Descriptive Experience Sampling of individuals with symptoms of obsessive-compulsive disorder

Daniela S Hugelshofer

University of Nevada, Las Vegas

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DESCRIPTIVE EXPERIENCE SAMPLING OF
INDIVIDUALS WITH SYMPTOMS OF
OBSESSIVE-COMPULSIVE DISORDER

by

Daniela S. Hugelshofer
Bachelor of Arts
Claremont McKenna College
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A thesis submitted in partial fulfillment
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Daniela S. Hugelshofer

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Dean of the Graduate College

Examination Committee Member

Graduate College Faculty Representative
ABSTRACT

Descriptive Experience Sampling of Individuals with Symptoms of Obsessive-Compulsive Disorder

by

Daniela S. Hugelshofer

Dr. Russell T. Hurlburt, Examination Committee Chair
Professor of Psychology
University of Nevada, Las Vegas

This study employed the Descriptive Experience Sampling method to investigate the inner experiences of three individuals with symptoms of obsessive-compulsive disorder (OCD) and one non-OCD-symptom participant. Participants were provided with a random-interval generator (beeper) and were asked to “freeze” the aspects of their inner experience at the moment of the beep and record this experience in a notebook. Participants met with the investigators within 24 hours to discuss each of these sampled moments in detail. Salient characteristics were identified for each participant. Characteristics of inner experience were found to be shared across subjects: OCD-symptom participants were found to have a higher frequency of unsymbolized thinking and feelings, and a lower frequency of inner speech than normal participants. Additionally, participants were often able to localize the characteristics of their inner experience in some specific location in their heads. Results of sampling did not find any frequently recurring thoughts, impulses, or images.
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CHAPTER I

INTRODUCTION

The purpose of the present study is to determine whether individuals who share symptoms of Obsessive-Compulsive Disorder (OCD) also share distinctive characteristics of inner experience, and if so, to provide a description of these characteristics. An essential feature of the diagnosis of OCD is that the person experiences recurrent, persistent, and intrusive thoughts, impulses, or images. However, a direct investigation of these thoughts, impulses, and images has never been undertaken. This study constitutes an initial attempt to fill in a gap in the literature and describe the phenomenon of OCD inner experience. Without such an investigation, for example, researchers cannot definitively state whether individuals with OCD actually do experience recurrent and intrusive thoughts or whether they mistakenly believe that they do. Furthermore, it is plausible that the thoughts of OCD individuals are no different than those of normal individuals but that for some unknown reason individuals with OCD mistakenly believe that these thoughts are recurrent, persistent, and intrusive. Therefore, this study seeks to obtain a better understanding of inner experience as it manifests itself in individuals with symptoms of OCD.

The present study begins with a review of the literature in two areas: (a) investigations of the presentation and phenomenology of OCD; and (b) investigations of inner experience.
Obsessive-Compulsive Disorder

Obsessive-compulsive disorder (OCD) is defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) as a disorder that is characterized by recurrent, persistent, and time-consuming obsessions and compulsions that cause marked anxiety and distress or significant impairment in functioning (American Psychiatric Association, 1994). The DSM-IV requires that obsessions in OCD be recognized by the individual as a product of his or her mind rather than imposed by an external source. However, Insel and Akiskal (1986) have identified a fraction of obsessive-compulsive disorder patients who are atypical in that they exhibit transient psychotic features and may entirely lack emotional insight. They recommend the use of the qualifying phrase "with psychotic features" in those severe cases of OCD in which the intrusive thoughts acquire the qualities of delusions. The compulsions of OCD are repetitive behaviors or mental acts, often performed in response to an obsession, that are aimed at neutralizing anxiety or preventing a dreaded situation from happening (American Psychiatric Association, 1994). Common compulsions include washing or cleaning, checking, repeating, ritualizing, counting, ordering or arranging, hoarding, and avoiding (Khanna & Srinath, 1988; Okasha, Saad, Khalil, Dawla, & Yehi, 1994).

Although previously thought to be rare, obsessive-compulsive disorder represents the fourth most common psychiatric disorder (Rasmussen & Eisen, 1992). The National Epidemiologic Catchment Area Survey (ECA), funded by the National Institute of Mental Health (NIMH), estimated that OCD was 50 to 100 times more common than previously believed, with a six-month prevalence of 1.6% (Myers, Weissman, & Tischler, 1984) and a lifetime prevalence of 2.5% (Robins et al., 1984).
Almost all clinical and epidemiological studies of adults suggest that the majority of OCD cases have onset in adolescence and young adulthood. Rasmussen and Eisen (1992) found that the mean (with standard deviations in parentheses) age of onset of significant OCD symptoms in their sample was 20.9 (9.6) years, with males having a significantly earlier onset of illness: 19.5 (9.2) years for males; 22.0 (9.8) years for females. They also reported a significant increase in incidence appearing at puberty. Although onset occurs relatively early in life, many years can pass before individuals receive appropriate treatment for their OCD symptoms. One study found a 17-year gap between the onset of OCD symptoms and appropriate treatment (Hollander et al., 1996). Hollander and his colleagues attributed this gap to two factors: (a) respondents sought professional help for their symptoms approximately 10.5 years after onset of initial symptoms; and (b) respondents were frequently misdiagnosed as having generalized anxiety disorder (47%) and/or depression (42%), causing an additional lag of six years before being correctly diagnosed. Rasmussen and Tsuang (1986) reported a smaller mean (with standard deviation in parentheses) treatment gap of 7.6 (9.2) years, although many patients with moderate to severe symptoms had a 10-20 year difference between age at onset and age at which they first sought psychiatric treatment. The secretiveness of the disorder has also been identified as a contributing factor to the large gap between onset and treatment (Rasmussen & Eisen, 1989).

The chronic, fluctuating course of OCD has been supported both retrospectively at the beginning of treatment and objectively in follow-up after treatment (for review, see Eisen & Steketee, 1997). The natural, long-term course of OCD was best documented in a study that prospectively followed up 144 patients with OCD during a 40-year period.
(Skoog & Skoog, 1999). The investigators found improvement of symptoms in 83% of the sample. However, only 20% of the sample achieved full remission, with two-thirds continuing to experience clinical or subclinical symptoms. Furthermore, 10% showed no improvement and another 10% experienced a deteriorative course. Whereas little is known about the precipitants of remissions, stressful situations are thought to cause an exacerbation of OCD symptoms (Samuels & Nestadt, 1997). It is therefore not surprising to find some worsening of OCD symptoms during pregnancy and the premenstruum. Williams and Koran (1997) found worsening of OCD symptoms during the days before menstruation in 42% of the women in their sample and during pregnancy in 17% of the women.

The chronic, often disabling course of OCD can have far reaching consequences for both the OCD sufferer and his/her friends, family, and employers. The personal mental distress caused by hours of daily ritualizing or repetitive thoughts or urges can be enormous. One study assessing the quality of life of individuals with OCD found that OCD symptoms interfered with family relationships in 73% of respondents; 62% reported having fewer friends or difficulty in maintaining friendships, and 92% experienced lowered self-esteem (Hollander et al., 1996). Additionally, the authors found that OCD symptoms interfered with respondent's ability to concentrate on academics (58% had lower academic achievement) and work (47% experienced work interference and 40% were unable to work for an average of two years). The physical health of OCD individuals can also be affected – excessive washing often leads to severe skin damage (Gupta, Austin, & Black, 1997). It is not surprising that depression is also very common among OCD sufferers. Rasmussen and Eisen (1992) found that 31% of
their sample were depressed at the time of the interview and 67% had a lifetime history of depression.

Given that thinking patterns are the central feature of the definition of OCD, that a large number of people suffer from OCD, and that the consequences of OCD symptoms for the afflicted person are great, it would seem important to understand how OCD manifests itself in the daily inner experience of people with this disorder. Surprisingly, very few studies have described the characteristics of the inner experience of individuals with obsessive-compulsive symptoms. Most studies that do describe inner experience concern themselves with categorizing obsessions into their content areas. Obsessions have been found to cluster around several themes, including dirt and contamination, aggression and violence, sex, death and illness, need for symmetry or exactness, hoarding and saving, and religion (Khanna & Channabasavanna, 1988; Rasmussen & Tsuang, 1986; Rasmussen & Eisen, 1992). These investigations are far from consistent about which themes occur with greatest frequency. For example, Okasha et al. (1994), found that religious obsessions were the most frequent, occurring in 60% of their sample of Egyptian OCD patients. By contrast, a study done in Italy found religious obsessions to be relatively uncommon, occurring in only 10.8% of their sample (Ronchi et al., 1992), and another study in England did not report the presence of any religious obsessions whatsoever (Johnson, 1993). This seems to suggest that the content of obsessions is likely to be environmentally or culturally determined. Additionally, the content of obsessions has been shown to be rather unstable, often changing within the life span of the individual patient. One study reported that a change in symptom pattern had occurred in 90% of their subjects (Swedo, Rapoport, Leonard, Lenane, & Cheslow, 1989).
Therefore, general content of obsessions might prove to be less interesting or informative than how the obsession is experienced by the OCD patient; that is, the form, or structure of the phenomena.

Although there seems to be general agreement about the different forms of compulsive behaviors (most notably "washers" and "checkers"), attempts to categorize obsessions into their form have proven to be more difficult because of the subjective nature of obsessions. Akhtar, Wig, Varma, Pershad, and Verma (1975) studied 82 patients from India with obsessive-compulsive neurosis "from a phenomenological point of view in order to delineate the various forms and contents of obsessions and compulsions" (p. 342). Information was obtained through the use of a semi-structured personal interview and verbatim records were created to preserve the precise language each patient used to describe his or her symptoms. Akhtar and his colleagues identified six forms of obsessions:

1. **Obsessive doubt**: An inclination not to believe that a completed task has been accomplished satisfactorily. (Each time he left his room a 28-year-old student began asking himself “Did I lock the door? Am I sure?” in spite of a clear and accurate remembrance of having done so.)

2. **Obsessive thinking**: A seemingly endless thought chain, usually one pertaining to future events. (A 24-year-old pregnant Hindu girl tormented herself by thinking “if my baby is a boy he might aspire to an academic career that would necessitate his going far away from me, but he might want to return to me and what would I do then, because if I...”, and so on.)
3. Obsessive impulse: A powerful urge to carry out actions which may be trivial or socially disruptive or even assultive. (A 41-year-old lawyer was obsessed by what he understood to be the “nonsensical notion” of drinking from his inkpot, but also by the serious urge to strangle an apparently beloved only son.)

4. Obsessive fear: A fear of losing self-control and thus inadvertently committing a socially embarrassing act. Unlike the obsessive impulse, there is no actual urge involved here. ... (A 32-year-old teacher was afraid that in the classroom he would refer to his unsatisfactory sexual relations with his wife, although he had no wish to do so.)

5. Obsessive image: The persistence before the mind’s eye of something seen, usually recently. (A 47-year-old housewife kept “seeing” a car’s license plate that had come to her attention. Another patient “saw” her baby being flushed away in the toilet whenever she entered the bathroom.)

6. Miscellaneous forms: Phenomena obsessionl in nature but unclassifiable in the above five categories. (A 29-year-old student could not rid her consciousness of a currently popular tune.) (pp. 343-344)

Despite calling their study a “phenomenological analysis,” the investigators did not provide in-depth, descriptive examples of how their OCD patients experienced the above phenomena. Rather, the authors concerned themselves with identifying the frequency with which each form was experienced. Obsessive doubts were found to be the most common form of obsessions (displayed by 75% of patients), followed by obsessive thinking (34%) and obsessive fears (26%).
Other investigators have also attempted to create categories for the various forms of obsessions (Dowson, 1977; Kulhara & Rao, 1985; Khanna & Channabasavanna, 1988). These three investigations all attempted to identify the forms of obsessions by retrospectively analyzing case records. However, they too concerned themselves only with identifying the frequency with which each form was experienced rather than describing that experience. Kulhara and Rao (1985) found obsessive doubt to be the most common form of obsession (experienced by 65% of patients), whereas Khanna and Channabasavanna (1988) found obsessive fears to be most common.

Unfortunately many subsequent investigations have chosen to use previous researcher's form categories (Thomsen, 1991; Egrilmez, Gülseren, Gülseren, & Kültür, 1997) rather than conduct an in-depth, truly phenomenological analysis of how an individual with OCD experiences his or her symptoms. However, a few studies have taken a closer look at some other aspects of the inner experience of OCD sufferers.

Leckman, Walker, Goodman, Pauls, & Cohen (1994) identified and described a phenomenon in patients with primary Tourette's syndrome comorbid with OCD that they called "just right" perceptions. The investigators found that in describing their awareness of a need or urge to perform compulsions, fully 81% of these participants emphasized a sense of imperfection and a need to perform the compulsions until a certain "just right" feeling of satisfaction or completion was obtained.

Leckman and colleagues conducted a similar study with patients with a primary diagnosis of OCD with or without the presence of tics (Leckman et al., 1995). Overall, 73% of the OCD patients reported the occurrence of "just right" perceptions during the past week and 92% reported having had these perceptions at some point during the course...
of their illness (Leckman et al., 1995). In gathering information about the "just right" perceptions, the investigators paid specific attention to the subjective accounts of these perceptions and to the descriptions of their character, timing, and location. The subjective accounts of the "just right" experiences commonly began with the patient noticing something out of the ordinary or out of place in their usual environment, resulting in patients reporting "a frightening feeling in the pit of their stomach", a "physical tensing up", 'a terrible uneasiness as if the world around me is falling apart', 'my head feels like it will blow up', 'a sense of general anxiety', or 'a vague foreboding'" (Leckman et al., 1995, p.211). Respondents varied in their explanations of how they stopped their compulsions: some were successful in their efforts to achieve a situation that was "just right," others reported becoming so exhausted, angry, or frustrated that they simply gave up, and still others discontinued their compulsions when another one took its place. Fifteen percent of the respondents reported that they were "hardly ever" or "never" able to perform compulsions so they were "just right."

In terms of timing, 75% of the subjects with "just right" perceptions reported that they were aware of these urges immediately before or occurring simultaneously with the onset of their compulsions. The remaining subjects reported that they were aware of this "just right" need only during the actual performance of their compulsions. Fifty percent of the respondents felt the "just right" urge was more mental than physical, and another 45% indicated that it was somewhere between the two.

