?

I think positive. It's making me think about my experiences. It's not just, 'oh I have an itch' No. It's 'what the hell is this itch, like what is it'. Kind of like a philosophy class except shorter and not as expensive. **More curious about inner experience; Increased awareness of inner experience;**

Do you feel like DES had any impact on you outside of sampling? On your thoughts, your feelings?

Yeah, it's kind of made me realize that everything has some sort of value and by that I mean, it's not just a yawn. It's not just an itch. It's something. It's not just something you can cast to the side. Everything deserves a little bit of thought. I guess that's the best way to put it. **Increased awareness of inner experience/ self-discovery(value of his inner experience)**

Is there anything you do differently because of your participation in DES?

No, I don't think so.

Do you feel like DES has influenced the way you view yourself or anything else?

I thought I was crazy for a second, but besides that, no. If anything it makes me feel a little bit more sane. I don't know how that really works but it's kind of how I feel. **Felt crazy at first, then a little more sane;**

Do you have any other thoughts or reactions about participating in this study?

Can I do it again? And not just for the money. It's just fun. **Requests to participate more;**

Maddi

What was it like to collect the samples?

At first, I didn't know what to write down so I wrote down everything that I was doing. Then I got a better picture of what you guys wanted and then I used that. It wasn't that difficult. **DES difficult until skill improves;**

What were the interviews like for you?

Kind of intimidating at first because of the cameras. Not really use to that. Other than that it was fine...didn't really mind it. **Cameras intimidating;**

Do you think that doing DES...doing the sampling had an impact on you? Positive or negative?

Positive. Every time I read now I'm kind of aware of everything. When I'm in these picture things I stop and think about it for a minute. So probably positive. I'm more aware of myself I guess. **Increased awareness of inner experience; Enjoyable experience;**

Did DES have an impact on your life outside of sampling, your thoughts, your feelings?

Kind of, not really, no. **No Impact;**

Is there anything you do differently because of your participation in DES?

Well, no. If me and my friend are reading the same thing I ask her questions about it...just kind of curious about other people I guess. **More curious about inner experience; Impromptu self-sampling/thinking about inner experience;**

Dr. Hurlburt: So more curious now than you were before about their experiences. Is that what you mean?

Yeah, it's really weird. Basically. I wasn't all curious before I didn't really care or know about it...

Dr. Hurlburt: So what kind of questions might you ask?

Oh, OK. So me and my friend, inaudible;, we were together and we were reading something and I asked her how, what she was thinking of and if she pictured it or what she pictures. Basically what you guys do to me. **Impromptu self-sampling/thinking about inner experience;**

Dr. Hurlburt: And did you find that interesting? Did she find that interesting?

Well yeah. She thought it was weird.

Jason: Has DES influenced the way you view yourself or anything else?

No

Jason: Do you have any other thoughts or reactions about participating in this study?
Not really, no. Good study I guess...psychology class and stuff.

Pamela

What was it like for you to collect samples?

At first it was kind of odd. And like, I think I was thinking more about it going off than what I was actually doing. But as it went on it was fine. I liked doing it more when I was busy because it kept my mind off the actual beeping of the beeper. I think the first time I did it a few times I was wondering when the beepers going to go off, so I redid the beeps. **Undesirable rumination on beeper; Skipped beeps;**

Dr. Heavey: You didn't count those?

Pamela: No. I didn't want to count those ones.

Dr. Heavey: We count those. We're inaudible;. We'll take anything. (laughter).

Pamela: It was fun. Actually it was really fun. I'm going to miss doing it.

Dr. Heavey: I'm going to miss doing it.

What were the interviews like for you...the part where we sit around and talk about everything?

At first it was very strange. It got more enjoyable. I guess.

Vince: Can you say anything more about how it got more enjoyable?

Pamela: I guess I liked thinking about what I was actually thinking more and digging into what I was thinking and breaking it down when at first it felt daunting. I couldn't even...I don't know. **DES difficult until skill improves; Enjoyable experience; More curious about inner experience**

Dr. Heavey: Yeah, it's challenging. It's unique...the kinds of things people haven't done

Dr. Hurlburt: And would you say the part that you liked about it was about the collecting of the samples or the talking about it or both.

Pamela: Both. It's almost therapeutic.

Dr. Heavey: We wondered about that.

Pamela: I feel like I got out of a therapy session when I leave here. **DES like therapy;**

Dr. Hurlburt: We'll send you a bill later

Dr. Heavey: This is the best kind of therapy. You get paid to do it. (laughter)

Vince: You kind of maybe have been talking about this a little bit. Did DES or this process have an impact on you, like positive or negative?

Pamela: Yeah, it was a positive experience. I'll definitely remember it. It made psychology more interesting. **Enjoyable experience;**

Vince: Do you think it had an impact on your life outside of sampling and paying attention to thoughts and feelings?

Pamela: No, I wouldn't say it changed anything I was doing or going to do.

Vince: Has it changed how you view yourself or anything else?

Pamela: Yeah, a little bit. I realized how dumb some of my thoughts are.

I think our thoughts are more mundane than we think they are, because the kinds of things people remember are not characteristic of what actually is going on most of the time when you throw random darts into people's experience. **Increased awareness of inner experience/self-**

discovery (learned her inner experience was more mundane than she thought before);

Discovered most of her thoughts were mundane;

Vince: And finally, do you have any other thoughts or reactions about participating in this study?

Pamela: I don't think so. **Nothing additional**

Deana

1. What was it like to collect samples?

It was pretty weird at first. I kept thinking, 'what am I going to think about when the beep beeps. What am I going to say and how am I going to write that down? And what are they expecting the first time?' But then after a while, I knew when the beep hit what was happening before. Because the beep kind of stops my thought process, so it's like I'm thinking and it comes and it shuts it down. And then after the first time I knew exactly, not exactly because it's still hard to explain what was expected. **DES difficult until skill improves;**

2. What was the interview like for you?

They were pretty fun, not as stressful as I thought it was going to be.

Me: Was there some stress to them?

Participant: Yeah, at first, when you guys whipped out the video cameras, I'm like, 'Oh, my god.' But now, it's not bad. **Cameras intimidating;**

Me: What was it like trying to explain some of the things to us because I know...

P: So hard, I always felt like I was saying it wrong or I was weird because it makes sense before you say it and when you say it sounds so weird, like 'what am I doing.' But in my head it makes so much sense. **Felt weird;**

Me: How did you feel like we responded to you?

P: Pretty comfortably. Sometimes I think I have really immature thoughts, like about the Pinocchio thing, but you guys weren't 'Oh, my God, why weren't you reading?' kind of thing. **Did not feel interviewers had expectations for her inner experience;**

3. Did DES have an impact on you (positive, negative or neutral)?

I realize that feelings...the distinct difference between thinking feeling and feeling feeling. Because I thought they were like... because I thought they were...I thought it was normal to feel in your body. I guess I would be no one if I didn't feel inside my body. I'd be so sad, no offense. **Increased awareness of inner experience/self-discovery (learned difference between thinking feeling and feeling feeling); Learned difference between thinking feeling and feeling feeling;**

4. Did DES have an impact on your life outside of sampling, your thoughts, or your feelings? Um, like?

Me: Well, you've talked about how you noticed the difference between thought feelings and feeling feelings. Do it affect you in any other ways outside of that.

P: When the beep hit, I'd be more willing to analyze what I was thinking. **More curious about inner experience;**

M: I just mean now, like from start to finish.

P: No, besides the whole difference between if I'm thinking feeling or feeling feeling.

5. Is there anything you do differently because of your participation in DES?

Not like my mindset, but I'm more aware of how I'm reacting to things.

Me: Can you say more about that?