Savoie (1996) investigated guilt in the inner experience of individuals with OCD. Guilt has been known to play an important role in OCD for many years (Rachman, 1993; Tallis, 1994; Shafran, Watkins, & Charman, 1996) but few researchers have studied it as
a factor in its own right. Savoie sought to investigate, qualitatively, the meaning of guilt for OCD sufferers and its relationship to their obsessive-compulsive symptoms. Savoie selected nine participants who had identified guilt as a part of their disorder and interviewed them using an unstructured approach. Then, through the phenomenological techniques of reduction and clustering, he obtained 15 descriptive guilt/OCD themes. These themes, and examples from participants, are described below:

1. Forbidden thoughts, feelings, and behaviors: “I’d be watching a story say, about some little boy who got kidnapped and I’d think ‘that could happen to my son.’ And then I’d go ‘Oh no! I thought about it so maybe it will happen!’ So I’d have to go back and in my head say a kind of ritual: ‘nothing bad has ever happened to them, nothing bad will. God will protect them.’... The guilt would be that if he did get hit by a car or kidnapped, well, it was because I didn’t think that positive thought.” (p.199)

2. Hyper-responsibility/omnipotence: “I had a friend who was on one of the teams (on TV), and if I was in the kitchen listening to it, then he was o.k. and they would do good. But if I came in here and I watched them, they’d screw up. And I was saying [to myself] get a grip, it doesn’t matter, you’re not even in the same city. So I made myself sit there and they lost. And whoa! I felt guilty. I felt all I had to do was stay in the kitchen and they would have won. I feel that I had a mystical responsibility that I wasn’t taking care of...” (p. 200)

3. Conflict between internal standards and external behaviors: “I remember telling my daughter to bring [an item] home from school...and she forgot it
there...and I almost killed her. And all the time I was [beating her]. I was thinking this is so horrible, this is so senseless, but I was so afraid, these feelings were so intense from the OCD. And that made me feel really horrible. I was acting totally out of fear and against my principles.” (p. 200)

4. Rituals alleviate existing guilt: “Our relationship [became more sexual] and the more that happened, the more I felt that I had to wash. I was striving for chastity, but doing this on a regular basis. I was embarrassed, and of course, there's that guilt. And that's where I started really severe washing with Comet and things like that. I guess when I did clean it felt like a penance. Like something to negate the guilt.” (p. 201)

5. Fear of guilt motivates rituals: “If I break any of those rules then I'll start to feel guilty and then I'll think that this is going to happen and then this and on it goes. So if I don't do it then it's like I'm asking for things to happen. If I don't do my rituals and make sure that I do them the same then I'm asking for something to happen.” (p. 202)

6. Inadequate justification: participants expressed guilt over their inability to explain their strange behaviors to others, and felt guilty that others were being affected by behavior which they were unable to justify. “He said to my husband, ‘maybe when I leave mom will feel better.’ He thought he was the one who was causing all of this, and you see, children do this. He said ‘well, mom won't have so much to worry about and so much to do if I'm gone.’ When he went off to college he thought maybe I would get better. When I heard that, it really broke my heart, and that's where the guilt is.” (p. 203)
7. Bad mother/bad wife: "My daughter was getting so embarrassed because people were commenting on her strange mother...and she didn't want people to see her strange mother. She was ashamed of me..." (p. 204)

8. Bad daughter/son: "My mom was in the hospital for cancer surgery. I thought I was doing pretty good so we came in to see her. I had no problem with that. But the lady in the next bed beside her was getting a lock put in for her IV. Well, I almost passed out and I couldn't stay in the room and I couldn't go back up to see her. Well, how much more guilt can you feel then not going up to see a sick mother. And it was cancer, what if she died? But I couldn't go up. And so, the guilt..." (p. 205)

9. Bad friend: "You feel guilty. I know I hurt so many people. Because I'm not saying these people's homes were messy, but they'd see me pick up a glass and check to see if it was clean. And it became where you'd kind of hurt people's feelings but I couldn't stop. I did it to every person I knew..." (p. 205)

10. Interpersonal isolation/alienation: "Sometimes I feel really guilty because when I'm talking to somebody it appears that I'm really intense, because I'm thinking about a ritual or I'm actually doing it mentally without people noticing. Some things people do notice and it makes me feel embarrassed and I feel guilty because I don't know if I should tell them about my OCD or if I shouldn't. I feel guilty that if I tell them then it's a burden for them. Or, I feel selfish because I think if I tell people then they're going to go away. So I
don't tell them. And then *that* causes me to feel guilty." (p. 206. italics in original)

11. Failing the self: "I don't know who I am anymore. I'm trying to get back to where I was before this disorder started because that's who I know as me, and everything I do now is so different in the way I act, the way I think and the way I have to walk and talk and do every little thing the way that I do. Because it's all connected with the OCD. ... I just feel so separate from everybody and everything 'cause I don't know where I fit in anymore and I don't know where I belong." (p. 207)

12. Waste: "You're wasting your life. Because, I can't go back and go to my son's preschool graduation. I can't do those things, I missed all those things. Which is another guilt all in itself, what you missed. I still have a lot of guilt now for what I put them through, what I missed, what they missed out on because I couldn't do it." (p. 208)

13. Coping with guilt: "I think sleep helped with guilt because I know I slept a lot when I had my worst symptoms and I think it was kind of my way of shutting it off. Because I didn't have it when I slept. I wasn't hurting, or stopping anybody from doing anything. I wasn't causing anybody problems, I wasn't throwing things away. So I would sleep..." (p. 209)

14. Guilt regarding improvement and the loss of conscientiousness: "I'm going to have to watch all my friends fail, I'm gonna have to watch my house and my children become contaminated, I'm gonna have to be disrespectful to God. I
have to do all these things to get over this. Is this something worth getting over?” (p. 210)

15. Reparation: “Now I’ll do anything for the kids to the point that I’ll sacrifice me. But it’s just the guilt that I feel, that I’ll give them anything. My husband accuses me of buying their love and from the guilt I feel that I am. In a way I make excuses and say ‘well, I’d rather give it to them before I die,’ things like that. You see I was very strict on them when I was [ill] and the guilt, the guilt. Now there’s nothing they could do that would make me angry.” (p. 210)

From these examples, it becomes apparent that sufferers of OCD make a number of connections between feelings of guilt and OCD symptoms. Feelings of guilt were found to precede, motivate, or arise from the OCD symptoms (Savoie, 1997).

In this section of our review, we have shown that OCD is a common psychiatric disorder with far-reaching consequences for the afflicted. Additionally, we have seen that very few studies have attempted to investigate the obsessions and other characteristics of inner experience despite their being a central feature of the definition of OCD. Those studies that have investigated obsessions have a number of shortcomings. First, as previously mentioned, all investigations of the form of obsessions have focused on identifying the frequency with which each form is experienced rather than accurately describing those experiences in detail. For example, many studies identify the form “obsessive doubting” as occurring in OCD patients. However, none of these studies specified whether an individual who experienced obsessive doubting was (a) innerly speaking their doubting words, (b) seeing an inner visual image of a door they believed
might still be open, or (c) experiencing this "doubt" as a thought unaccompanied by
words, images, or other symbols (Hurlburt, 1990). As a result, the reader is left without a
full sense of the experience of OCD sufferers. Secondly, it is doubtful that studies
attempting to identify the forms of obsessions by retrospectively analyzing case records
could obtain enough descriptive information from these records to allow for an accurate
categorization of an obsession into a particular form.

Some studies have investigated other important aspects of the inner experience of
individuals with OCD, such as "just right" perceptions and the meaning of guilt for OCD
sufferers. These studies constitute an important step in the direction of investigating
inner experience. However, the question of how obsessions are experienced remains
unanswered. Clearly, more studies addressing the obsessive thoughts, impulses, and
images of OCD need to be undertaken. In the following section, we will identify a
number of methods that might be used to obtain systematic reports of the inner
experience of individuals with OCD.

Inner Experience

The lives of human beings are comprised of the minute-by-minute activities and
experiences that fill up their time. In order to understand people's lives it is important to
describe and evaluate their experiences as they go about their daily routines. There are
many methods that psychologists have used to attempt to get close to their experiences.
Klinger (1978) has identified five classes of procedures used to obtain systematic reports
of inner experience: questionnaires (including structured diaries), thinking out loud, event
recording, thought sampling using ratings, and thought sampling using descriptive
techniques. Each procedure will be discussed in turn.

Klinger’s first class of procedures, questionnaires and structured diaries, are self-report forms in which individuals record information about their inner experiences and endorse items pertaining to these experiences. One of the most commonly used questionnaires to assess cognition is the Imaginal Processes Inventory (IPI: Singer & Antrobus, 1970). This questionnaire contains 400 self-descriptions (such as “I daydream about what I would like to see happen in the future”) that the individual rates depending on how characteristic each statement is of him or her.

Structured diaries are similar to questionnaires in that they ask individuals to report on pre-determined aspects of their experience. For example, in a study addressing the relationship between panic symptoms and situational avoidance behavior, subjects were asked to record aspects of their panic attacks by means of a structured diary (deJong & Bouman, 1995). The Panic Diary was to convey the frequency of panic attacks, the intensity of panic attacks, the general level of arousal, and the presence of physical and cognitive symptoms. Another study employing a structured diary specifically addressed the development and preliminary validation of the instrument for frequent monitoring of moods and activities in the individual’s natural environment (Hedges, Krantz, Contrada, & Rozanski, 1990). This diary requested information on the start and stop times of the activity, the location of the activity, and psychological states during mental and physical activities.

Although questionnaires and structured diaries are useful for a wide range of purposes, they are not ideal for recording fine discriminations in the quality of
experience. First, because questionnaires and structured diaries rely upon retrospective recollection and force respondents to think of their experiences as a whole, they tend to miss the subtle, idiosyncratic, and often contradictory dimensions of immediate experience (Csikszentmihalyi and LeFevre, 1989). Secondly, many studies indicate that there is little reason to believe that people can accurately describe aspects of their inner experience retrospectively. For example, Freeman, Csikszentmihalyi, and Larson (1986) asked adolescents to provide randomly-signalized reports of their affective states for two 1-week intervals situated two years apart. The adolescents were then asked to rate any changes in their affective states over the two-year time period. Although the findings showed little change in the quality of immediate experience, respondents believed a strongly positive change had taken place. In another study, Hurlburt (1979) found that most respondents were surprised at the sampling results — one subject reported that he thought about sex 30 to 40% of the time but the signal never caught him. These results led Hurlburt to conclude that people are not good estimators of the relative frequency of their thought classes. A final criticism of questionnaires and structured diaries is that self-report forms that address specific cognitive or affective areas necessarily lack flexibility and limit the chances of uncovering unexpected information (Newton & Barbaree, 1987). As a result of these criticisms, investigators are looking towards other methods that obtain reports of inner experience closer to the actual event.

Klinger identified a second procedure for obtaining reports of inner experience, thinking out loud, that eliminates the problems of retrospective recollection (Klinger, 1974). The think-out-loud method requires the participant to "speak continuously as he or she is thinking, rather than to give periodic synopses of thought between reports. If the
participant can do that – not all can – the reports provide the information not only about
the gross moment-to-moment thematic content of thought but also about the sequence in
which it occurred” (Klinger, 1978, p.229). In one think-aloud study, participants were
required to think aloud while engaged in solving manual puzzles, solving logical puzzles,
revery (letting their minds wander with open eyes), and quasihypnagogic thought (letting
their minds wander with eyes closed) (Klinger, 1974). The obvious advantage of this
method is that the participant’s reports of their cognitive experience occur immediately
after the experience itself, thereby keeping retrospection to a minimum. However, many
disadvantages of the method have also been identified. Klinger (1977) noted the
following:

Thinking out loud has the disadvantages of forcing subjects to choose which
aspects of their complicated thoughts they will express, of requiring subjects to
spell out their thoughts much more communicatively than they probably would in
normal silent thought, of making subjects more than normally self-conscious, and
possibly, of causing the spelled-out thoughts to influence the content of later
thoughts more than they would have otherwise. (p. 33)

A final disadvantage of the thinking-out-loud method is that it may provide little useful
information if the inner event is one that is experienced infrequently. The chances of an
infrequent event occurring at the time the think-aloud method is employed is slim indeed.

The third procedure Klinger identified for obtaining information on inner
experience is event recording. The event-recording method requires that participants
report on aspects of their activity or experience every time an event meets a pre-
established definition. The key to this method is that definitions of qualifying events be
unambiguous and that participants respond immediately after the event has occurred (Wheeler & Reis, 1991). This method easily captures rare events and therefore maximizes the amount of clinically relevant information obtained. Newton and Barbaree (1987) used event-contingent recording to examine headache-related cognitions of chronic headache sufferers prior to and following cognitive-behavioral treatment. Contingent upon the occurrence of a headache, participants were asked to call a specified number at the local clinic and rate the intensity of their headache as well as any headache-related (or otherwise noticeable) thoughts. Another study employing the event-recording method was concerned with the relationship between negative automatic thoughts and dysphoric mood in the normal population (Kumari & Blackburn, 1992). Participants were required to record the presence of automatic thoughts contingent upon any mood changes for a period of two weeks. Results indicated qualitative and quantitative differences in depressed and normal populations, with a high occurrence of themes of self-depreciation, rejection, hopelessness, and illness in the depressed patients, and a theme of hostile world expressed more often in normal participants.

As previously mentioned, an advantage of the event-recording method is that retrospective recollection is kept to a minimum provided participants respond immediately after the pre-established event. A study that highlighted the threat of retrospection explored the phenomenology of panic attacks in the natural environment (Margraf, Taylor, Ehlers, Roth, & Agras, 1987). For six days, participants in this study were asked to fill out a fixed-format diary immediately following the occurrence of their panic attacks. Following the event-contingent sampling, participants were asked to retrospectively provide interview and questionnaire descriptions of these attacks. A
comparison of the diary and retrospective descriptions showed that participants had a distorted recollection of the symptoms of their panic attacks, especially for the more dramatic symptoms such as the fear of dying, going crazy, or losing control.

Event recording has a number of advantages and is the method of choice when "researchers are interested only in one or a very limited number of human activities; when these events can be defined clearly for subjects; and when it is important to obtain a large number of events, so that variation within the category may be studied" (Wheeler & Reis, 1991, pp. 348-349). However, event recording is not appropriate for all research questions. Target events which are not clearly defined and which have a gradual onset may make it difficult for participants to determine at which point a response is required (Wheeler & Reis, 1991). Additionally, some investigators may be interested in obtaining a representative sample of experiences that occur during the course of an individual’s daily life. For these research questions signal-contingent thought sampling methods would be more appropriate.

Klinger’s fourth class of procedures for obtaining reports of inner experience was thought sampling using ratings, now commonly broadened to experience sampling. One of the most widely used experience sampling procedures is called the Experience Sampling Method (ESM), a procedure that randomly obtains self-reports about each respondent’s daily experience (Csikszentmihalyi, Larson, & Prescott, 1977). Individuals are given an electronic signaling device and self-report forms measuring the researcher’s variables of interest. The participants are signaled at random intervals to help ensure that a representative sample of their daily experiences is obtained, and are asked to fill out one self-report form (diary or questionnaire) each time they are signaled. The signaling
devices used in ESM studies have included pagers (Fransoi, Kessenich, & Sugrue, 1989; Norem & Illingworth, 1993; Richards & Duckett, 1994) and programmed wrist watches (Dijkman-Caes, deVries, Kraan, & Volovics, 1993; Harlow & Cantor, 1994). whereas other thought sampling studies have employed random-interval generators (Hurlburt, Lech, & Saltman, 1984; Hurlburt & Sipprelle, 1978) or other devices (Klinger & Cox, 1987).

The ESM procedure can been used with children and adolescents (Greene, 1990; Leone & Richards, 1989; Rathunde & Csikszentmihalyi, 1993), adults (Fleeson & Cantor, 1995; Gauvin & Szabo, 1992; Marco & Suls, 1993), and elderly adults alike (Ellis, Voelkl, & Morris, 1994). It has been applied in the study of psychotic disorders such as schizophrenia (deVries & Delespaul, 1992), and with chronic mental patients (Delespaul & deVries, 1987), anxiety (Dijkman & deVries, 1987) and mood disorders (Larson, Richards, Raffaelli, Ham, & Jewell, 1990; Merrick, 1992), and the eating disorders of bulimia (Larson & Johnson, 1985) and anorexia nervosa (Larson & Johnson, 1981). It has also been successfully employed in the study of anger in violent forensic patients (Hillbrand & Waite, 1992), alcohol and marijuana use in adolescents (Larson, Csikszentmihalyi, & Freeman, 1984), and heroin use (Kaplan, 1992).

The ESM methodology, when used correctly, allows for the virtually instantaneous recording of individuals' everyday experiences in their natural environments. Problems may arise when participants do not respond immediately to the signals or fail to respond entirely. Failure to respond to the signal in a timely manner not only increases potential inaccuracies and distortions caused by retrospection, but can also bias the sampled moments if individuals wait for a more convenient time to respond.
One study, reporting on the timeliness of participant’s response to the signals, found that 10% of all participants responded on average within 1.3 minutes, 50% responded within 4.6 minutes, and 80% responded within 8.7 minutes (Hormuth, 1986). Delays in responding are usually due to situations in which the individual is engaged in an activity that cannot be interrupted.

Unfortunately, some signals are never responded to. Csikszentmihalyi and Figurski (1982) found that 3-4 beeps per week were missed due to instrumental failure, while another 6-7 beeps per week were missed due to individual failure (i.e., not responding because of immediate situational requirements, forgetting the pager, or being out of hearing range). Sometimes individuals may purposely leave the signaling device at home for fear of drawing attention to themselves or being embarrassed in public. In an ESM study conducted with elderly widows, women were reluctant to take the pagers into public, thereby limiting the possibility of sampling the full range of experiences and activities undertaken by these elderly adults (Hnatiuk, 1991). Larson (1989) attempted to determine whether the non-reporting of signals created a bias in the estimates of how children and adolescents spent their time. He found that ESM data underestimated church attendance, playing sports, and sleeping or napping, and overestimated studying, eating, and watching TV. However, since close to 90% of the children’s time was accounted for, these biases were considered to be small.

In addition to the issues of response compliance, a number of other limitations have been highlighted, including the intrusiveness of the procedure, possible self-selection bias, reactivity (repeatedly measuring psychological variables may cause changes in people’s experiences), and restrictions of field settings for which ESM is...
appropriate (Alliger & Williams, 1993). For a review of the validity and reliability of the ESM, see Csikszentmihalyi and Larson (1987).

The self-report forms used in ESM and other thought sampling studies frequently address affective and contextual variables, as well as other cognitive states such as arousal, attention, concentration, motivation, and sense of control (Duckett, Raffaelli, & Richards, 1989; Emmons & King, 1989; Larson, Csikszentmihalyi, & Graef, 1980; Richards, Casper, & Larson, 1990). However, relatively few studies directly address the participant's thoughts, despite their being an important component of inner experience. In a study measuring intrinsic motivation, participants were asked to fill out self-report information sheets “describing their present situation, e.g., time, day, place, activities involved in, thoughts, etc” (Graef, Csikszentmihalyi, & Gianinno, 1983, p. 158). However, results regarding the nature of the participants' thoughts were not discussed. In a study investigating self-awareness, participants were asked only to identify whether they had been engaged in private self-awareness (thinking about personal and covert aspects of themselves), public self-awareness (thinking about themselves as a social object that other people look at and react to), or other awareness (thinking about other people or things) (Franzoi & Brewer, 1984). Findings indicated that the presence of others resulted in a heightened public self-awareness, but that, in general, people were more attentive to their private self than to their public self.

In a thought sampling study addressing the dimensions of thought flow, participants were asked to fill out a Thought-Sampling Questionnaire, requesting a brief written report of their most recent mental content followed by ratings of that content on 23 scales (Klinger & Cox, 1987). Results indicated that:
Thought content frequently contains content in which the subject behaves in ways that would be considered mildly unusual by other people or in which the content would probably be physically impossible. It is more often focused on the environment than otherwise, and subjects usually retain a feeling of moderate control over their thoughts. Thought content is usually accompanied by some degree of interior monologue, although the monologue mostly consists of only a few words. (p. 122)

Interior monologue was found to be a feature of thought flow that was independent or nearly independent of all other features, but visual imagery emerged as the most prominent modality in mental imagery, surpassing both auditory imagery and interior monologue (Klinger & Cox, 1987).

The last class of procedures that Klinger identified for obtaining information on inner experience is thought sampling using descriptive techniques. While ESM and most other thought sampling studies use a closed-ended format for their self-report forms, thought sampling studies using descriptive techniques employ an open-ended format. The advantage of using an open-ended format is that it allows for the emergence of unanticipated outcomes. Foulkes and Fleisher (1975) asked participants to lie down in a moderately illuminated room under instructions to “relax, but stay awake.” When a random signal was given, participants were asked to report their very last pre-signal mental experience and answer a series of questions about it. Findings showed that participants experienced mental visualization on 68% of arousals, mental auditory imagery on 16% of arousals, and brief hallucinations (where participants felt, during the experience, that the events he or she was imagining were really happening) on 19% of the
arousals. In a similar experiment, participants who had described their mental experience as being visual-imaginal while in a state of relaxed wakefulness were subsequently asked whether they were “in” the scene imagined (Foulkes, 1994). Results indicated that participants claimed to have seen as if through their own eyes on 60% of the trials, had seen themselves as others might on 15% of the trials, and were not in the scene in 21% of the trials. Additionally, Foulkes noted that the image content in both the self-absent and see-oneself reports involved plausible life events, whereas the own-eyes condition often contained frankly unrealistic reports (such as a flying in the air like a bird).

Hickford, Ward, and Bulik (1997) examined the cognitions of restrained (dieting) and unrestrained eaters. After analysis of the thought transcripts was performed, three mutually exclusive categories evolved from the data: (a) thoughts relating to food and eating, (b) thoughts relating to self, and (c) other thoughts. Results indicated that although there was no difference between restrained and unrestrained eaters in the frequency of their thoughts about food, the nature of their cognitions revealed that restrained eaters evaluated food more highly than did unrestrained eaters.

Hurlburt and Sipprelle (1978) used a thought-sampling method to obtain reports of the thoughts and subjective anxiety level (on a 5-point Likert-type scale) of a 48-year-old man suffering from severe anxiety attacks. Results of the sampling indicated that over one-third of his thoughts reflected annoyance with his children. This finding was surprising to the researchers and the participant himself, and might not have been identified had a closed-ended self-report format been used.

While most thought-sampling methods provide quantitative measures of inner experience, a method called Descriptive Experience Sampling “seeks simply to describe
inner experience rather than to quantify it based on the view that careful descriptions should be the foundation on which subsequent quantification should be built" (Hurlburt, 1997, pp. 945-946). Participants in descriptive experience sampling research are given a beeper and are instructed to "freeze" their ongoing inner experience at the moment of the beep and take notes on the aspects of this experience in a 2x3 inch notebook. Participants are asked not to focus on why they were having that particular experience, or what situational conditions were responsible for the experience, only to describe which aspects of their inner experience they were aware of at the moment of the beep (Hurlburt, 1990). When participants have collected between six to eight samples, they meet with the researchers for an extended discussion about those samples. At this time participants are asked to describe their sampled inner experience. Some participants have no difficulty with this request and use their own terminology to describe the various aspects present at the moment of the beep. However, most participants initially find it difficult to describe their inner experiences. In order to facilitate the discussion, the investigators might say, "At the moment of the beep were you experiencing any thoughts, feelings, sensations, perceptions, tingles, itches, ideas, or anything else that we don't know enough about to ask?" This question is asked in as tentative a way as possible and includes a variety of characteristics in order to convey to the participants that the investigators are unsure what to expect, and to minimize the possibility of leading the participants or otherwise influencing their descriptions. When a characteristic has been identified, the investigators question the participant about it until a complete and accurate description of it has been obtained. The discussion of one sampled moment can take anywhere from 5 to 30 minutes. The entire sampling procedure is continued until enough samples have
been collected, defined to be when (1) subsequent samples can easily be identified as belonging to an already existing category. (2) no modification of the existing categories is required, and (3) emerging categories have been adequately defined (Hurlburt, 1990).

An advantage of the descriptive experience sampling method is that it requires participants to develop their own language to describe aspects of their inner experience rather than report on predefined categories (Hurlburt, 1990). Thus, this method allows for the emergence of unexpected findings. An illustration of the unanticipated results that can be obtained by the descriptive experience sampling method can be seen in the case of “Fran,” a 44-year-old woman with Borderline Personality Disorder (Hurlburt, 1993). In this case study, Fran was found to exhibit three unusual characteristics of inner experience: she experienced multiple visual images, all occurring in the same, physically impossible, visual space; some of her visual images were unrelentingly present for hours or days (one extremely unpleasant image lasted for at least three, possibly four, days), and; her real and imaginal perception contained no figure-ground phenomena (Hurlburt, 1993; Hurlburt, 1997).

Another case study involving a woman with schizophrenia revealed that the woman’s everyday inner experiences were predominately visual and that these images were often distorted or “goofed-up” (Hurlburt & Melancon, 1987). The images she experienced at the moment of the beep could be tilted, blurred, or otherwise altered in some dramatic way.

Doucette (1992) used the descriptive experience sampling method with a group of bulimic women and found that their inner experiences were often multiple; that is, they often experienced several, separable, identifiable happenings, all taking place at the
moment of the beep. Other salient characteristics included sensed awareness (knowledge that a process was ongoing at the present moment, but outside central awareness), thought/feelings (moments where cognition and affect were experientially inseparable), and incongruent bodily awareness (awareness that does not reflect the actual physical state of the body).

Hebert (1991) sampled the inner experience of five anxious participants and reported on the salient characteristics that emerged. The anxious participants were found to have an extremely low frequency of clear and colorfully vivid images, a relatively high frequency of indeterminate inner visual experience (awareness of visual processing but with little to no clarity, detail, or color), and a relatively high frequency of worded thinking (experience of the words being present but with no experience of producing or hearing the words) compared to normal participants. It was also found that the anxious participants had the sense that listening and seeing was something they did in an active and directive way, while speaking was something that simply happened. Additionally, it was found that the participants had difficulty describing their feelings in detail and did not seem to have access to the nuances of their emotional experience.

In a descriptive sampling study of individuals with high natural rates of speech, Koch (1997) found that these individuals had extremely “rich” inner experiences; that is, they experienced frequently complex, complicated, richly detailed, or multiple experiences. Additionally, individuals with high rates of speech were found to have a relatively high rate of unsymbolized thinking and a relatively low rate of inner speech compared to normal subjects.
Hurlburt, Happé, and Frith (1994) sampled the inner experience of three adults with Asperger’s syndrome – verbally fluent and high-functioning individuals with autism. Results indicated that visual images were the only inner experience obtained: no other kinds of experiences were found to be present at the moment of the beep. Additionally, one of the individuals reported having no inner experience whatsoever. Although this individual used the language of inner experience in his descriptions, it was found that he “apparently used the word ‘thinking’ to mean that he was engaged in a behaviour that was in progress and not yet complete, and therefore he ‘must have been thinking about it’” (Hurlburt, Happé, & Frith, 1994).

The present investigation is interested in examining the inner experiences of individuals with symptoms of obsessive-compulsive disorder. This disorder, as previously mentioned, is characterized by recurrent, persistent, and intrusive thoughts, impulses, or images. However, we concluded the OCD section of the review with the observation that no direct investigation of these thoughts, impulses, or images has ever been undertaken. After a review of the procedures used to obtain systematic reports of inner experiences, we conclude that the Descriptive Experience Sampling method would be most useful in the investigation of OCD inner experience because it provides accurate descriptions and allows for the emergence of unexpected findings. Because there is no theoretical basis for forming predictions about the inner experience of individuals with symptoms of OCD, our investigation is treated without formal hypotheses. Additionally, conducting our study without formal hypotheses will help prevent us from being blinded to unanticipated outcomes.
CHAPTER II

METHOD

Participants

Participants were recruited for the study by requests made to UNLV undergraduate psychology classes, requests made to UNLV's Student Psychological Services center, requests made to local psychotherapists, by direct solicitation, and by an ad placed in a campus newsletter. The ad did not contain the words "obsessive-compulsive disorder" because we felt this may intimidate prospective participants and decrease the chances of their participation. However, we used terminology taken directly from the DSM-IV diagnostic criteria for OCD. The ad read as follows:

Research participants wanted. Are you bothered by recurring and persistent thoughts, impulses, or images? And are these thoughts not simply excessive worries about real-life problems? Are you unsuccessful in your attempts to suppress these thoughts? If so, faculty members in the Department of Psychology would like you to participate in a study of inner experience. Confidentiality is assured, and you may find participation useful. Call RTH or CH for more information.