P: If someone does something to me and I get really happy or really mad, I'm more aware of what I'm actually feeling and what I'm doing to respond to that. **More aware of inner experience; More aware of her response to her inner experience;**

M: So it's like you notice the sparklers or the lava more.

6. Has DES influenced the way you view yourself?

Yeah, the way I feel feelings. No. The way I think about feelings way more now. I thought they were just not as important, but I'm thinking that feelings are much more important than other things. **DES led her to believing that feelings are more important than before;**

Me: Can you say how they are important to you now?

P: That I feel dynamically over the day. You can feel thousands of things in one day. It changes so often. I notice those little changes now. **Increased awareness of inner experience/self-discovery (learned that she can feel thousands of things in one day)**

7. Do you have any other thoughts or reactions about participating in this study?

No, I think we're good.

Isobel

1. What was it like to collect samples?

It was cool. I was kind of nervous at first because I was thinking, 'Am I going to be able to remember what I was thinking exactly before. But as it went on, it got easier. **DES difficult until skill improves;**

Dr. Hurlburt: You said it was cool and that was your first word and I sort of interrupted that. So did you have more to say about that aspect of it?

Participant: No

Dr. Hurlburt: And did you feel you were capable of grabbing your experiences after some practice, after a couple of days of it. Did you feel like you were doing a high fidelity job of grabbing what was on your experience and describing it to us?

Participant: At first I had to do some of them over because I couldn't remember and then as it went on, I was like OK and I was writing it down. **DES difficult until skill improves;**

2. What was the interview like for you, when you came in here and we asked you all the questions?

It seemed easier when there were more people because they were able to give more examples when it was more people. It was interesting. Everyone was nice. I thought I wasn't going to be able to say the right things. **Interviews easier with more interviewers to give examples of inner experience;**

Me: Was that at the beginning, the middle the end, when you thought you weren't going to be able to say the right things.

Participant: In the beginning

Me: Did the interviews get to be different for you over time or were they pretty much the same for the most part.

Participant: It seemed like it got easier every time. **Interviews became easier;**

Me: Can you say in what ways?

Participant: Yeah, at first I thought I wasn't going to be able to say the right things and then as it went on, there wasn't a perfect thing to say. It was just whatever I was thinking. **Did not feel interviewers had expectations for her inner experience;**

Dr. Hurlburt: And so I gather from what you said that the large number of people around this table, the group of us, that was a positive thing for you because some of us would have different aspects that would be helpful to you. It wasn't like you felt like you were ganged up on by a bunch of people.

3. Did DES have an impact on you (positive, negative or neutral)?

No, I still don't tell people what I'm thinking.

Me: Do you have a better idea of what you're thinking yourself now?

Participant: Yeah

Me: Can you say more about that?

Participant: When I think of something, I'm like 'wait, why was I thinking of that.' Then, I think of why I was thinking that. I don't know how to say it. It's kind of weird. **More curious about inner experience;**

Me: So it sounds like you notice that you'll think something and then you'll wonder, what,

why was I thinking that. So you notice yourself basically thinking. So you just see it more and have a bit of a question about why it was happening.

4. Did DES have an impact on your life outside of sampling, outside of when you were here with us, on your thoughts, or your feelings?

Dr. Hurlburt: And when he says 'DES' he means this whole set of interviews, wearing the beeper, talking about them.

Participant: Yeah, when I leave, I'm more conscious of what I'm thinking about. And I'm like, 'no, I shouldn't be thinking that.' **Increased awareness of inner experience;**

Dr. Hurlburt: So it that a good thing or a bad thing?

Participant: Sometimes both. Sometimes good. Sometimes bad. **Judges her inner experience more —positively and negatively;**

Me: Can you say good or bad in what ways?

Participant: No

5. Is there anything you do differently (I guess we've already covered this) because of taking part in this whole process?

No.

6. Because you went through this whole thing, do you feel it's changed the way you look at yourself?

No

7. Do you feel like it's changed anything else that we haven't asked about or haven't covered?

No, just like I said, when I think of stuff, I'm like, 'I shouldn't really be thinking that.'

Dr. Hurlburt: If one of your friends asked you if she should engage in this study, would you say 'yeah, go for it or it's a waste of time.' What would you say?

Participant: I would say, 'yeah, you should go.'

Me: If she said 'why' what would you say?

Participant: Because there's people who care about what you think and you get paid. .

Enjoyable experience because interviewers care about your inner experience and because of compensation

Olivia

What was it like for you to collect samples?

Interesting, I guess. I forgot about the beeps a lot quicker than I thought. At times, I was hyper-aware of what I was thinking and how I was thinking it. But, I don't know if it was just luck but the beep never caught me during one of those moments. The questions you asked definitely brought to mind some things to consider when I'm thinking about things like, Is it in a voice? Is it my voice? And stuff. I never really thought about my thoughts that way. It was hard to do while I was doing other things, so I had to do it while I was studying or...I couldn't be doing too many things at once or I missed the beep or I wasn't able to recreate what was happening so I had to pick moments where I was studying or by myself not talking.

Vince: Did you have some moments where it beeped and you couldn't capture it so you threw that one away?

Participant: No, it was like, I tried it once while I was studying with music and I turned it off because I got so paranoid that I was going to miss it. **Collecting samples was challenging;**

What was it like to be interviewed?

Easier to understand that I anticipated. I was still confused at some points, but for the most part I generally understood what you were asking me. That was cool. Certain words or phrases that you would use. I'd think, oh, ok, so that was what was happening. **Developed understanding of terminology;**

Did you feel like this process has had any impact on you?

Yeah, I'll probably start looking at my thought process differently. So after I ask someone what they're thinking, I'll probably ask them so, "how did those ideas present themselves to you?" And they'll just look at me like I'm crazy. **Impromptu sampling of peers;**

Dr. Hu: I want to go back and amplify the question. Sometimes we ask very specific questions and repetitive questions. Do those seem to you like, 'Geez, you already asked that 10 times.' So does impatience arise in you about those questions or not?

P: No

Do you think this process has influenced the way you view yourself?

P: Myself as like a person? I've found out that I'm a very visual person, but other than that not really. **Increased awareness of inner experience/self-discovery(learned she is a very visual person); Learned she is a very visual person;**

V: So you were more visual than you thought you would be.

P: Yeah

Do you have any other thoughts or reactions about participating in this study?

I'm just curious about how you're going to synthesize this information and organize it.

V: We've actually been organizing a lot lately. It's quite a busy process.

Dr. Hu: So, it is a challenge to organizing the data. That is the big challenge of what it is that we're about to...but the kind of thing that we're interested in is. So you have a lot of "visual stuff" as you say and we would notice that. And other people don't. We are discovering to our satisfaction that people are different from each other. Some people have visual phenomena frequently, some have it all the time, some have it never. Would you have said at the outset that

you are a visual person? I guess we asked you to say that so sooner or later we'll find out. Did it come to you as a surprise that you're a visual person?

Participant: I knew I was visual, but I didn't realize how much I had to picture to understand things. For example, when I was recalling information from my notes. I've always pictured my notes, but I never acknowledged the fact that I have to see in my mind's eye my notes to understand what I wrote. I didn't know to what extent how visual I was, which is apparently very. **Increased awareness of inner experience/self-discovery(learned the role of inner seeing in her learning); Increased understanding of how she learns;**

Dr.Hu: That is part of what this study is about, to get some handle around those kinds of things. And people as a general rule, don't have a very accurate view of what their own experience is like. And it's sort of surprising given that you spend your whole life doing it. But most of the time you're looking at something else rather than the characteristics of your experience. Do you have other questions for us?