Unfortunately, our attempts to solicit participants were largely unsuccessful – only four women with OCD symptoms were recruited. One of these prospective subjects declined
to participate following a somewhat lengthy time gap between her initial meeting and the actual sampling. Her sampling had been delayed because the investigators were sampling with other participants. Subsequently, only three individuals with OCD symptoms and one individual without OCD symptoms participated in the present investigation. All four participants were female. Their ages ranged from 18 to 26 years old (mean age = 22).

Of the three participants with symptoms of OCD, only Cathy (all names have been changed) was presently a student at the University of Nevada, Las Vegas. Kelly and Allison were recent graduates of UNLV who had accepted positions working for the University. Prior to sampling, Cathy reported engaging in checking behaviors such as making sure her car lights were actually off, checking to make sure her iron wasn't plugged in, and repeatedly flipping her alarm clock’s switch back and forth to check that the time was correct. She believed her checking behaviors and related obsessions were “stupid” but found it difficult to stop performing them. Allison reported experiencing two or three thoughts that would recur several times throughout her day. These were undesirable thoughts that Allison had trouble controlling and she reported wishing that she could be rid of them. She was interested in sampling her inner experiences as a means to help her learn more about her thoughts. Kelly reported experiencing intrusive and recurrent thoughts in addition to thoughts that appeared in rapid succession, often occurring so quickly that she could not finish a complete thought. She reported experiencing this as stressful at times, and explained that her interest in our project was driven by a desire to better understand herself and her thoughts. No attempt was made to
determine whether our participants met the DSM-IV diagnostic criteria for obsessive-compulsive disorder.

Mia, our only non-OCD symptom participant, was an undergraduate at UNLV. She reported having no particular difficulty with intrusive, persistent, or recurrent thoughts, impulses, or images. She was included to provide a contrast for the OCD participants and to add to the pool of participants whose inner experience has been sampled using the Descriptive Experience Sampling method. Due to the non-random method of obtaining volunteers for this study, and the small number of participants obtained, the sample is not intended to be representative of any population at large.

Materials

Each participant was provided with a pocket-sized, random-interval generator (beeper) that was set to emit a 400 Hz tone through an earphone at random intervals (Hurlburt, 1980). The intervals ranged from a few seconds to one hour, with an average interval of 30 minutes. Each participant was able to adjust the volume of the beeper to her liking, largely dependent on the noise in her surrounding environment. Once received, the signal could be stopped by the participant by pressing a button on the top of the beeper.

Participants were also provided with 2x3 inch spiral notebooks in which they recorded descriptions of their inner experiences at the moment of each beep.

The participants were requested to complete the Symptom Checklist-90-R (SCL-90-R: Derogatis, 1994) as a pre-test measure of their OCD symptoms. The SCL-90-R is a 90-item, multidimensional, self-report symptoms checklist designed to measure
psychological symptom distress. The severity of the 90 symptoms are rated on a 5-point scale ranging from “not-at-all” to “extremely” distressed. Responses are transformed into nine symptom dimensions (obsessive-compulsive, somatization, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism) and three global measures (global severity index, positive symptom distress index, and positive symptom total). For the purpose of this investigation, we were only interested in obtaining pre-test scores for the obsessive-compulsive scale of the SCL-90-R.

Procedures

The investigators employed the Descriptive Experience Sampling method described by Hurlburt (1990). All participants were initially interviewed by the author and two additional interviewers. Later interviews were conducted by all three investigators whenever possible. However, when scheduling conflicts arose, only the author and one other investigator, Dr. Hurlburt, conducted the interviews.

During the initial interview, the goals of the research project and the sampling procedure were explained. Participants were provided with a beeper and a small spiral notebook, and were instructed on the mechanical workings of the beeper. Each participant was instructed to wear the beeper in her natural environment at a convenient time for a period of about four hours or until approximately 6-8 sampled moments had been obtained. At each signal, participants were instructed to “freeze” their ongoing experience and take notes about that experience in the notebook we had provided them. Participants were to write down enough information about their inner experience so that the experience could be accurately reconstructed when we met to discuss it at the next
Participants were asked not to focus on why they had had a particular thought or what it might mean, but simply to describe their inner experience as it had occurred at the moment of the beep. Participants were advised that they could decline to disclose any information about their inner experience that they were uncomfortable sharing with us. However, they were instructed to inform us explicitly if such material was being omitted, rather than gloss over it or eliminate it entirely from the discussion. Participants were also informed that they could choose to discontinue the sampling at any time. Lastly, participants were provided with the Symptom Checklist-90 and were asked to complete it prior to starting the sampling process.

The sampling discussion meetings were conducted as soon after the samples had been obtained as possible, usually the same day or the next day. These meetings were often videotaped or audiotaped. At this time, participants were asked to describe the details of their sampled inner experience. It generally took a few "practice beeps" for participants to learn to pay careful enough attention to their inner experience so that they could provide us with an accurate and detailed description of it. The investigators questioned each participant about her experience until either (a) a complete description of the sampled moment had been obtained, or (b) we had "reached the limit of our abilities" to describe the particular sampled moment. No script for this questioning was used; rather, the information obtained from the participant guided the questions that were subsequently asked. That is, if a participant had said, "At the moment of the beep, I was thinking that the bathroom needs to be cleaned," we might probe a number of options: whether she had innerly spoken or innerly heard the words, "The bathroom needs to be cleaned," whether she had seen an inner visual image of a dirty bathroom, whether the
bathroom thought was somehow unaccompanied by any visual, verbal, or emotional symbols, or whether her thought presented itself to her in some other way that we did not know how to ask about.

Following each sampling discussion meeting, the author wrote descriptions of each of the sampled moments that had been discussed. Author-written descriptions were used in lieu of transcriptions of the sessions because it was felt that verbatim records of the participants' descriptions would not accurately reflect their inner experiences. For example, participants using this method will often initially describe an inner experience with words such as, "I was saying to myself..." when, in fact, no words were being spoken at all (either aloud or in inner speech). If we relied on transcriptions we might conclude that this sample contained the characteristic of inner speech; however, more careful probing might reveal that this sample actually involved an unsymbolized thought that was initially difficult for the participant to describe, or perhaps involved an inner visual image of the words she was "saying." Thus, we believe that author-written descriptions provide a more precise view of the inner experiences of our participants. To ensure maximum accuracy, the descriptions were written as soon after the sampling discussion meetings as possible, usually within one or two days. Hurlburt (1993) identified two reasons why writing the descriptions soon after the discussion meetings made them more accurate: (1) the details of the participant's experience were fresher in the investigator's memory and, therefore, easier to recall; and (2) information obtained in subsequent discussion meetings could not influence the description of the current sample. The sampling and discussion meetings continued until both the participant and the investigators agreed that enough samples had been obtained to accurately reflect the
participant's usual inner experience. At this time, participants were asked to take part in a final follow-up interview in which they provided a brief description of themselves and their life, and reported any effects that they felt the sampling study had had on them.

During the sampling process it became clear within each participant's samples that a number of samples contained phenomena that were identical or very similar to phenomena obtained in their other samples. We identified these as "salient characteristics" and reported on them in the following chapters. Additionally, phenomena were also found to be similar across participants, and therefore an attempt was made to identify and report the common characteristics shared by all three participants with symptoms of OCD.
CHAPTER III

RESULTS - KELLY

Kelly (not her real name) was a recent graduate of the University of Nevada, Las Vegas, and was working for the University at the time of the study. Kelly was recruited after responding to an ad the investigators had placed in a campus newsletter. Her participation in the study was entirely voluntary. Prior to sampling, Kelly obtained a T-score of 66 on the OCD subscale of the SCL-90-R. This represents a score that was 1½ standard deviations above the mean.

Kelly completed five days of sampling over a period of 3½ weeks. She was beeped a total of 31 times and was able to respond to 29 of these beeps. Kelly was unable to respond to two of the beeps because she could not recall what she had been thinking about at the sampled moment. Of the 29 obtained samples, we were able to discuss 21 of them in detail. Due to time constraints in the interview process, eight obtained samples were skipped. Thus, our description of the characteristics of Kelly’s inner experience is based on the 21 samples that were discussed in detail.

The salient characteristics of Kelly’s sampled inner experience included inner visual images which occurred in 10 (48%) samples; unsymbolized thinking in nine (43%); feelings in nine (43%); and bodily sensations in three (14%). Only one sample contained the characteristic of inner speech. Each salient characteristic will be discussed in detail in the following sections, beginning with the most frequently occurring
characteristic and continuing in descending order of frequency. Throughout sampling, a number of aspects of Kelly’s inner experience were brought into awareness by the beep, rather than residing in her awareness prior to the beep. In at least six (29%) of Kelly’s samples one or more characteristics of her inner experience was brought into awareness by the beep. Additionally, nearly all of the salient characteristics of her inner experience (the only exception, possibly, being images) were brought into her awareness at least once by the beep. This brought-into-awareness phenomenon will be discussed last so that we may first discuss the samples in which it occurred.

Images

Kelly’s inner experience contained inner visual images in 10 (48%) of her 21 samples. Three of these images occurred alone, whereas seven occurred along with other characteristics of inner experience. Whenever an image occurred, whether alone or in conjunction with other characteristics, the image was experienced as being the central feature of the sampled moment. When images occurred, they were easily identified as being present in Kelly’s awareness at the moment of the beep. Kelly’s images contained vivid and accurate color, varying degrees of clarity and detail, sometimes occurred as a quick sequence of images, and sometimes included motion.

Sample #12 is a typical example of Kelly’s images. A few seconds before the beep occurred, Kelly had begun imaging a scene in her mind. She had had an image of two coworkers, Jack and Jill. Jack was telling Jill a secret. Now, at the moment of the beep, Kelly was experiencing an image of a number of coworkers simultaneously talking about Jack’s secret, as if they all now knew it. The image was viewed straight ahead of
her. There were many people in the image and all were known to be talking about this secret and focusing on Jack, who was not present in the image. The voices of these people were all heard simultaneously; therefore, Kelly could not report the individual words each person was saying. However, Kelly knew that each speaker was talking about the secret and was saying such things as, “I can’t believe that!” “Are you serious?!” and “No way!” Also at the moment of the beep, Kelly’s body was in a state of nervousness that she described as having butterflies in her stomach and an accompanying feeling of warmth in the palms of her hands – moist but not sweaty. Kelly’s feeling of nervousness was existing in her body at the moment of the beep, but was not a direct part of her awareness until the beep occurred and she took stock of her experience. Thus, this sample included an image and a feeling of nervousness brought into awareness by the beep.

In two of her sampled moments, Kelly experienced a quick series of inner visual images. For example, in sample #29 Kelly and her coworkers were discussing the upcoming Christmas exchange party. At the moment of the beep, Kelly was experiencing a quick sequence of inner visual images. These were images of stores – such as Bath & Body Works, Dillard’s, and so on – where she might soon be purchasing her gift for the party. In each image she was looking through the front entry of the store to see the colorful display of bottles of body wash. These images were seen in accurate color – blue, green, red, pink, and turquoise bottles – but the details of the body wash bottles were not fully realized. The images were understood to mean that this would be the gift that she would soon be purchasing.
Kelly's images fell on a continuum of clarity and detail. Although most of her images were rich in detail, some images contained details that were not fully realized (for example, sample #29 above). At the very end of the image clarity continuum Kelly obtained one sample that could not actually be categorized as an image. At sample #23 she had an experience that can best be described as "waiting for an image." In this sample, Kelly was in her room, standing in front of her closet, trying to figure out what to wear the next day. She was staring at her clothes, as if in a trance-like state. At the moment of the beep, Kelly was waiting for a visual image of what she would wear tomorrow to appear. She did not seem to be expending much energy in trying to create this image. Rather, she was just waiting for the visual experience to occur. Kelly seemed to be engaged in a creative task of solving the problem of what she was going to wear tomorrow that would be resolved when the image appeared to her. Had the beep not interrupted her task, the process may have ended with the experience of a visual image of the clothes she would wear tomorrow.

Although most of Kelly's images were motionless, three images did contain movement. Sample #11 is one such example. A few seconds before the beep, Kelly and her coworker were calling a male coworker on the radio. As part of a long-standing joke, her coworker said, "He's probably playing cards." At the moment of the beep, Kelly had a clear, vivid, visual image of her male coworker sitting at a table. The image was seen in accurate color and included motion—he was throwing his cards down on the table as if to say, "Dang! It was my turn to deal." Although only the coworker, table, and cards were in the image, the other players were understood to be there as well. In response to this inner picture, Kelly also had a bodily experience of laughter. The laughter seemed to
originate from her stomach, and traveled upwards until it came out of her mouth. Both
the image and Kelly's subsequent laughter were present in her awareness at the moment
of the beep.

Unsymbolized Thinking

In nine (43%) of Kelly's 21 sampled moments, she reported experiencing some
particular thought that was directly known to be ongoing but was not represented by any
images, feelings, words, or other symbols present in her awareness at the moment of the
beep. Kelly typically reported that she "just knew" what she had been thinking about,
despite this thought not being represented in any concrete visual, verbal, or emotional
way. Hurlburt (1990) referred to this phenomenon as unsymbolized thinking. Kelly's
unsymbolized thinking usually occurred along with other characteristics of inner
experience, but did emerge as the sole characteristic of her experience in three samples.

Sample #25 is an example of an unsymbolized thought that occurred in
conjunction with other characteristics of her inner experience. Kelly was sitting outside,
smoking a cigarette. At the moment of the beep, she was experiencing a visual image of
herself smoking. This image was an accurate representation of her right hand and the
cigarette she was holding at the moment, but it was viewed from a location slightly
behind and to the right of her head. At the same time, Kelly was feeling queasy and had
a headache. These bodily sensations were known to be caused by her smoking. Also at
the same time, Kelly was wondering why she still smokes cigarettes even though it
makes her feel queasy and gives her a headache. This "wondering" was unaccompanied
by words, images, feelings, or other symbols, and was understood to be caused by her
bodily reactions to the cigarette. Thus, this sample included an image, a bodily sensation, as well as an unsymbolized thought.

Sample #18 is an example of unsymbolized thinking without other characteristics present in awareness. Kelly was sitting on her couch completing a crossword puzzle. She had read the clue “NC17 Movie Viewer” and had just come up with the answer: “adult.” At the moment of the beep, Kelly was in the process of writing in the letters of the word “adult” and was having a thought which, if put to words, might be expressed by statements such as “That wasn’t as hard as I was making it out to be.” “That wasn’t so hard to figure out,” and “That was an easy clue.” These are all ways of characterizing the central meaning of her thought, but there were no words, images, or symbols present in Kelly’s awareness at the moment of the beep.

Two of Kelly’s nine unsymbolized thinking samples included multiple unsymbolized thoughts. For example, in sample #24 Kelly was watching the Cowboys’ football game on television. At the moment of the beep, she was experiencing an inner visual image of a betting ticket. This was an accurate image of the ticket that belonged to her coworker. She could see her coworker’s handwriting and the words “Dallas” printed in black ink on the white paper of the ticket. Kelly could also see a brown background to the image which was understood to be her coworker’s desk. The image was viewed as if she were staring down at the ticket on the desk. In addition to this image, Kelly was experiencing a number of simultaneous unsymbolized thoughts. If put into words, these thoughts might be expressed by statements such as, “Only he and I picked the Cowboys,” “See, I told you so,” and “The Cowboys are winning and I thought so.” However, these
thoughts were unaccompanied by words, images, or other symbols present in Kelly’s awareness at the moment of the beep.

Feelings

Nine (43%) of Kelly’s 21 samples contained feelings. Usually (seven of nine), these feelings occurred in conjunction with other characteristics of inner experience, but twice they emerged as the sole characteristic experienced at the moment of the beep. Kelly’s feelings were generally localized somewhere in her body (six of nine), but were sometimes experienced as mental events (once), or a combination of both bodily and mental events (twice).

Sample #26 is an example of a feeling that was experienced as a bodily event. Kelly was watching a Carl’s Jr. commercial on television. This commercial had just followed a truck commercial and a beer commercial. At the moment of the beep, Kelly was thinking that all these commercials were geared towards men, and she recognized the Carl’s Jr. burger to be a “man burger.” This thought was not accompanied by any images, words, or other symbols present in her awareness at the moment of the beep. In addition to this unsymbolized thought, Kelly was experiencing a feeling which she describes as being “pissed off.” This feeling took the form of a scowl on her face. Kelly’s scowl was not present in her awareness at the moment of the beep, but was recognized to be there after the beep.

In sample #30 Kelly experienced a feeling that contained both bodily and mental components. At the moment of the beep, Kelly was experiencing a feeling of embarrassment that was giving way to feeling offended. Kelly experienced
embarrassment as a mental phenomenon – she wished that she could either disappear or have a wall suddenly separate her from her coworker. Her feeling of offense was experienced as a bodily phenomenon – the inside of her body, especially her stomach, felt warm, and her palms were moist. Kelly could not definitively say whether the warmth in her body and her moist palms were a product of her embarrassment or at feeling offended.

Sensory Awareness

Three (14%) of Kelly’s 21 samples included a bodily sensory awareness that did not have a particular emotional significance. Two of these bodily sensations occurred in conjunction with other characteristics of inner experience, and one of them occurred alone.

In sample #10, Kelly was experiencing a steady, sharp pain in the lower right quadrant of her stomach. The pain occurred internally, approximately two inches below the surface of her stomach. This pain was experienced as a plum-sized circle with a flat surface, inside which lay an arrow that would prick her someplace within her body to cause the sharp pain. In addition, Kelly was experiencing concern over her pain, which, if put to words, might be expressed as “There’s that pain again, I wonder what it is.” However, Kelly’s concern was unaccompanied by any words, images, or other symbols. Both the pain and the concern were in the back of Kelly’s awareness at the moment of the beep. She knew that they were there, but the beep had brought them both into focus. Thus, this sample included both a sensory awareness and an unsymbolized thought.
In sample #17, Kelly’s bodily sensation was the sole characteristic of her inner experience. At the time of this sample, Kelly was in a relaxed state, rubbing the back of her neck and hairline. Her eyes were closed and her head was tilted. At the moment of the beep she was concentrating on the tickling feeling in her neck as she rubbed it with her fingers. She was not paying attention to the feeling or movement in her fingers at all. Rather, all her attention was focused solely on the feeling in her neck.

Inner Speech

Although inner speech did not emerge as a salient characteristic of Kelly’s sampled moments (it occurred only once), we include it in our results section because previous research has found it to be a common characteristic of inner experience. Inner speech is the experience of speaking words in the person’s own voice but with no external sound actually being produced. This inner speech has the same vocal characteristics (tone, rate of speech, inflection, pitch, pauses, etc.) as the person’s external speech. When the person’s inner speech has the same vocal characteristics as their external speech, but is experienced as being heard, rather passively, we refer to it as “inner speech (happening).” Sample #3 provides us with an example of Kelly’s inner speech, which had this “happening” quality to it. Kelly was at work and was discussing with her coworkers who would bring what to the upcoming potluck. Kelly, who is black, had just finished saying, “I don’t know what to cook for white people,” and at the moment of the beep had a strong feeling as though she had stuck her foot in her mouth. This feeling had aspects of embarrassment, nervousness, and anticipation of what her coworker's reaction would be. If put into words, this feeling might be characterized by
statements such as "What the hell did I say that for?" and "I can't believe I said that," although no words represented this fully in Kelly's awareness. Kelly's feeling had a physiological (bodily) component to it - her heart was pounding. At the same time Kelly was experiencing a repeated hearing of her words, "white people, white people, white people." These words were understood to be her own voice, as she had spoken them a few seconds before, but somewhat louder or more insistent. As best as she could say during the interview, these words were localized at the back of her head to the right. The implication was that she was wondering why she had said that, that she could have used different words, and that those words had been a dumb thing to say. Thus, this sample included a feeling and an inner speech (happening).

Brought Into Awareness by the Beep

Throughout sampling, Kelly experienced substantial difficulty discerning whether aspects of her sampled inner experience were actually already in her awareness at the moment of the beep or whether they were brought into her awareness when the beep occurred and she "took stock of" her experience. Kelly identified six (29%) samples that contained at least one characteristics of her inner experience that was brought into awareness by the beep. In two of these six samples, more that one characteristic was residing outside her awareness before the beep occurred. As previously noted, every salient characteristic of Kelly's inner experience (with the exception, possibly, of images) was brought into awareness by the beep at least once. More specifically, this brought-into-awareness phenomenon occurred in four of Kelly's nine feelings, three of her nine unsymbolized thinking, and one of her three bodily sensations. However, given that
Kelly was often unsure whether or not characteristics in her sampled moments were in her awareness at the time of the beep, it is possible that the six (29%) samples that were identified are actually an underestimate of the number of samples that contained at least one characteristic that was brought into awareness by the beep.

In the middle of Kelly’s sampling process, it became clear that this difficulty in identifying whether her experiences were brought into awareness by the beep or whether they were in her awareness prior to the beep was substantial for her. For example, in sample #19 Kelly was wondering where she had seen the magazine *Showbiz Weekly* before, and was experiencing a series of images of the magazine as it might be found in various places – on the table in the lounge at work, in the magazine rack at Tower Records, and so on. These images were seen one at a time, occurred in rapid succession, and repeated themselves frequently as if cycling from one to the next. The magazine itself was the central focus in each of these images. It was seen in accurate color – black cover with the white letters of “Showbiz” running uphill – but the picture that was on the cover remained unclear – perhaps it was a man wearing a cowboy hat, but Kelly was not positive about this detail. Although no obvious features of the lounge room or Tower Records were found in Kelly’s images, the magazines were understood to be located in those places. For example, Kelly’s image of the magazine at Tower Records included only the *Showbiz Weekly* magazine and a magazine rack viewed from the side. However, Kelly understood that this rack was at Tower Records. The images of the *Showbiz Weekly* magazine occurred in sequence, one after the other, with the image of the lounge table occurring more frequently (perhaps because this is where she most likely had seen the magazine before). Kelly’s images were the central feature of her inner
experience. However, Kelly could not tell us whether her images of the magazine occurred in her awareness at the moment of the beep, or if the beep brought the images into her awareness once she took stock of her experience. (Incidentally, this is the only sample in which Kelly was unsure whether her images were brought into awareness by the beep.) At the conclusion of our discussion of this sample, we presented two options to help clarify our discussion of future samples. Option 1. At this sample Kelly’s experience was of a series of images that passed directly through the center of her awareness, each image seeming to reside in awareness until the next image took its place there. Option 2. At this sample a series of images were somehow passing through her field of awareness, but were never in the center of her awareness until the beep caused her to focus on her inner happenings. Until forced into awareness by the beep, this series of images was somehow but not directly known to be ongoing. Kelly’s analogy was to the sound of the air conditioner: the sound is there, and you know it’s there, but you don’t really pay attention to it until someone says, “Pay attention to the air conditioner.”

Despite our attempts to clarify our discussion of future samples, Kelly continued experiencing difficulty discerning whether her thoughts were present at the moment of the beep. For example, in sample #22 Kelly was seeing an inner visual image of the face of her niece—the daughter of Kelly’s sister. This image had an alternating quality to it in that the expression on the niece’s face switched back and forth between a puzzled expression and a slight smile. The switching was not equal—it seemed there was somewhat more emphasis on the puzzled expression portion of the image. The image was clear and was seen in accurate color. Kelly was focused on her niece’s face, but she could also see her niece’s torso, chubby stomach, and the white printed T-shirt she was
wearing. Although her niece's hair was known to be there, it was not present in the image at the moment of the beep. The niece often changed her hairstyle, and it was as if Kelly did not know which style to include in the image, so she simply omitted the detail. Also at the moment of the beep, Kelly was thinking three apparently separate thoughts—about the niece’s biological father and that he was mostly unknown to the niece; about her sister’s boyfriend who the niece had been calling “Daddy” but who was in the process of breaking up with Kelly’s sister and therefore would be leaving the niece’s life; and about some fictional new boyfriend, and whether the niece would call him “daddy” also. None of these three unsymbolized thoughts contained words, images, or other symbols present in Kelly’s awareness at the moment of the beep. Kelly had substantial difficulty describing exactly how these three thoughts were present; perhaps they were already there “in the back of her awareness”; perhaps they were not in awareness but were some kind of cognitive processes that were ongoing outside of awareness and were brought into awareness by the beep; perhaps they were just implications of the image process and not separate processes at all. In addition to the image and unsymbolized thoughts, Kelly was experiencing compassion for her niece. This was a mental feeling of compassion rather than a bodily feeling. Kelly’s compassion was also outside of her awareness at the moment of the beep. Thus, this sample included an image that was present in Kelly’s awareness at the moment of the beep, and multiple unsymbolized thoughts and a feeling of compassion that were both somehow outside her awareness at the moment of the beep.
Summary

Kelly’s sampled moments were characterized by inner visual images, unsymbolized thinking, feelings, and bodily sensations. None of these salient characteristics dominated Kelly’s inner experience. Throughout sampling, a number of these characteristics – with the exception, possibly, of images – were brought into Kelly’s awareness when the beep occurred and she took stock of her inner experience.

Kelly experienced a total of 10 (48%) samples of images, in addition to one phenomenon that we called “waiting for an image.” Her images contained vivid and accurate color, and included varying degrees of clarity and detail. Additionally, some images included motion, and others occurred as a quick sequence of images.

Unsymbolized thinking occurred in nine (43%) of Kelly’s samples. They usually occurred along with other characteristics of her inner experience at the moment of the beep. In three of Kelly’s samples, unsymbolized thinking was brought into awareness by the beep.

Feelings, occurring in nine (43%) samples, were generally localized somewhere in the body, but were also experienced as mental events, or a combination of bodily and mental events. Feelings usually occurred along with other characteristics of inner experience, and were frequently brought into Kelly’s awareness by the beep.

Bodily sensations occurred in three (14%) samples. Two of these sensations occurred with other characteristics of inner experience. One was brought into awareness by the beep.
It should be noted that inner speech occurred in only one sampled moment, and the characteristic of inner hearing never occurred. No content categories emerged from Kelly's sampled moments.

During our initial meeting, prior to sampling, Kelly described aspects of her inner experience. She reported experiencing recurrent and intrusive thoughts as well as rapidly occurring thoughts: both were perceived as rather stressful at times. She explained that her thoughts could be recurring in two ways: (1) the thought would occur over and over again until she became distracted by another thought; or (2) the thought would recur at various times throughout the day, sometimes prompted by an external stimulus. For example, Kelly reported that she thinks about the possibility of getting, or already having, cancer in her jaw. This thought seems to occur frequently when she is smoking a cigarette or thinking about wanting to smoke a cigarette.

The results of the sampling procedure indicated that Kelly did not obtain any thoughts or other inner experiences that were recurring – each obtained sample differed in content from all other samples. Kelly did obtain one sample (#25) in which she thought about smoking cigarettes. However, at the moment of the beep she was not thinking about the possibility of getting or already having cancer in her jaw. It could not be determined whether Kelly experienced rapidly occurring thoughts because the Descriptive Experience Sampling method is concerned only with identifying what inner experiences are ongoing at a precise moment in time, not with how those experiences change over time. However, Kelly did obtain two samples (#19 and #29) in which she experienced a quick series of inner visual images that might be taken as evidence of rapidly occurring (or at least rapidly changing) thoughts.
CHAPTER IV

RESULTS – ALLISON

Allison (not her real name) had recently graduated from the University of Nevada, Las Vegas, and was working for the University at the time of the study. Allison responded to an ad the investigators had placed in a campus newspaper and agreed to volunteer in the study in an attempt to learn more about her thoughts. Prior to sampling, Allison obtained a T-score of 73 on the OCD subscale of the SCL-90-R. This score fell over two standard deviations above the mean.

Allison completed four sampling days over a period of eight days. She was beeped a total of 22 times and was able to respond to 20 of those beeps. One beep (the first one) was missed because Allison was startled by the beep and subsequently could not recall anything about her inner experience at that moment. In another beep (sample #11), Allison was not confident about the characteristics of her inner experience; therefore, this sample was excluded from our analyses. No beeps were skipped due to time constraints. As a result, we were able to discuss 20 sampled moments in detail. Our description of Allison’s salient characteristics will be based upon these samples.