P: Yeah, how are you going to...I can't imagine that you are going to chart things like this, but how do you go about working through all this data. Do you just look through it and make a general statement about each person and then...I'm just curious how it goes because I'm a bio major so, I do a bunch of experiments and I have no idea how I would even begin with all this kind of stuff.

L: Well, qualitative research is definitely tough to handle in that way. So you see we take a lot of notes and after each interview we write up all of the different beeps, the descriptions of what was going on for you moment, pass it around and see what we agree on, disagree on all that sort of stuff. And then at the end of your sampling, we look through to see what are common things for you. So, visualizing is common for you. So, that will be a predominant thing in your experience. And we essentially just have profiles of what is common for each of our participants. And then we look to see...we can't draw any real general conclusions about things, but we look to see if there are similarities or themes or things like that, that we can talk about.

P: Um hmm

Dr.Hu: We don't know what's important until it's too late, basically. So, for example, in your last beep or second to last beep, the fish beep. Well, in several of your beeps, you had taken the perspective of the main character, but in only one of those things, you had imagined yourself into the main character. In the other two, you were just seeing it from that. So, we'll make note of that and that will go into the mixture of things that we have made note of. And maybe, we'll find that there's a lot of people who do that or maybe we'll find that there is nobody else does that. And sooner or later, we'll try to make sense out of those kinds of themes. So what we try to do is get what we call a high fidelity view of your experience and then try to figure out what that means down the road. So, for the most part, we're looking for the idiosyncratic characteristics of your experience.

P: So, is the goal just to observe and understand rather than come to a conclusion in the study.

Dr. Hu: In the short term, for sure yes. In the longer term, we'd like to know something about reading. Reading is an important deal. And some people read in one way. Some people read in another way. And the question is well, does that matter. And if it does matter, does it matter in any important sort of way. So, if someone is a visual person, should you teach reading in one way and if someone is not a visual person, should you teach reading in another way? Well, we don't know the answer to that. But you can't know the answer to that until you can identify

clearly that there are some people who read in a visual way, and there are some people who read in a non-visual way.

P: So how come you only incorporate reading into the last session of beeps?

Dr. Hu: In one manner of speaking, the first four days are training for ... We needed to get you to be pretty good at what you're doing before we asked you to read.

P: OK

Dr. Hu: And we don't want to do the reading on the first day because we want you to be good at it before you get to what we're really interested in. There's a lot of stuff going on in the study, but what happened today was among the most important parts of this study. We wanted you to be good at noting our experience in any kind of experience before we asked about reading. We just had that you had to do it for that many days because as you recall the first day was sort of difficult and the second day was not quite so difficult, the third day was easy, and the fourth day was better and then you got to here and then you were pretty confident about what was happening. And it took you four days to get here. And that's the way it is. That's not your failure. It takes people that long to do it.

P: OK

Dr. Hu: There are certain characteristics that some people have in common. Some people talk to themselves a lot. And some people don't. Some people have a lot of feelings. Some people don't. As Leiszle said, we will go through each one of your experiences and say well, 'she was visualizing in this beep' and she was 'talking in that beep.' Then, we can count those up and we can say, in 59% of her samples she was engaged in some kind of visual activity. And we can compare that across people. And that is part of the data analytic process.

P: OK. Interesting

Dr. Hu: Other questions?

P: No, that's it.

Kevin

What was it like to collect samples?

It was different because if I read a book I see these images and they go away and I don't really remember them. When I'm writing them down, it's kind of cool to see how my memory...my mind makes these images. Before, I don't really focus on how my mind makes these images. I see these images and then I move on. So, it's cool to write them down and be able to see them again because I write them down in detail so I can actually remember them again. **Increased awareness of inner experience; Enjoyable experience; Enjoyed remembering experience of images;**

L: So you liked being able to capture that sort of momentary image that you're seeing.

Participant: Yeah.

Dr. Hu: Did you feel you were pretty competent at being able to capture what your experience really was?

P: Yeah. I think it was better the closer I did the recording to the time we had the meeting. So as time went on, I sort of forget details, the specific things that I see.

L: So doing it today, you sampled pretty close to when our interview was today.

P: Yeah, I sampled when I got up this morning.

L: So, was this like the easiest one for you?

P: Yeah. Definitely.

Dr. Hu: That could be confounded with, this is a reading one so it's a different kind of a deal here.

P: That's right.

What was the interview like for you?

P: It was nice, very friendly. **Enjoyable experience;**

L: So, it didn't feel.

P: Nope. Didn't even notice the cameras

Dr. Hu: So we use what might be called probing or repetitious questions. Did you feel like, 'c'mon man let's get on with this' or did those questions seem alright with you?

P: No. I liked the questions because they made me think more about what I had saw instead of just blurting it off. If that makes sense, right.

Dr. Hu: The questions did not seem like they were just nit-picky, they seemed like they were helping you to get to your experience.

P: Right, yeah. I sort of took as you guys are trying to help me remember for you guys instead of you guys trying to pull something out of me.

L: Good.

Dr. Hu: That's the object. It's doesn't necessarily mean you have to experience it like that.

Did DES have an impact on you?

No, probably not too much because this is the way I see things, just in images. It didn't really have any impact. **No impact;**

Did it have an impact on you outside of sampling, like noticing your thoughts or feelings more or anything like that?

Not to a great extent, no. **No impact;**

L: OK. So it was a fun exercise, but it doesn't seem to have really generalized.

P: No

Is there anything you do differently because of your participation in DES?

I think doing the sampling before the meeting, within a closer time range probably would have helped just because over night I'm going to have all these dreams and stuff that are going to sort of phase my memory so I felt that it was hard to remember things that happened the day before our meeting that happened the next day.

L: So the morning interviews that we did when you sampled the day before, you felt like that was kind of fuzzy.

P: Yeah, it was a little harder. It was harder to remember the specific details.

L: Did you sample the day of anytime other than this one? Do you remember?

P: I don't remember. I probably did it. At one point, We had a meeting that was pretty late in the afternoon. I think I sampled that morning on that day.

Dr. Hu: And you had one meeting as I recall, where there were two sleeping periods between the sample and the...

P: Yeah, that was this last one.

Dr. Hu: We have discovered from reports like yours that two sleeping nights is a bad deal because for most people they feel like they can keep things in mind across one sleeping exercise, but the second seems to be...

P: In my own mind, I made it into one because I just slept all day that next day.

Dr. Hu: That's why everything we have to do has to be really couched and people are not just awake, asleep, awake, asleep.

Has DES influenced the way you view yourself?

No, I don't think so. Not much. Not to a great extent.

Dr. Hu: And is that because you think you had a pretty accurate view of the way your experience was before you participated in this?

P: I would say that some of the questions you guys asked sort of have stuck with me. So as I'm doing these sampling things I sort of remember some of the questions you guys asked and I try to answer them before I get here. So, the first person and all the colors and all the focus and stuff, that I don't know because I've been doing a sampling every week so maybe after this point I might use some of those questions maybe when I'm reading a book. I might ask myself was that in detail, was this in detail, in color. I might ask myself that but I don't know yet **May engage in impromptu self-sampling/thinking about inner experience in the future;**

Dr. Hu: Does it seem like your experience changed or does it seem like you got a little better at reporting it.

P: It changed just because I was able to use those questions you guys asked me to get a better image, I feel like. Not get a better image, but remember the image better, so get details out of the image that happened in like a second, get as much out of that image as I can. **Increased awareness of inner experience/self-discovery (learned more details of his inner seeing); Improved ability to remember details of inner experience;**

Dr. Hu: So what changed was your ability to apprehend the image, the image itself might be more or less the same, but the characteristics of the image might be the same, but your ability to

get it

P: To pull it out Yeah.

Has DES changed the way you do anything else?

It might change the way I read, but that is just because of this one. **Possibly changed the way participant reads;**

Do you have any other thoughts or reactions about participating in this study?