Allison’s salient characteristics included unsymbolized thinking, occurring in eight of her samples (40%); inner speech in seven (35%); inner visual images in six (30%); and feelings in five (25%). One of Allison’s samples contained the characteristic of inner hearing, and another one contained the phenomenon of just talking. Allison
obtained three multiple experience (15%) instances in which two or more unrelated elements of inner experience were ongoing at the moment of the beep. These multiple experiences will be discussed after a description of each salient characteristic has been provided. Lastly, Allison was frequently (in at least 45% of her samples) able to identify where the particular characteristic of her inner experience was localized in her head. This ability will be discussed last so that we may first discuss the characteristics in which it took place.

Unsymbolized Thinking

Allison experienced a phenomenon we call unsymbolized thinking in eight (40%) of her 20 sampled moments. These thoughts were known to be ongoing at the time of the beep but were not represented by any words, feelings, or images. In half (four) of these samples, unsymbolized thinking emerged as the sole characteristic of inner experience, and in the other half it occurred in conjunction with other characteristics.

Sample #3 provides us with a typical example of a sample containing only unsymbolized thinking. Allison had just heard someone on television say, “If it’s okay by you, it’s okay by me.” At the moment of the beep, Allison was having a thought which, if put into words, might be expressed by statements such as “I don’t want to be a pushover like that” and “I hope I don’t sound like that.” There were no words, feelings, images, or other symbols present in Allison’s awareness at the moment of the beep. This thought seemed to take place in the center of her head.

In sample #14, Allison’s unsymbolized thinking occurred along with another inner experience characteristic. She was watching a television show in which a reporter
was knocking on the door of an empty building in hopes of finding the company Ty, Inc. At the moment of the beep, Allison was innerly speaking the words, "How strange." These words were not spoken out loud, but were experienced just as if she had actually said them aloud — same voice, tone, pitch, rate of speech, inflection, and so on. At the same time, Allison was experiencing a "ball of thoughts" which, if put into words, might be, "Why is it so hard?" "What's the problem?" or "I could find it." However, these thoughts did not have any words, images, or other symbols associated with them. It was impossible for Allison to be clear whether these were several thoughts intertwined, or one thinking process — that of wondering about the mystery of the Ty, Inc. company — that had several aspects. Thus, it was impossible to determine whether to classify this sample as a multiple experience. Allison's ball of unsymbolized thoughts seemed to be localized in the bottom of the back of her head.

All of Allison's eight unsymbolized thinking samples occurred when she was engaged in solitary activity — watching television (most frequent activity), listening to the radio, daydreaming, or reflecting on her day.

**Inner Speech**

In seven (35%) of Allison's sampled moments, she experienced the phenomenon of inner speech. Inner speech is the experience of speaking words in the person's own mind, just as if they were actually being spoken aloud, with the same vocal characteristics as their external speech. Allison's inner speech seemed to be identical to her external speech — same tone, inflection, rate, pauses, and so on. Allison spontaneously described the phenomenon as "hearing myself say the words...." Thus, in the obtained inner
speech samples, she appeared to be a passive listener of her own speech rather than
directing or initiating it in any way (although we could never be sure if she fully
understood this distinction). Allison's inner speech occurred alone in four samples and
along with other characteristics in three samples. In almost all of her samples (six of
seven), Allison's inner speech was not followed by an actual, external production of
those words. (In passing, Allison mentioned that she thought her inner speech was
designed for things she chose not to say. However, she was probably mistaken about
this; she was making a theoretical statement based on only a few samples.)

Sample #9 is a typical example of Allison's inner speech. Allison and her
husband were talking and he had just made a negative comment about his mother. At the
moment of the beep, and in response to this negative statement, Allison heard herself
innerly speak the words, "Oh, no." These words were known to be in her own voice but
were not spoken out loud. However, they were spoken just as if she were producing them
externally – with the same inflection, tone, and rate as would occur in her normal voice.
In addition, Allison's heart was beating faster as a consequence of hearing the negativity
in her husband's voice. This feeling was located solely in the region of her heart and was
present in her awareness at the moment of the beep. Allison's inner speech was not a
rehearsal for what she was going to say to her husband; she did not say, "Oh no" out loud
after saying it to herself in her inner experience.

One sample (#6) did contain words in her inner speech that were, in fact,
subsequently spoken. Allison was on the phone with her Dad. She knew that at some
point during their telephone conversation he would ask her what she was having for
dinner. Tonight, although she would actually have chili, she was planning on telling him
that she was going to have chicken because he would think that was healthier. At the moment of the beep her Dad was asking, “What are you going to eat for dinner?” Allison was listening to the question, but, in anticipation of it, was innerly rehearsing the words “I’m having chicken.” These words were in her own voice as if she were speaking them. She was simply waiting until she would have the chance to say them. Allison’s rehearsed words appeared to be localized in the back of her head, whereas her listening to her Dad’s words seemed to occur in the front.

Images

Six (30%) of Allison’s sampled moments contained inner visual images. Allison’s images were usually realistic representations of something she had previously seen or something that might possibly occur. Her images were detailed, clear, accurately colored, and usually contained no motion. Four of Allison’s images occurred along with other characteristics of her inner experience whereas two occurred as the sole characteristic experienced at the moment of the beep.

Sample #4 contains all of the common features of Allison’s images described above. Additionally, it represents the only obtained sample that she identified as frequently recurring throughout her daily life. At the time of this sample, Allison was saying goodbye to her husband and had just finished telling him to “be careful.” At the moment of the beep, and apparently related to this statement, Allison was experiencing a detailed inner visual image of the aftermath of a car accident. This image was experienced as a real scene and was seen in accurate color – blue car, single yellow street line, and so on. The scene was at night and the street was otherwise empty. The car was
smashed on the front and passenger side, and its front windshield was shattered in the middle as if it had been involved in a crash that was almost head-on but slightly to the passenger side. The scene was being illuminated by a bright white light, as if a white strobe light were flashing on and off about twice a second. This illumination resembled the pure white light from a police car's flashing lights. Allison was seeing the image from the front right side of the car, perhaps 30° to the right of the center and slightly above the car. There was no one in this image and, with the exception of the flashing white light, there was no motion either. This detailed image was localized, literally, in the back of Allison's head. However, she could be looking directly at it without having to turn her head — that is, the image was viewed as if it were straight ahead. In addition, Allison was experiencing a feeling of panic. If put to words, this panicky feeling might be characterized by the statement, "don't go." Allison described this feeling as a nervousness in her stomach and chest, similar to nausea, and the feeling of cold hands. This feeling of panic was present in her body at the moment of the beep, but was not directly in her awareness at that moment.

Sample #19 featured the only unrealistic, improbable image, and also the only one containing motion. Allison had just heard that the model Cindy Crawford had been in a car accident and had to have glass washed out of her eye. At the moment of the beep, Allison was experiencing an inner visual image of a man washing out Cindy Crawford's eye. This was a close-up image of Cindy's right eye as viewed from the right side. In the image, a man's fingers were holding open Cindy's eye while a strong stream of water was shooting into the eye, washing out the shards of glass. This stream of water was so
strong that, in reality, it would have damaged a real eye. The source of the water was not identified in Allison's image. The image was seen in accurate color and in motion.

In one sample (#13), Allison was experiencing two simultaneous images at the moment of the beep. Allison was watching a show on television that was depicting the search for the company Ty, Inc., that makes the stuffed "beanie baby" dolls. At the moment of the beep, Allison was experiencing two different inner images. One image was of a computer screen that her past employer, Citibank, had used for its charges. This image was an accurate portrayal of the real computer screen - she could see the words "Ty, Inc." displayed in red letters on the black charge screen, just as they might have appeared had she called up the Ty, Inc. account when she worked there. Although she did not see beyond the computer screen, the desk on which the computer was located was understood to be there as well. This image appeared to be localized in the front of her head, just behind her forehead. The other image was that of the words "Why is it such as mystery?" as if typed out by a typewriter - black letters on white paper, correct capitalization and punctuation, the same size as being typewritten, and so on. This image appeared to be localized in the middle of her head. In addition to these two images, Allison also experienced an unsymbolized thought which, if put into words, might be expressed by the statement, "Why can't they find this company?" However, this thought was not experienced to be in words, images, or any other symbols. This thought was experienced to be moving through her head, having started in the middle of the front of her head, behind her forehead, and was in the process of moving towards the back of her head. This movement had a definite, constant rate of speed, seeming to take a second or two to move from the front to the back of her head.
Feelings

Five (25%) of Allison’s sampled moments contained a feeling. Her feelings were generally localized somewhere in her body, but in one sample (#15) she could not definitively say how her feeling of happiness presented itself—whether bodily, cognitively, or otherwise. Usually her feelings occurred in conjunction with other aspects of inner experience, but once (sample #21) it emerged as the sole characteristic at the moment of the beep. In three of Allison’s feeling samples, the feeling she was experiencing was brought into awareness by the beep rather than being immediately present at the moment of the beep.

Sample #22 provides us with an example of a feeling that contained a bodily component, which was brought into awareness by the beep, and which occurred along with another characteristic of inner experience. Allison’s husband was teasing her, and had just finished saying, “Don’t think that I don’t know you stole my water.” At the moment of the beep, and in response to his statement, Allison was experiencing an inner visual image of three bottles of water, lying horizontally with the caps facing towards her, in her refrigerator. The image was viewed as if Allison were facing the refrigerator, and was seen in accurate color. It was an accurate image of her refrigerator. Allison’s focus was on the bottles of water. She could see other things in the refrigerator, but they were not clear. Also, Allison was experiencing a feeling that was being expressed through laughter. Her laughter, however, was not part of her awareness until the beep brought it to her attention. Thus, this sample included an image and a feeling.

In another sample (#21), Allison’s feeling was the only characteristic she experienced at the moment of the beep. She was watching the Music Awards on
television. On the program, LeAnn Rimes was giving her speech and had just said, "I thank God for my talent." At the moment of the beep, Allison had tears in her eyes in reaction to LeAnn's speech. However, these tears were not in Allison's awareness until the beep brought them to her attention.

**Multiple Experience**

In three samples (15%), Allison experienced two or more unrelated elements of inner experience that were ongoing at the moment of the beep, the phenomenon called multiple experience. Two of these samples contained two elements of the same characteristic of inner experience (for example, the two separate images of the computer screen and words discussed in the Images section as sample #13 – or multiple unrelated unsymbolized thoughts), whereas the other sample contained three different characteristics of inner experience.

In sample #2, Allison experienced multiple unsymbolized thoughts. Allison was changing channels on her television and had briefly paused on Rosanne Barr's show. At the moment of the beep Allison was having a number of separate and overlapping thoughts which, if expressed in words might include, "How did she lose so much weight?" "I wonder if I could do that too"; "Maybe she had plastic surgery"; and "Germs scare me too." These thoughts all appeared to be happening at the same time rather than appearing in sequence or progression. Additionally, they were very obviously separate thoughts rather than being various ways of characterizing one thought process. These thoughts all seemed to be localized inside the front of her head near her forehead.
Sample #18 provides us with an example of a multiple experience that contained different characteristics of inner experience. At the moment of the beep, Allison was inwardly speaking the words, “Today’s my lucky day.” These words were not spoken out loud but were experienced just as if she had actually said them—same voice, tone, pitch, inflection, and so on. These words seemed to be localized towards the front of her head. Also at the moment of the beep, Allison was (a) thinking that the traffic wasn’t as bad as she had thought it was going to be, and (b) was also remembering that she hadn’t gotten a ticket when she had been stopped by a police officer earlier that morning. Allison experienced these as being two aspects of one unsymbolized thought rather than two separate processes. This thought was what led her to the thought that today was her lucky day. No words, images, or other symbols were associated with this thought process. It seemed to be localized in the back of her head. Also at the same moment, Allison was hearing a fragment from a song that she had heard in her car a few minutes earlier. This song fragment was being played repeatedly in her imagination and was heard just as if she were hearing it on the radio. This inner hearing seemed to take place all over in her head.

Localization

In at least 45% (9 out of 20) of her samples, Allison was able to identify where in her head the particular characteristic (or characteristics) of her inner experience was (were) localized. Furthermore, it is possible that Allison’s ability to identify the perceived location of her thoughts occurred more frequently than reported; during the discussion of some samples we did not explicitly ask how the characteristic she
experienced at the moment of the beep presented itself to her. Among the localized salient characteristics, unsymbolized thinking, inner speech, and images were perceived to be located somewhere in her head. Feelings perceived as bodily events were not included as localized inner experience (the localization of Allison's feelings was discussed in the Feeling section above). None of Allison's salient characteristics seemed to favor any particular location in her head.

Most of the localized characteristics in Allison's obtained samples were perceived to occupy a definitive space in her head. However, one sample (#13, previously discussed in the Images section) contained a thought that appeared to be moving from one location in her head to another. In this sample, Allison was experiencing two different inner images - one of a computer screen and another of the words, "Why is it such a mystery?" The image of the computer screen appeared to be localized in the front of her head, just behind her forehead, whereas the image of the typewritten words seemed to be localized in the middle of her head. In addition to these two images, Allison also experienced an unsymbolized thought which, if put into words, might be expressed by the statement, "Why can't they find this company?" This thought was experienced to be moving through her head, having begun from the front of her head, behind her forehead, and was in the process of moving towards the back of her head. This movement had a definite, constant rate of speed, seeming to take a second or two to move from the front to the back of her head. Thus, this sample included two images that were perceived to occupy a definitive space in her head as well as an unsymbolized thought which appeared to move from one location of her head to another.
Summary

A dominant feature of Allison’s samples was her ability to identify where in her head a particular characteristic was located. Allison’s ability to localize her inner experience occurred in at least 45% of her sampled moments, perhaps even more. In most of these samples, Allison’s characteristic occupied a definite place in her head, but in one sample, she experienced an unsymbolized thought that seemed to be in the process of moving from the front of her head to the back. The other salient characteristics that emerged from Allison’s samples included unsymbolized thinking, inner speech, images, feelings, and multiple experience.