It was fun. I'd like to know what other people think in their inner experience.

Dr. Hu: We would be happy to make, when we're done with this study...

P: Is the study going to be published anywhere

Dr. Hu: hopefully

L: That would be nice

Dr. Hu: So we should try to make sure we get everybody a copy of the publication once we get it in writing. All participants deserve to see the write up. But the answer to your question is that people are different. You were visual at every stage of the reading study for example. And not everybody is but you were also, if I am recalling correctly, pretty visual as you went across your everyday life you had a lot of visual material. And some people have no visual imagery and some people have more vivid imagery than you so there is a range and that's what we're trying to explore.

L: Do you have any questions for us?

P: No. I don't think so. This was fun. **Enjoyable experience**

Lance

What was it like in general to do this process?

I liked it. I never really thought so much of an inner experience. I kind of would just not think much of it. I kind of liked the questions you guys would ask down to very exact detail. I never really thought liked that. The questions I liked...I don't know if difficulty is the word, but kind of like, having to think all the way down to my actual thought. **Enjoyable experience;**

What was it like to wear the beeper and collect samples?

It wasn't really that bad. I just had the beeper and the headphone. I just did my thing and the beeper would go off and I had to write down what I had.

V: So pretty unobtrusive

P: Not really a big deal. Just easy. When I was about to wear the beeper, I just made sure I had my notepad and my pen with me just to write down what was happening when the beep would go off. **Beeper and collecting samples was easy;**

V: How about the part about capturing what was happening in your experience? After the beep, noticing what was going on before the beep. What was that like for you?

P: At first it was weird because I never had something stop me and have me think back to the second right before about how I thought. When I did think back, I would usually have some time go by and then think way back to hours before. I never really had anything beep and think back to how I felt the one second right before. **Felt weird;**

V: I'm not quite sure I know what you mean. The beep would go off and then it was hard to see just that moment before?

P: At first, it was difficult because...the first time we did it. I never really knew how...I didn't know what to write down because I didn't know what I was expecting the second right before to write down. At first, I didn't know what to write about or what to do compared to now, when the beep went off, I knew more or less what was happening, what I was doing, what I had to do, what to write down. **DES difficult until skill improves;**

Do you think this process has had any impact on you, positive, negative, neutral?

P: I would say it was more positive than anything because I liked it. I liked coming here and talking about it. I enjoyed it. **Enjoyable experience;**

V: Do you get the sense there might have been any impact outside of just this room. I gathered you enjoyed talking about it and probably learned some stuff about it.

P: What do you mean? Impact in which way?

V: Do you think maybe you view experience differently or yourself differently..

Dr.He: or change the way you do anything or feel about anything.

V: No is OK as well

P: I'm not sure. I don't know. I can't think of any examples.

Do you have any other thoughts or reactions about participating in this study other than what we just talked about?

P: I don't think so.

Dr. He: Do you have any questions for us about the study?

P: I always thought, because I came down to the exact detail of the inner experience...what does that do in essence? Is it a way of thinking of how people think or is it...most people don't think about it down to the exact detail of why they're thinking it.

Dr He: We stay away from generally questions of why, so we don't know why things happen. We're trying to get a really good survey of the what. What is in people's experience when they go right down to a particular moment and try to capture it as fully as possible. It turns out that psychology doesn't really know much about that because a lot of people have not done the work that we've just done. Like you said, mostly what people ask is people to think back a long time ago it the past, like how did you feel when found blah, blah, blah...you got an A on that test a week ago. So we don't have a good sense of what the details of people's inner experience are. The goal of this project is to do a survey of what that's like, what people's inner experience is like and once we've trained people to be good at that also to look at what it's like when people are reading because we also don't know the answer to that question. It turns out the one thing we do know is people are different. So you were real consistent about having these ongoing visual images. Some people don't have that, some people are real different and are saying words to themselves and are reading and having different kinds of experience. So we're trying to understand what goes on in people's inner experience in general and while they're reading.

P: When I first started the reading, I felt like it was so much harder at first. I felt like I was doing it wrong for some reason. **DES difficult until skill improves:**

Dr. Hu: I can't remember. Did you have visual imagery in your everyday beeps.

P: Some of them were visual.

Dr. Hu: So it wasn't like this was the first chance that you've had to describe visual imagery.

Dr. He: Yeah, Playing football beep and seeing the football

P: I don't know. When I think of stuff I usually picture it kind of. I think of myself in the situation or myself in it and I let it play in my head, picturing it going on in my head.

Dr. Hu: We don't have really very many specific questions other than what you've seen here. So, for example, you've had one beep today where you were in the picture and other beeps where you weren't in the picture. What's that about? We don't really know. There is no data out there that says that people are frequently in the picture or frequently not in the picture. We're collecting this stuff from scratch basically. We have to drill down to the data to get to those kinds of details. So that's what we're doing. We're trying to accumulate...

Dr. He: An accumulation of people's inner experience.

Dr. Hu: Right

P: So at the picture one, when I pictured myself there, compared to all the rest, it was more like...talking about golfing prior to that I pictured a big golf course. It was talking about her on top of a hill so I pictured her on the hill and then when it talked about...when they were saying that golf group was down the bottom, they were talking about her coming down the hill. I was thinking, I'm going to picture myself in with them, in their conversation looking at this girl come down the hill, compared to everything else, when they were talking and she told them she liked them, I seen it, but I didn't feel as if...

Dr. Hu: You were a part of it

P:...I was a part of it. And then with the...everything Nick went through, it was only Nick in the story for the most part, so I didn't put myself in with Nick so, at the very first beep there were so many people that I placed myself with all those people.

Dr. Hu: So, it could be that we'll find that that's an accident of this particular scene that this scene draws people into it. That's the kind of thing that we might find. We're not looking for that, but that's the kind of thing we might discover as we go through.

Zelda

What was it like to collect the samples?

At times, it was inconvenient because I have this little box I have to carry around with me. I can't do my laundry. I can't do certain things with it. I'm trying to connect it somehow so it doesn't break. When it would beep, it would interrupt me and what I was doing. It was a little frustrating because I'm having a serious conversation with my mom at one point and I have to remember what I'm doing. I'm also very glad to be in the experiment and doing it. It made me more...this probably doesn't answer it correctly, but I felt like I was more consciously aware of how I was experiencing things, regardless of the beep going on. When things are popping up in my thoughts now, I'm like huh, did I just picture that or did I see that as in words. I'm starting to think like that so I'm becoming more aware of how I'm experiencing things so that's really cool. So as for writing it down it got easier. I just kind of jotted down a few things and I needed to write more as I went on. Does that answer your question. **Beeper mildly irritating/intrusive; Enjoyable experience; Increased awareness of inner experience;**

D: Yeah.

P: Is there something you're looking for?

D: I'm actually not looking for anything in particular at all. There's not something I want you to say or something I don't want you to say. I want to make sure that my understanding stands up with yours and makes sense with yours. So it was inconvenient to have the beeper and there was something limiting to what acts you could do, the beep interrupted you and you had to stop and start writing down..

P: People kept telling me that...they would kind of make fun of me. It looked like one of those old tape decks or something.

D: Also you were more aware of your experience.

P: Right. Yes. I would be thinking about the beeper and thinking it was going to effect the beep, but I was never thinking about it when the beep went off. It's so funny.

D: I wasn't clear if you were saying that you were thinking about your experience more just when you were wearing the beeper or you were thinking about your experience more in general.

P: Now in general, without it on. It's cool. I use to think about it a lot, but I didn't know how to describe certain things and I was curious about it. Now, I'm coming back to that and I'm starting to think about more I guess. So it's interesting. **More curious about inner experience;**

D: And also that you learned better what to write as things progressed.