Allison experienced unsymbolized thinking in eight (40%) of her 20 sampled moments. In half of these samples unsymbolized thinking emerged as the sole characteristic of her inner experience at the moment of the beep, and in the other half it occurred along with other characteristics. All eight of Allison’s unsymbolized thinking samples occurred when she was engaged in solitary activity – usually watching television.

Seven (35%) of Allison’s samples included the experience of inner speech. Allison described her inner speech as “hearing myself say the words…” thus indicating that, in these moments at least, she was a passive listener of her own inner speech rather than directing or initiating it in any way. In most of Allison’s samples, her inner speech was not followed by an actual external production of the words spoken in her own mind. However, in one sample, the words she had “spoken” in inner speech were subsequently spoken externally.
In six (30%) of Allison’s sampled moments, she experienced inner visual images. These were usually realistic representations of a scene she had previously witnessed or something that might possibly occur. Allison’s images were detailed, clear, accurately colored, and usually contained no motion. One sample (#4) represented the only characteristic of Allison’s inner experience that she identified as frequently recurring in her daily life.

Feelings were identified in five (25%) of Allison’s samples. Her feelings were generally located somewhere in her body, and were the only characteristic that was frequently brought into awareness by the beep.

Lastly, Allison encountered multiple experiences in three (15%) of her sampled moments. Twice, these samples contained two, unrelated occurrences of the same characteristic, and once Allison’s multiple experience contained three different characteristics of her inner experience.

Prior to sampling, Allison reported experiencing two or three recurring thoughts every day. These particular thoughts were undesirable and difficult for her to control, and she reported that she would like to be rid of them. During the sampling procedure she identified the inner visual image of the aftermath of a car accident (in sample #4) to be one of these distressing and undesirable recurring thoughts. However, this was the only obtained sample that was identified as a recurring thought. Additionally, since each sample differed in content from all the others, no obtained inner experience appeared to be recurring.
CHAPTER V

RESULTS – CATHY

At the time of the study, Cathy (not her real name) was completing the end of her freshman year at the University of Nevada, Las Vegas. She volunteered to be a participant after hearing her professor describe the study to her class. Prior to sampling, Cathy obtained a T-score of 58 on the SCL-90-R OCD subscale. This score fell just under one standard deviation above the mean.

Cathy completed four days of sampling over a period of five days. She received a total of 18 beeps and was able to respond to all of them. However, due to sampling discussion time constraints, four samples were skipped (#4, #5, #9, and #10). Thus, we were able to discuss 14 of Cathy’s samples in detail. Our description of Cathy’s salient characteristics will be based on these samples.

The salient characteristics that emerged from Cathy’s samples included unsymbolized thinking, occurring in eight out of 14 samples (57%), feelings in seven (50%), concentrated doing in five (36%), inner speech in three (21%), and inner hearing in three (21%). Cathy obtained one sampled moment in which she was experiencing a sensation, another in which she had the experience we call “imageless seeing,” and another sample called “just doing” where she was engaged in an activity and was paying attention to it but had no awareness of thinking about it. Additionally, Cathy was able to identify where in her body or mind a particular characteristic was localized in at least five
(36%) of her samples. This aspect of her experience will be discussed last so that we may first describe the characteristics in which it took place.

Unsymbolized Thinking

Cathy experienced the phenomenon of unsymbolized thinking in eight (57%) of her 14 sampled moments. These thoughts were somehow directly known to be ongoing at the time of the beep but were unaccompanied by any visual, verbal, or emotional symbols. In seven of her eight samples, Cathy's unsymbolized thinking occurred along with other characteristics of inner experience. In five of Cathy's samples, she experienced a single unsymbolized thought, whereas in three samples she experienced multiple unsymbolized thoughts.

Sample #13 provides us with an example of a sample in which Cathy experienced a single unsymbolized thought. Cathy was reading on her computer screen when her heater clicked off and made a noise, startling her and causing her to jump in her seat. At the moment of the beep, Cathy was in the process of turning towards the noise. She was experiencing a thought, which, if put into words, might be "What was that?" However, no words, images, or other symbols accompanied this thought. Cathy knew what the noise was, but it startled her just the same. Also at this time her breathing had speeded up and she was experiencing the sensation of electricity starting in her heart and radiating down both her arms. This shock of electricity traveled quickly down her arms and left a tingling sensation in its path. It was as if tiny particles were vibrating at rapid speeds within her veins. Thus, this sample included an unsymbolized thought and a feeling.
In sample #6, Cathy experienced a number of related but separate unsymbolized thoughts. Cathy was reading a brochure about the housing at Western Washington University (WWU). She had just finished reading a statement that explained that a high level of maturity and respect was expected at WWU. At the moment of the beep, and in response to this statement, Cathy was experiencing irritation. This was a mental feeling without any accompanying physical sensations. Also at the moment of the beep, Cathy was experiencing a number of separate but related thoughts. One such thought, if put into words, might be expressed by statements such as “Do they think I’m really going to believe this?” “Am I supposed to believe this?” and “I’m not an idiot; I don’t believe it.” This thought was central in Cathy’s awareness. Cathy was also simultaneously experiencing thoughts about the people who lived in her dorm now, and that it wouldn’t be any different at WWU. All these thoughts seemed to take place in the back of her head. There were no words, images, or other symbols accompanying any of the thoughts Cathy was experiencing at the moment of the beep. Although separate, each of these thoughts was somehow tied together, and all contained or were related to irritation. Thus, this sample included a mental feeling and multiple unsymbolized thoughts.

Feelings

Seven (50%) of Cathy’s sampled moments contained feelings. Her feelings always occurred in conjunction with other aspects of her inner experience at the moment of the beep. Cathy’s feelings were experienced as bodily events, mental events, and as a combination of bodily and mental events. We have described two feelings already (samples #13 and #6) in the above section on unsymbolized thinking.
Sample #8 is another example of a feeling that Cathy identified as taking place in her body. Cathy was searching WWU's Web Site to find out what her student ID number was. She had been upset and frustrated because she did not know her student ID number and could not proceed in getting the information she wanted without that ID. At the moment of the beep, she was reading a paragraph that she thought would provide her with her ID number. This "reading" was actually more like skimming. She was seeing the words but was not reading for meaning. Cathy had a general understanding that she was looking for something, some rule for determining the ID number, but didn't know exactly what that something was. She understood that she would know it when she saw it, and knew that she would start reading for meaning at that time. We called this phenomenon "concentrated doing" (discussed in greater detail in the following section). Cathy's "reading" was in the back of her awareness at the moment of the beep. Also at this time, Cathy was experiencing a compilation of anticipation, happiness, and excitement - they all felt physically similar to her and could not be distinguished from one another. This compilation of feeling was a bodily event, composed of two distinct parts: (a) her body felt lighter and (b) she was experiencing a "humming" in her entire body. This humming was like a vibration that took place within her body. It felt as though it radiated from her heart and diffused as it traveled out towards the other parts of her body.

Sample #11 provides us with an example of a feeling that was represented both bodily and cognitively. Cathy was typing a review sheet of terms for one of her classes on her computer. She had finished a number of terms and remembered that she should save her work. In her mind, she was repeating the phrase "gotta save, gotta save, gotta
save," an example of inner speech. At the precise moment of the beep, Cathy had just let go of the mouse after clicking Save As and was innerly saying the words "save as" to herself. These words were not spoken out loud but were experienced just as if she had said them aloud – same tone, pitch, and so on. Also at this moment, Cathy was experiencing a bodily and mental feeling of relaxation. The bodily component involved feeling her muscles relaxing and sitting back in her chair. The mental feeling of relaxation involved a slowing down of her mind. It was as if her mind was becoming calm – the phrase "gotta save, gotta save, gotta save" had ended when she clicked on Save As. Cathy was mostly aware of the mental relaxation and partially aware of the bodily relaxation at the moment of the beep. Also at this time, Cathy was experiencing some version of an unsymbolized thought which, if put into words, might be characterized by statements such as, "Now I can relax" or "Now I don’t have to worry."

Thus, this sample included inner speech, unsymbolized thinking, and a feeling represented both bodily and cognitively.

In one sample (#14), Cathy experienced a mental re-experiencing of a bodily feeling she had had at a previous time. At the time of this sample, Cathy was typing a letter to her friend, explaining that she had been mad at her boyfriend the previous week. She was typing the last word of the sentence, "I was going to get my tongue pierced just to piss him off" when the beep occurred. At this moment, Cathy was experiencing a number of unsymbolized thoughts. These were separate thoughts which included remembering how angry she felt last week, wondering what she would actually tell her friend, and knowing that she did want to tell her friend because it felt good to get her feelings out. These thoughts were not accompanied by any words, images, or other
symbols present in her awareness at the moment of the beep. These thoughts were experienced as being suspended in her head, all slowly moving around, and when one moved towards the front of her head it seemed to be more directly in her awareness. The recalled bodily experience was entirely a mental process – Cathy’s recalled feeling was not currently present in her body. However, in response to this re-experienced angry feeling, Cathy was beginning to have a real bodily feeling of anger. Her anger presented itself as increased heart rate, increased typing speed, and a slow tingling in her arms. Cathy’s bodily feeling of anger was experienced to be a separate and distinct process from her mental re-experiencing of anger. Thus, this sample included multiple unsymbolized thoughts, a bodily feeling of anger, and a mental re-experienced feeling of anger.

Concentrated Doing

In five (36%) of Cathy’s samples, she experienced a phenomenon that we might call “concentrated doing.” At the moment of these samples, Cathy was involved in some cognitive process that occupied her full attention and was usually central in her awareness. These concentrated doing samples often had an analytical or critical component to them. In three of Cathy’s samples she was involved in a critical listening process, in one she was skimming for key words (previously described in the Feelings section as sample #8), and in another she was somehow searching her mind for an answer to her own question. Cathy’s concentrated doing samples always included other aspects of inner experience at the moment of the beep.
Sample #2 provides a typical example of a concentrated doing sample that involved critical listening. At this sampled moment, Cathy was playing her guitar, trying to learn the chords from Tom Petty's song, Free Falling. This "trying to learn" was a repeated sequence of (a) an imaginary listening to Tom Petty's guitar, (b) an actual playing of a chord on her real guitar, attempting to match the imagined sound with the real chord, and (c) an analytical process that determined whether the real chord did in fact actually match the imagined chord. The imaginary listening was like hearing a portion of the Tom Petty song as if she had played it on her CD player, except that she was hearing only the guitar portion of the sound – the drums, vocals, etc. had been extracted. Otherwise, the guitar that she was hearing in her imagination was being played as she remembered his playing it on the CD. (She did allow that her recalled version of his guitar playing might not have been 100% accurate.) Immediately following this inner hearing, Cathy played a chord on her real guitar, attempting to match the Tom Petty chords she was hearing in her inner experience. Simultaneously or immediately after playing the real chord, Cathy's concentration had the meaning of "does this sound right?" although no particular words seemed to be present in her awareness to convey that meaning. Thus, Cathy's playing involved a rather intense concentration that was both an attempt to match the Tom Petty chord and an evaluation of whether this attempt had been "right." It was impossible for her to separate the aspects of her concentration: the attempt to figure out the right chord to play, the playing of the chord, and the deciding whether it was right were either all part of the same process or were overlapping, separate, distinct processes. Cathy's concentration seemed to be localized in her head, whereas both the hearing of her guitar playing and her inner hearing of Tom Petty's guitar playing seemed
to come in through her left ear, as she was leaning over her guitar with her left ear closest to it.

In sample #18, Cathy was experiencing a concentrated doing in which she was intentionally and actively searching her memory for an answer. Cathy was watching the 100th episode highlights of the show, Seinfeld. She was in the middle of laughing at a joke that Jerry had told when another clip came on. At the moment of the beep, Cathy was looking at the face of the woman who was in the clip, and was experiencing a thought which, if put into words, might be expressed by statements such as, “Where have I seen her?” “Who is she?” and “What episode is she from?” No images, words, or other symbols accompanied this thought. Additionally, Cathy was intentionally searching for the answer, but she had no sense of how she was going about it. It was as if she were trying to access an old memory without searching through episodes that she had seen. This “searching for the answer” seemed to be occurring in the middle of her head. Cathy had the sense that the answer was coming from a place higher in her head, and it was as if she were asking something above to retrieve the answer for her. Also at this moment, Cathy was still laughing from the previous clip of Jerry. The emotion that had made her laugh was gone. Her laughter was heard as background noise, as if it could have been coming from anyone but happened to be coming from her. Cathy seemed to hear her laughter as if it were in the room, rather than hearing it in her head.

**Inner Speech**

Cathy experienced the characteristic of inner speech in three (21%) of her 14 samples. (One of the samples containing inner speech, sample #11, was discussed in the
Feeling section above.) Cathy’s inner speech was experienced to have the same vocal characteristics as her external speech and was experienced as being under her direct and active control. Her sampled inner speech always occurred along with other characteristics of her inner experience.

In sample #7, Cathy was reading a brochure about the housing at WWU and was trying to figure out which dorm she wanted to live in. She had identified the dorm number on the key as #14 and was now searching the map to find it. Although she had been calmly searching when she began, she was becoming increasingly frantic that she hadn’t yet been able to find it. At the moment of the beep, Cathy was feeling frantic. This was experienced as partly a mental and partly a bodily feeling. The mental feeling was difficult to describe but involved a speeding up or racing of thoughts and a mental but not cognitive awareness of being upset. The bodily feeling involved tension of her upper body muscles, while hunching over a map, looking closely at it, with her eyes darting about. Also at the moment of the beep, Cathy was innerly speaking the words “Where is it!?!?” These words were spoken just as if she had said them aloud – same tone, pitch, inflection, and so on. Additionally, Cathy was experiencing a number of unsymbolized thoughts, which, if put into words, might be expressed by such statements as “It must be somewhere,” “It has to be there,” and “I know it’s there but I can’t find it.” These thoughts had become frantic as well; they seemed speeded up. No other words, images, or symbols were present in her awareness at the moment of the beep. Thus, this sample included a feeling, inner speech, and multiple unsymbolized thoughts.
Inner Hearing

Three (21%) of Cathy’s sampled moments contained inner hearing. In one of these samples (#2), Cathy was innerly hearing the guitar section of the song, Free Falling, in her imagination, whereas in the other two samples, Cathy was innerly hearing the production of her own (internal or external) voice. (In sample #18, discussed in the Concentrated Doing section above, Cathy was innerly hearing her own laughter.) Cathy’s inner hearing samples always occurred in conjunction with other aspects of her inner experience.