P: Yes, when in doubt write more. It's a way to learn.

What were these interviews like for you?

For me, something I looked forward to and I like helping out the experiment. I like analyzing it. I constantly think parts of it are really cool and I'm just fascinated by it. I like making certain realizations or discoveries about myself and just about how the brain works in general. I just think it's really cool. And it's been nice getting to know everyone in here, especially Dr. Hurlburt. That's been my experience. I think that the way you speak is really cool. **Enjoyable experience; Increased awareness of inner experience/self-discovery (unclear what she learned);**

D: So, do you have any realizations or discoveries that you can think of that might be in your

book that you can think of now?

P: Yes. That I really like this kind of research and that I feel like I'm really interested in pursuing my own research in this field, this area. I feel like it's kind of a place where I can find my niche as far as research goes which is difficult to say since I have been actively pursuing different research areas for a while and I haven't found something that would interest me enough to become more involved with it. ***Interested in pursuing inner experience research/affected career interests (*code suggested by second rater, there was a coding disagreement) I believed it reflected the More curious about inner experience code;**

Did DES have any impact on you, positive, negative or neutral, anything like that?

Positive definitely

D: or it could be a mix of any of those two.

P: Positive in that I obviously found another path that I can go on as far as my research goes, as far as I can pursue. I also felt like I was able to relate to people in the room who were analyzing things with me and that felt nice. I know this isn't a therapy session, but I just often find that it's difficult to relate to members of my family because they don't like my analyzing. Those two positive experiences. I know that sometimes it's very frustrating. There were a couple of times when, I like got a little anxiety, maybe a little bit, it wasn't a ton or anything, where I would just get frustrated and I just want to be able to answer the question and I just want to be able to explain, but I feel like I can't explain it. I want to say that there was one point, I think it was something... I wish I had written this down exactly because I don't have my journal with me. It was something that Dr. Hurlburt; had said...it's so weird, but you were so adamant on getting the answer or in wanting to figure it out or in wanting to explain it that I almost felt pressured and disappointed that I couldn't help more. But typically I didn't feel that kind of pressure. I just know that one I was feeling frustrated and a little bit anxious and it was one of those points. I felt so frustrated that I was getting emotional, like 'I need to put this in check, what's going on.' I don't really like to define things as negative or positive necessarily. But OK. **Like a therapy session; Anxiety during interviews; Felt inadequate during parts of interviews;**

Would you say that DES had an impact on your life outside of sampling, your thoughts, your feelings, anything like that?

Yes. I think that goes back to being consciously aware of how I'm experiencing things, like the process that I'm going through at points in time. And then, I don't want to keep repeating myself. I'm sorry. I'll think of something new. **Increased awareness of inner experience;**

D: You can say whatever comes to mind.

P: It's impacted my life in that I have more research that I've experienced now. I have more experience in that. I've been a participant in this study and that I've read more about it and I know that because I was a part of this study, that's a big reason of what I'm going to be focusing on for the next two years of my honors thesis.

D: So, you're more aware of your inner experience in general and you've also kind of got more research experience and you're also thinking that this is the path you want to take for your honors thesis is this, it's DES.

P: Which, very cool by the way as far as the DES study goes. Dr. Meana just said that you guys had talk and it would be OK to send to IRB and she didn't think there would be any

problems with approval.

Dr. Hu: We did have that conversation.

P: I guess we should touch base after

Dr. Hu: We should.

Do you have any other thoughts or reactions about participating in this study, is there anything you want to say that I haven't asked about?

I just think that...I look for ways to improve things, systems, or whatever. Just constructive criticism. In the future, with future participants, I would suggest that you explain things better, maybe give them a worksheet to take home with them or something because it was...it's not really hard to get, but I just felt like I didn't know right away that there would be a reading at the end. And then maybe if there's a way to have a different kind of clip on the beeper just so people can put it on their belt or something. It was kind of hard to use. **Beeper mildly**

irritating/intrusive;

Dr. Hu: You mean the clip itself doesn't allow you to put it over your belt.

P: Yeah, it's difficult to use. I would have been more apt to wear it in other situations, but this is so hard to...yeah. Can you repeat the question?

D: Repeats question.

P: Ok. Not at this point

Dr. Hu: I didn't quite understand when you said a description or list or something of what was going to happen.

P: I don't know if it...

Dr. Hu: so to be concrete, this would have been desirable on the very first...

P: Yes, I just feel like it would have improved things throughout. I could have been trained quicker on how to relate back and how to keep track of things if perhaps, and I don't know if this was part of your control so you can just tell me, If perhaps there was a worksheet and it said, try to record words if you're reading a message or something or reading a book, try to record that text, if you're having a conversation try to record what was said at that moment so you can come back later so when you're trying to discuss it you have those details because even though it was the day before, I'm going to be able to get back into it more if I have more to go off of.

Dr. Hu: it's a dilemma

Jenni

What was it like to collect samples?

It's not hard. It's just in the beginning it used to be a little harder because I didn't know what I was collecting. And now that we're going through the process it's easier to depict what I'm really thinking and really actually pay attention to it when the beep goes off.

L: So you definitely felt like it got easier as time went on.

P: Yeah.

L: Is there any day that you notice it being the first easy day or does that not make sense, it was kind of gradual?

P: Gradual.

What were the interviews like for you?

The first few interviews, even this interview, sometimes you're difficult because I don't know what you guys are asking me. And I feel like I'm explaining, but I guess I wasn't explaining it clear enough or I don't know.

L: So sometimes it felt like we just didn't get it and you couldn't explain it to us in the right way.

P: Mm hmm. And sometimes I felt like certain things you guys said would change my answer, but then I stuck to them, like 'no, that's what I thought.'

L: OK.

Dr. He: And would you say that overall it seems like stressful or not so stressful or pleasant?

P: It wasn't necessarily that I was stressed. It was just...I don't want to say I was stressed out, I wasn't. It was just trying to find the same common ground.

L: Like you were working kind of hard.

P: It made me work extra hard to think about my thoughts.

Dr. Hu: It's hard for us, too I would say

L: Hard work on this end, too.

Did DES have an impact on you, positive, negative, neutral

I'm neutral right now.

L: Are you unsure about where that's going to go. Right now as opposed to future.

Dr. He: Let me ask you a related question. Do you have a sense of how you felt either coming to or going from the interviews, like you could have felt like, 'aw, I'm dreading coming here.' Or 'felt bad going out' or you could have felt like, 'oh, that's going to not be too bad. I'm just going to this meeting.'

P: I'm just coming to the meeting.

Dr. He: So kind of neutral coming in and neutral coming out?

P: Yeah.

Did DES have an impact on your life outside of sampling, like your thoughts or your feelings?

Dr. Hu: And by DES she means this whole process here.

P: No, I just find it really interesting what you guys are trying to do. And sometimes I would tell my Mom, I'm going got my meeting where I get like 5 bucks for my thoughts. And she's like, 'aww, that's so cool.' They want to know what I'm thinking.

Is there anything you do differently because of your participation?

No, I'm still the same person. **No impact;**

Has DES influenced the way you view yourself?

No, not really. **No impact;**

Has it changed the way you do anything else, or changed anything else?

No. I still do the same stuff. If anything, the only thing that is different is I hear a beep in my mind and... **No impact;**

L: So when you're not wearing the beeper?

P: No. When I'm wearing the beeper.

L: I wasn't sure if you were self-sampling. Do you have any other thoughts or reactions about participating in the study?

P: No. It's pretty cool, even though it's difficult sometimes when you guys keep asking me the same questions, when we get to a common ground, it's like, 'OK that's what they wanted to hear.' **Interviews difficult at times;**

Dr. He: One of the things that unusual about this process is that we start with this assumption that we don't know what any words mean. So when people say things, we try to be sure that when they use the word thinking or seeing or feeling or any of those things, that... we have matched the understanding of those words and that makes it a struggle because that's a rare thing, most people just say, oh, you're feeling sad, oh, yeah, I know what that feels like.

P: Yeah. It's like a common ground from the get-go, but I guess there's more to it.

Dr. He: Right. So we try to get as solid an understanding as we can arrive at and that involves a lot of effort.

P: I guess that's what I can take from this experience. I learned that there is more to it than there really seems. **Increased awareness of inner experience;**

L: Yeah, it's not just that you're thinking about something, you're seeing it and feeling it and...

P: Yeah.

L: Alright. Do you have any questions for us?

P: No, but how many more days do I have with you guys?

L: So this is the last day as far as what you've agreed to and this is the last day of this study. We actually do have another study going on that would be one more sampling day that I was going to ask you about after I have a form or two for you to fill-out.

Dr. He: So, up to one more.

L: yeah, there's the potential for one more, but it's totally voluntary, you don't have to do it if you don't want to.

Dr. He: It's totally voluntary, but we'd be really excited if you did agree to do it so, we would like you to do it, but it's totally voluntary.

P: OK. I don't mind.

L: OK. We'll talk about it a little bit.

Adele

What was it like to collect the samples?

I thought it was a very neat idea. I was curious about what the beep would catch me on, catch me thinking. I just remember...I don't know. I thought it was a neat idea I guess.

Dr. He: Was that after you had done it or before you did it, did you think it was neat?

P: Yeah, before I did it. I wondered what people would think of me when they look at me getting on the bus. I got this beeper. I wondered if people would think, 'what's up with that.' And I was just thinking, I wanted to have some good thoughts for you guys. And I remember too thinking that maybe if it caught some strange thought, I was wondering if I would be honest and write that down. It never caught me in a crazy thought. And that's just what I was thinking. I was thinking that this is pretty cool. I also wondered if it would help me to regulate my own thought patterns or what not, like if it would be therapeutic in a way, to see, "wow, I was thinking crazy at 10:15, what happened before 10:15." Overall, I just thought it was a neat idea. **More self-conscious because of beeper and upcoming interviews; Wondered if it would be therapeutic;**

V: Did it end up feeling therapeutic at all or not so much.

P: I feel like it could have if I would have wore it everyday. The last few weeks have been good for me, but I usually can think some crazy stuff, so maybe if it would have caught me during a crazy moment, my beeps would have been more juicy. I would have liked to have worn it more often throughout the week. That's how I feel. **Has potential to be therapeutic if more frequent;**

What were the interviews like for you?

I didn't know what to expect. Of course, I was wondering what the questions would be like, wondering what you guys wanted. Just wondering what you guys were looking for, what you guys wanted. And just hoping that my beeps were good enough, really. **Hoping to meet interviewers' expectations;**

V: So now that the interviews are done, what do you make of it, how do you think they turned out?

P: I'm still wondering what you guys are looking for.

Dr. He: Did you enjoy the interviews or not enjoy the interviews.

P: Yeah. I enjoyed it. **Enjoyable experience;**

Dr. He: OK

P: It was an overall interesting experience.

Dr. He: You enjoyed it, but there's still a question out there, like what did we think about the whole thing.

P: Yeah, what are you guys going to do with the answers and how are you going to incorporate that in the study. What is the results going to look like and what is it going to tell you as far as inner experience?

Dr. He: Explains the aims of DES;

Did this process seem to have any kind of impact on you either positive or negative?

I feel like it could have been more positive, therapeutic if I had worn it everyday, so I could see the pattern of my thoughts. It wasn't a negative experience. **Has potential to be therapeutic if more frequent;**

V: So not negative, but could have been maybe more positive if you wore it more.

P: It was positive. I just think I wanted to wear it all the time. **Wanted more DES;**

L: Do you think it would have been feasible with your schedule to wear it 5 days in a row, Monday through Friday?

P: Yeah, sure. I wouldn't have minded that.

Do you think DES, this process, has an impact on your life outside of sampling, maybe an impact on your thoughts or your feelings?

P: Do I think DES?

Dr. He: Doing this. Doing the beeper. We call it DES. That's our name for it.

P: Oh, OK. So say that again, do I feel that this would be beneficial to me outside of...

V: Do You feel like it's had an impact outside of your life outside the process, on your thoughts or feelings?

P: Yes, I feel like it could have, if I'd worn it everyday, yeah. My dad said, you can wear it everyday, write down your thoughts." He did say that.

Is there anything you do differently because of your participation in this process?

P: Is there anything I do differently because of this?

V: Mm Hmm

P: Yeah, I kind of do. I must say. I really do. Knowing that I was in this study and if I was wearing the beeper and it went off, I was able to say, 'oh, that was in my experience.' And I do catch myself doing that now, just being more attentive or aware of what's in my environment and just thinking to myself, 'what am I experiencing?' It's funny. So I would say yeah, it has impacted me as far as what I'm paying attention to. **Increased awareness of inner experience; Impromptu self-sampling/thinking about inner experience;**

Dr. He: And specifically it sounds like it's led you to pay more attention to your ongoing inner experience. At some moments, you notice it more than you used to.

P: Yeah, I'm aware now of my inner experience and how it's like, I'm more aware that it exists, I guess.

Do you think this process may have influenced the way you view yourself or the way you view anything else?

P: No. Like I said, if I would have wore it more often and jotted down my crazy thoughts, then I think that would have definitely helped me to better view myself. **Wanted more DES**

Do you have any other thoughts or reactions about participating in this process?

P: No, I think it's rather cool that you guys are looking into inner experience. I just think that that's interesting.

V: So do we.

Dr. He: Thanks. Explains where to get the iPhone app iPromptU, which is an app that functions like a DES beeper.

Paula

So what was it like to just collect the samples?

Paula: It was kind of awkward I guess. I've never done anything like this before and the beeps were really obnoxiously loud and I have really sensitive hearing. I can hear really far away sometimes. Keeping a headbud in my ear that's nothing new to me, because I always have headphones in, but having something that obnoxiously loud, within a certain time frame repeating...just scares the shit out of me because after it goes off I just kind of forget it was there...then it all of a sudden beep. **Beeper obnoxious; Beeper frightening**

M: So it was scary for you... it was kind of irritating...

L: Yeah, more irritating I guess. **Beeper irritating;**

M: So what was it like just walking around day to day people seeing you with the earbud.

L: I did it at home. I did not do it in public. I was like nope I'm not doing this in public.

M: So what were the interviews like for you...when we sat you down...

L: Intrusive. It's the best way to describe it. I'm not used to the nitty gritty questions like that. I felt like I was interrogated for a crime. **Interviews intrusive;**

M: Were there any moments that stood-out to you in the interview?

L: No. It was just really uncomfortable for me in general.

M: Can you tell me what felt intrusive? What was happening that made you feel like this was too much?

L: In the beginning, I wasn't terribly uncomfortable because the questions started out pretty generic. And then as they got more specific I got more annoyed because I'm not used to it and I tend to ...when I'm uncomfortable I tend to want to seclude because that's how I am. I guess it was just the nature of the beast.

M: Can you remember what kind of questions felt comfortable and what kind of questions started to feel uncomfortable?

L: It was when y'all got...trying to get really specific minute, second of my life, each beep, as the questions got more and more specific I started to feel uncomfortable because as I told you over the phone I have a hard time remembering very specific moments in my life but I can remember certain time frames... even if I'm describing a story, something that happened to me to a friend I can't remember exactly what time, I can't remember exact seconds, but I can remember within a fifteen minute window or so. So I think that's probably what got me the most...asking one second of my life when I can barely remember what I did a week ago.

Specificity of interview questions irritating;

M: So it was just the level of detail...do you remember any questions that were OK or any that were...

L: No, I can't remember anything specific.

M: yeah, it's been a while. Do you feel like taking part in this has had any impact on you...positive, negative, in-between?

L: Yeah, I guess in-between. I brush most things off easily. It was definitely different to say the least. But I don't lose any sleep at night over it.

M: You said you brushed it off so was there something you could say that this was what I had to brush off?

L: I guess just the awkwardness cause it was really awkward for me, but otherwise, I don't'

really have any qualms about it **DES was awkward;**

M: Do you feel like DES had any impact on your life—

L: not really. Not really

M: Do you feel like it affected your thoughts?

L: No

M: Do you feel like it affected how you felt...even during the interviews.

L: Not really. Yeah, not really.

M: When you first came before we started this interview; I asked you how it was and you said 'I don't like talking about my feelings'.

L: I *hate* talking about my feelings. Hate it. I absolutely I cannot stand it. If I want to talk about them, I'll talk about them, but I have to want to. People have learned over time I do not do well being forced to do anything. Work is a different story cause you're getting paid...you're basically selling your labor in the interview, but on my own time when someone is trying to force me to do something, I usually tell them to fuck off because I'm like, look if I don't want to do it, I don't want to do it, that's the bottom line. People have to understand, I have to do these things on my own volition, I guess in order for my own mind to justify it cause, if I do something forced, it kind of eats at me a little bit. You know like I let somebody get to me. I don't know...I've always been kind of stubborn in that way. Even my own parents haven't been able to get me to do some things. It's just the way I am. I've told them to go screw themselves too.

M: I wonder if maybe, the questions that felt intrusive...if maybe that was in some way connected to what you were saying where it kind of made you feel like 'I don't' want to do this. I don't' want to talk about this. I don't' want to talk about this.'

L: Yeah, pretty much. That's exactly what was going on in my head the whole time. I just don't want to talk about it. I'll give the generic nature. Usually, I'm pretty meticulous about anything else, but when it comes to my feelings I'm like, nope, I'm not giving you much detail sorry. I went to dinner with my mom last night, it's like once or week or so when I go with her. I told her recently, like Tuesday, I told her that I got the birth control shot and she's trying to ask me all these questions and I'm like kind of answering her but it's more in the tone of can we not talk about this anymore. It's like 'yeah, yeah, whatever mom, yeah.' **Private person; Does not like being told what to do;**

And was that kind of what the interview was like?

L: Yeah, pretty much.

M: Well, I don't feel like I wanted you to feel that way. So if you did that wasn't our intention at all. We weren't trying to make you or force you to do anything. We were just curious...

L: You had no idea I was this introverted did you?

M: No, I wouldn't say...I almost see it as just being private. The area we're asking you to talk about is an area where I...if I want to let someone in there, I'll let them in and then that'll be my choice, you can't just pick random moments and ask me to come talk to you...

L: Let me put it this way. If people could read my mind I'd be in prison right now. I would be. I'm serious. I think some really terrible shit. **Believes she has heinous thoughts;**

M: That's not illegal.

L: I've thought of a dozen ways to kill people in 10 minutes very slowly and painfully. That's why I say I'd be in prison by now if people could read my mind.

M: You know, that's not that uncommon, we've had participants before that talk about hurting people in very creative ways.

L:(laughter) I think of hurting people every day cu they're dumb.

M: You could have a beep where you think about hurting us and we'd be super interested. We'd love to hear about it. You'd think we'd be offended, but we'd be like, no, what happened. So at the moment what was going on 'well, I forgot about that moment, but I can tell you about this one right now.' I guess, DES is just a little bit more of a personal thing for some people than it is for others. I mean it's personal for anybody...I think for you it was especially, 'get away from me, I can't handle anyone going into that space.'

L: Pretty much.

Do you think there's anything you do differently because you took part in DES.

L: Not really.

M: I think this one might be important. Do you think DES has influenced your view of yourself or anything else.

L: No, not really. I think I shock myself more with the shit that comes out of my mouth with my friends (laughter). I don't like planning anything because I like to be just as surprised as they are.

M: The reason I kind of hung on that question and I kind of thought about it a little bit more is because for a few moments or maybe not a few moments, maybe for a little while, we were asking you to think about something you don't normally like to think about or kind of in a way experience it a little bit too because when you think about something you kind of had to talk about it to a certain extent. And I wonder if maybe that had some kind of impact on you even if it was it just made you feel a certain kind of way.

L: Like a generic feeling process?

M: It could be a generic feeling, it could be how you felt when you were sitting there with us, it could be I'm sitting there with...

L: I'm not going to lie, I felt pretty uncomfortable that I was on camera. I don't like any kind of lens pointed at me ever. I run from cameras as I told you before. **Uncomfortable around cameras:**

M: Did you tell me that before? (laughter)

L: I'm pretty sure I did. I gave the example that I was in student government last semester and a friend of a different senator, she held up a camera because she wanted to take a picture of me and my friend Linda and I fucking ran. I was like, no you're not taking a picture of me. The less pictures of me anyone has of me the better. I cannot stand cameras. I cannot stand videos. I don't want my photo or video taken ever.

M: So, how did you feel when there were 2 cameras pointed at you?

L: I knew in the back of my mind, I wasn't comfortable, but I sucked it up. Because I could see them I had it in the back of my mind, I was like, whatever Paula, just breathe. I basically signed that I don't want it sent anywhere. So I guess that was more my piece of mind. Because, if I'm able to control if it's released or not, it gives me some...I don't know. I guess... a cushion.

M: Keep in mind, if you want us to erase and ever get rid of the tape and not even have it period, that's well within your rights, too. And same thing with this recording.

L: I don't care what you guys do with it. I just don't want it released.

M: Right, you don't want it on YouTube or something...we'd never do anything like that

L: No.

M: When you were in the interview with us, were there times when you were upset with us or angry with us?

L: I wouldn't really say angry...I can't say angry.

M: So that doesn't fit. But it seems like there might be another word for it, like maybe there's something besides feeling uncomfortable and maybe intruded upon, like there was a little bit of something else maybe.

L: maybe tired, I don't get a lot of sleep at night. And this is completely unrelated, I swear I'm dyslexic sometimes. I've read a little bit about it. And I swear, to you sometimes I'm like dyslexic. I found out when I used to work at IT on campus because...can I see a pen.

M: I'll have to go outside and grab one out there.

L: Do you mind if I write on that?

M: No.

L: So let's say the ticket number was [inaudible], I'll get 1318 and then do 65. I don't mean to, and when I type sometimes I reverse keys on accident because I'm trying to type too fast. I've noticed even when I'm reiterating it to somebody else I sometimes do it. I don't mean to. I'm really good at math which is really a weird thing that I would do something like that. There's a difference of 11, you have no idea what those 11 tickets might entail.

M: So if there was a beep that were to happen right when you were to write this down. That would be kind of...

L: That's probably why I did it in 24 hour format because if I did it in 12 hour...AM and PM.

M: Did what in 24 hour format.

L: When I wrote down the times. I guess I'm OCD about it I guess. My phones' in 24 hour, too. That's probably why I use 24 hour better because of little things like that.

M: So just lite..

L: It's like an OCD thing for me. Everyone has little things that drive them nuts. That's one of mine

M: And so this is kind of your time to tell us if there was anything about this study that...not just about you or that you enjoyed, but just stuff that I think you know what I think you guys could do this or try this or here are some things that I think you guys should know. Basically, it's your turn to not just tell us what it was like to take part in the study but also to critique it as well or critique as us as well, if you want to.

L: I haven't put any thought into it. I really don't know. I'm kind of terrible for giving this kind of feedback. I don't think about it. It's not something that crosses my mind usually.

M: Well, you seemed to have a reaction to DES, like we seemed to pull some sort of reaction from you. So we were hoping there was some way you could say 'hey well if you did this or you didn't do this, it would have been easier for me'.

L: I would say make the questions less intrusive, but that's kind of the point of the study.

M: Well, what kind of questions would you have preferred we asked?

L: Well, truthfully, I would say none at all because I don't like talking about it (laughter).

M: Do you any other thoughts or reactions about taking part in DES...

L: No...I couldn't...I wouldn't do well as a famous person, I don't like people interrogating me. Even if I did something that got me famous, I would be like 'nope, nope. Go talk to my press secretary. Leave me alone.'

M: Well, I agree with you. I think at times those interviews have sort of an interrogation sort

of feel to them because we keep asking you...everyone gets asked to the point where they can't answer, to where there's no answers anymore. So it's...there can definitely be sort of an interrogation sort of feel because we don't try to make it harder, we don't try to make it super-supportive, that's not part of the atmosphere that much.

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- Saint Louis University, Saint Louis, MO* 2005
Bachelor of Arts in Psychology

PREDOCTORAL PRACTICUM TRAINING

- Cornerstone Behavioral Health/Mountain Regional Services Inc.** 8/2014 – 8/2015
- Individual psychotherapy and Bion-type group psychotherapy with clients diagnosed with intellectual disability and co-occurring severe mental illness
 - Individual psychotherapy and Yalom-type group psychotherapy for substance abuse clients at ASAM levels II.1 (Intensive Outpatient – minimum of 9 hours/week of psychotherapy) and I.0 (Continuing Care – minimum of 2 hours/week of psychotherapy)
 - Responsible for case conceptualization, treatment and termination planning, behavioral plans, and crisis intervention. Treatment modalities included IPT, ego psychology, and behavioral interventions.
 - Completed dementia screenings, substance abuse evaluations, and developmental disability waiver evaluations in residential and outpatient settings.
- Supervised by Adam K. Fuller, Ph.D.
- Optimal Psychological Services** 1/2012 - 8/2012
- Completed psychological evaluations and integrative reports in a private practice setting for child and adolescent victims of physical, sexual, and emotional abuse.

- I continued working as a psychometrist at this site for 3 months after the completion of my official practicum
Supervised by Gerald Augustin, Psy.D.

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Walton Rehabilitation Hospital

- Completed neuropsychological testing using the Boston Process Approach and assisted in writing integrative reports in a hospital setting for adults with a wide range of neurological and psychiatric symptoms.
- Assessment clients typically suffered from TBIs, cerebrovascular accident (stroke), dementia, or memory complaints.
- Conducted a Yalom-type group with adults suffering from TBIs, a psychoeducational group for families of individuals who experienced a TBI, and a support group for families of individuals suffering from a TBI.
- Conducted individual therapy with clients suffering from TBIs or cerebrovascular accidents
- Supervised a clinical psychology student in a terminal master's degree program.
- Used biopsychosocial, object-relations, and existential approaches in individual and group therapy with brain injured adults and adolescents
- Attended weekly multidisciplinary treatment team meetings
Supervised by Jeremy Hertz, Ph.D.

Family and Child Treatment of Southern Nevada

9/2008 - 8/2011

- Conducted long-term individual and family therapy in a non-profit, community mental health setting with child and adult victims of physical and sexual abuse. Responsible for case conceptualization, treatment and termination planning, crisis intervention, and intakes. Treatment modalities included IPT, play therapy, object-relations, gestalt, self-psychology, analytical, existential, and systems perspectives.
- Assisted in development of a psychoeducational group therapy curriculum for non-offending parents of sexually abused children.
- Conducted individual therapy with court-mandated and non-mandated non-offending parents.
- Co-facilitated a court-mandated therapy group for substance abusing adolescents, a court-mandated therapy group for juvenile sex offenders, and a court-mandated therapy group for adult sex offenders.
- Interfaced with caseworkers and parole officers
- Conducted assessments with a therapeutic component on adult victims of physical and sexual abuse.
- Conducted forensic psychosexual evaluations and integrative reports on adults convicted of sex offenses for the Clark County Office of Parole and Probation.

Supervised by John Matthias, Ph.D.

Supervisor in Training, Center for Individual, Couples, and Family Counseling, UNLV 5/2010 - 8/2010

- Provided weekly individual clinical supervision at a university department clinic to a junior practicum student in the clinical psychology doctoral program as part of a provision of supervision course.
 - Used an approach that integrated interpersonal and developmental models of supervision.
 - Received didactic, group, and individual supervision of supervision
- Supervised by Michelle Paul, Ph.D. formerly known as Michelle Carro

Center for Individual, Couples, and Family Counseling, UNLV 9/2007 - 8/2008

- Provided long-term psychotherapy to clients in a campus community mental health clinic. Responsible for all aspects of treatment planning and delivery. Treatment modalities included CBT, DBT, IPT, and psychodynamic perspectives.
- Supervised by Marta Meana, Ph.D.

Psychological Testing Clinic, UNLV 9/2007 - 8/2008

- Completed psychodiagnostic evaluations and integrative reports, primarily with children and young adults, in a campus-based clinic.
- Supervised by Michelle Paul, Ph.D. formerly known as Michelle Carro

OTHER SUPERVISED CLINICAL EXPERIENCE

Family and Child Treatment of Southern Nevada 1/2013 – 8/2014

- Same as practicum experience above with promotion to sole facilitator of a court-mandated therapy group for sex offenders.
- Employed as a master's level clinician
- Weekly individual supervision provided

Family Research and Services, UNLV 9/2006 – 9/2007

- Assisted in the development of treatment manual and protocol checklists for the implementation of Family Behavior Therapy.
 - Acted as a liaison between therapists, the Department of Child and Family Services, and court-mandated clients.
 - Developed Client Enlistment and Retention Procedure Manual
 - Made presentations to the Department of Child and Family Services and other organizations about our Family Behavior Therapy program
- Supervised by Brad Donohue, Ph.D.

PROFESSIONAL ORGANIZATIONS

| | |
|------------------------------------|----------------|
| American Psychological Association | 2007 - Present |
| Western Psychological Association | 2006 - 2007 |
| Nevada Psychological Association | 2008 - 2014 |

AWARDS

| | |
|---|------|
| Edward D. Lovinger Psychology Scholarship | 2007 |
|---|------|

PUBLICATIONS AND PRESENTATIONS

- Hertza, J., & **Turner, D.** (2011) The Value of Neuropsychological Assessment. Poster presented to the Brain Injury Association of Georgia. Augusta, GA.
- Kearney, C.A., **Turner, D.**, & Gauger, M. (2010). School refusal behavior. In I. Weiner & E. Craighead (Eds.), *Corsini's encyclopedia of psychology* (4th ed.) (pp. 1517-1519). New York: Wiley.

TEACHING EXPERIENCE

- | | |
|---|----------------|
| Part-Time Instructor, University of Nevada Las Vegas | 9/2008 –5/2010 |
|---|----------------|
- Taught Psychology 101 course. Developed the course structure, lectures, syllabus, and exams, and was responsible for all aspects of student evaluation.

SERVICE

- | | |
|---|-------------------|
| Black Graduate Student Association | 10/2009 - Present |
|---|-------------------|
- Assisted in the organization and sponsoring of the following events: Black fatherhood forum, Relationship panel, Surviving and Thriving as a Graduate Student, Pioneers in Latino History, and Diversity Challenges Panel.
 - Engaged in weekly mentorship and tutoring for underprivileged youths