For example, at sample #3, Cathy was “reading aloud in my head” a paper she had written for class. She had highlighted portions of the written paper that she would use for an upcoming oral presentation of that paper, and now she was practicing her oral presentation, reading the portions she had highlighted. At the moment of the beep, Cathy seemed to be engaged in two separate, parallel processes: (a) she was innerly reading the highlighted words as if she were giving her oral presentation, and (b) she was actively listening, critiquing her presentation to determine whether it sounded okay. These two portions of her awareness were understood to be two separate, independent processes. The reading was experienced just as if she were actually saying the words aloud to the class—same intonations, pitch, rate of speech, and so on, and thus would be called inner speech. In addition to this inner speech, Cathy was also listening to herself speak. She experienced this listening as if she were a member of the audience during her presentation. This inner hearing appeared to have an analytical component to it. She was attempting to determine whether everything was sounding okay, and whether it was making sense. She found it difficult to describe the details of this listening experience.
Localization

In at least five (36%) of Cathy's 14 sampled moments, she was able to identify where in her head the characteristic of her inner experience was localized. Among the localized salient characteristics, Cathy experienced unsymbolized thinking, concentrated doing, inner speech, and inner hearing as taking place somewhere in her head. None of these characteristics seemed to favor any particular location in her head. Cathy's bodily feelings and bodily sensation were not included as localized inner experience (for a more complete description of how Cathy's feelings presented themselves to her, please refer to the Feelings section above). Most often, Cathy perceived the characteristics of her inner experience to occupy a definite place in her head, but sometimes she perceived her thoughts to move from one location in her head to another. When this occurred, the thought that was moving towards the front of her head was felt to be in central focus.

Sample #14 (previously discussed in the Feelings section) provides us with an example of how Cathy's thoughts were perceived to move about in her head. In this sample, Cathy was experiencing a number of separate thoughts that included remembering how angry she had been at her boyfriend last week, wondering what she would tell her friend, and knowing that she wanted to confide in her friend because it felt good to get her feelings out. Each of these unsymbolized thoughts was unaccompanied by words, images, feelings, or other symbols present in her awareness at the moment of the beep. Cathy felt as if these thoughts were suspended in her head, all slowly moving around, and when one moved towards the front of her head it seemed to be more directly in her awareness.
Summary

Most of Cathy’s samples included more than one characteristic of inner experience at the moment of the beep. Ten (71%) samples contained two or more characteristics of experience, whereas only four samples contained a single aspect. These four samples included one sample each of just doing, sensory awareness, imageless seeing, and unsymbolized thinking. However, none of Cathy’s samples could be considered multiple experience because all the aspects of her inner experience were related to one another in content. It should be noted that none of Cathy’s obtained sampled moments contained the experience of an inner visual image.

Cathy’s most frequently obtained characteristic of inner experience was unsymbolized thinking, occurring in eight (57%) of her 14 samples. Five of these samples contained a single unsymbolized thought, whereas three of the samples contained multiple unsymbolized thoughts.

Seven (50%) of Cathy’s sampled moments included feelings. Her feelings were experienced as bodily events, cognitive events, and sometimes as a combination of bodily and cognitive events. Cathy’s feelings always occurred in conjunction with other aspects of her inner experience.

Cathy experienced a phenomenon we called “concentrated doing” in five (36%) of her samples. In these obtained samples, Cathy was involved in some type of cognitive process that occupied her full attention and was usually central in her awareness at the moment of the beep. These sampled moments often contained a critical or analytical component to them – in three she was engaged in a critical listening process.
In three (21%) of Cathy's samples, she experienced the characteristic of inner speech. Her inner speech had the same vocal characteristics as her external speech, except that no external production of sound was being produced and her lips and mouth were not moving. Cathy's inner speech always occurred along with other characteristics of her inner experience.

Cathy experienced inner hearing in three (21%) of her sampled moments. She perceived this hearing to be either an imagined hearing of a song in her mind, or an inner hearing of the production of her own (external or internal) voice.

Lastly, Cathy was able to localize the aspects of her inner experience in at least five (36%) of her sampled moments. It is possible that she was able to identify the localization of her experience more often than this, but we did not explicitly ask her how the characteristic presented itself to her at every sampled moment. Unsymbolized thinking, concentrated doing, inner speech, and inner hearing were all perceived as taking place somewhere in her head. None of these characteristics of inner experience appeared to favor any particular location in her head.

Prior to sampling, Cathy explained to us that she frequently engages in various "checking" behaviors. For example, after turning off the lights in her car, she cannot stop wondering whether or not they are actually turned off, and she feels compelled to flip the lights on and off again, repeatedly, just to make sure. She reported that she can forget about the car lights only if she makes herself think about something else. In another example, Cathy reported that she repeatedly checks her alarm clock to see if it is set to the right time. First she checks to make sure it is set to the radio rather than the buzzer alarm, and then she checks to make sure the time is correct. She reported that she checks
less now that she is in college, but earlier in life she would check her alarm clock up to 10 times a night. Cathy explained that she still experiences an urge to check, but continues to fight it. Although she feels her checking behavior and related obsessions are "stupid," she finds them difficult to stop.

The sampling procedure did not produce any of the obsessions that Cathy described prior to sampling. However, it seems reasonable to assume that these obsessions would occur predominantly when she is in her car or getting ready for bed (although we did not clarify with her if this seemed to be the case). Since Cathy sampled during the day time hours (between 2:00pm and 7:30pm) it is possible that we did not sample times when Cathy would have experienced these thoughts.
CHAPTER VI

RESULTS – MIA

Mia (not her real name) was an undergraduate at the University of Nevada, Las Vegas at the time of the study. She volunteered to participate after her professor described the study to her and solicited her participation. Mia reported experiencing no particular difficulty with intrusive, persistent, or recurrent thoughts, images, or impulses. She was included to provide a contrast for the OCD participants and to add to the pool of participants who have been sampled using this method. Mia obtained a T-score of 64 on the OCD subscale of the SCL-90-R. This score fell just under 1½ standard deviations above the mean.

Mia completed three days of sampling over a period of two weeks. She was beeped a total of 17 times and was able to respond to 16 of those beeps. One of Mia’s obtained samples was discarded because she could not recall what was occurring in her inner experience at the moment of the beep. Three samples were skipped due to time constraints in the interview process. Thus, our description of Mia’s salient characteristics will be based on the 13 samples that were discussed in detail.

The salient characteristics in Mia’s sampled inner experience included inner speech, which occurred in six (46%) of her samples; sensory awareness in four (30%); unsymbolized thinking in three (23%); feelings in three (23%); and inner visual images in two (15%). Mia obtained one sample each of inner hearing, just talking, and multiple
awareness. Each salient characteristic will be discussed below in descending order of frequency.

Inner Speech

Mia experienced the characteristic of inner speech in six (46%) of her 13 sampled moments. In these samples, Mia had the experience of speaking words in her own voice although no external production of sound was being produced. Mia perceived the words in her inner speech samples to be slightly different from the external production of those same words in the interview process – the inner words were more neutral, dull, or bland, and were often softer or spoken faster than the “real” spoken words. However, Mia’s inner voice was clearly recognizable as her own. Mia’s inner speech usually occurred in conjunction with other characteristics of her inner experience (feelings, sensations, etc.), although in one sample it emerged as the sole characteristic at the moment of the beep.

Sample #15 is a typical example of Mia’s inner speech. Prior to the beep, Mia was viewing slides in her art history class and had just viewed a piece that she didn’t like. Just prior to the beep, she had been thinking that this piece “sucked.” Now, at the moment of the beep, Mia was just finishing innerly saying the words, “I don’t understand this piece.” These words were experienced to be in a dull, bland voice which, although different from her “real” external voice, was clearly her own. The inner words seemed to contain no emotional component. Also at the moment of the beep, Mia was experiencing confusion. This confusion was experienced in two ways: (a) there was a pain in the middle of her forehead, much like a headache, and; (b) it felt as if her entire brain were shrinking or squishing together, similar to crumpling paper. Mia’s original thought, that
the piece sucked, was also still in her awareness at the moment of the beep, but she was not paying as much attention to it as before. No words, images, feelings, or other symbols accompanied this particular thought. Mia had metaphorically described this thought as being "in the background" but could not tell us where (if anywhere) it physically manifested itself. Thus, this sample included inner speech, sensory (bodily) awareness, and unsymbolized thinking.

In sample #5, Mia's inner speech was the only characteristic present at the moment of the beep. Mia was standing over her fishbowl, watching her fish eat the food she had just dropped into the bowl. At the moment of the beep, she was innerly speaking the words, "Am I overfeeding my fish/you?" (Mia could not recall in the interview whether she had used the words "my fish" or "you" but was certain that one of them had been innerly spoken at the moment of the beep.) Mia said these words sounded slightly different than when she actually produced the words out loud in the interview – her inner speech was more neutral, or bland, and was not as loud. Additionally, they seemed to be spoken faster than her external production of those words.

Sensory Awareness

Four (30%) of Mia's samples included a sensory awareness that did not have any particular emotional significance. Three of Mia's sensations were bodily in nature whereas one was an external sensory experience. All of Mia's sensations occurred along with other aspects of inner experience at the moment of the beep.

Sample #14 is an example of a sensory awareness that was bodily in nature. Mia was standing outside her classroom when she heard someone, who she thought might be
her professor, talking inside. At the moment of the beep, Mia experienced an urge to get into class. If put into words, this urge might be expressed by statements such as, "Wow, I gotta go in." or "I'd better get into class." although no words, images, or other symbols were present in awareness at the moment of the beep. Thus, this was an example of an unsymbolized thought. Mia's urge was also experienced as a bodily event. She felt as if her body (especially her torso) had begun moving towards the classroom although she had not yet physically moved. Both the unsymbolized thought and the sensory awareness of her body seemed to be aspects of Mia's urge to get to class.

In sample #17, Mia experienced a sensation that was external in nature. Mia was in her art class and was looking at the drawing of the classmate beside her. At the moment of the beep, Mia was following the smooth curves of the branches in her classmate's drawing. She was following the branches from the bottom of the drawing to the top and was noticing the pleasing shape of each branch. Also at this moment, Mia was innerly speaking the words, "I don't know what to do with a branch." These words were innerly spoken, just as if she had said them aloud, but no external sound was being produced. The timbre of this innerly spoken voice was a bit more dull than her "real" voice, although the rhythm of her inner speech did contain some emotion. Thus, this sample contains the characteristics of sensory awareness and inner speech.

Unsymbolized Thinking

In three (23%) of Mia's samples, she reported experiencing a particular thought that was somehow directly known to be ongoing at the moment of the beep but was unaccompanied by any visual, verbal, or emotional symbols. These unsymbolized
thoughts always occurred in conjunction with other characteristics of her inner experience at the moment of the beep.

For example, at sample #4 Mia was in a hardware store and was deciding on which of two hand-sanders she wanted to purchase. She had read all the attributes of both sanders, and at the moment of the beep was involved in a mental comparing process. This process involved summing up all the attributes she had read about - size, price, and so on - to determine which one was better. No thoughts, words, or images accompanied this particular thought, which Mia described as “just knowing.” Also at the moment of the beep, Mia said the words, “Damn, I want to get one,” to herself. These words were not spoken aloud, and were slightly different than when she actually produced the words out loud during our interview. The inner voice sounded more neutral, or bland, was not as loud, and was slightly faster than her “real” voice. However, her inner voice was clearly recognizable as her own. Mia’s innerly spoken words appeared to “zip by” in front, becoming the foreground (metaphorically in the front of her mind, becoming the central focus of her attention), while the comparison process became the background. Thus, this sample includes unsymbolized thinking and inner speech.

Feelings

Mia experienced feelings in three (23%) of her obtained sampled moments. All of her feelings were experienced as bodily events, and one sample contained two separate bodily-perceived feelings. In two of Mia’s feeling samples, her feelings emerged as the sole characteristic of her inner experience and in one sample it occurred along with other characteristics.
In sample #12, Mia experienced two separate feelings that were experienced as bodily events. Prior to the beep, Mia's boyfriend had described the awkward way in which his father had given him a bicycle for his birthday. Now, at the moment of the beep, Mia was looking at the bicycle and was saying to herself, "Is this bike stolen?"

These words were innerly spoken just as if she had said them aloud except that the inner voice was more bland in nature. Also at the moment of the beep, Mia was experiencing feelings of humor and curiosity. Mia experienced the feeling of humor as if she were "smiling on the inside" although she was not actually externally smiling. The smile seemed to take place underneath the region of her face where her "real" smile would be. This feeling of humor also seemed to be located in her body, below her neck, even though Mia reasoned that, logically, it could not truly be there. She experienced the feeling of curiosity as taking place towards the back of her head. Both feelings appeared to be (metaphorically) in the background of her awareness. Her inner voice seemed to be in the foreground of her awareness, and was actually experienced as taking place in the front of her mind, near her forehead.

Sample #9 is an example of a bodily feeling that emerged as the sole characteristic of her inner experience at the moment of the beep. Mia was sitting in a coffee shop when a friend she hadn't seen in a long time entered the café. At the moment of the beep Mia was experiencing "surprise and happiness." Surprise and happiness seemed to happen simultaneously and were experienced as if they were one feeling which could be expressed by those two words. If put into words, this feeling might be characterized by the word, "Whoa!" but there were no words present at the moment of
the beep. Mia could not describe how this feeling was represented in her awareness except that her eyebrows were raised and she had smiled.

Images

Mia experienced inner visual images in two (15%) of her sampled moments. Both of Mia's images were in accurate color. One image contained both movement and sound, whereas the other was motionless and silent. Both images emerged as the sole characteristic in her experience at the moment of the beep.

In sample #1, Mia experienced an image that contained both movement and sound, and had particular aspects of the image that ranged on a continuum of clarity. Mia and a friend were talking about the 80's and were wondering what it would be like to go back in time and experience the 80's now. At the moment of the beep, Mia was experiencing an inner visual image. To the left of the visual image was the figure of a person. Mia could not identify whether this person was male or female. The person's hair was the clearest aspect of this inner image – it was a dark color, either brown or black, and was teased so that it stood up high. Other aspects of the image appeared less clear. The person's clothes, for example, were not fully realized in the image, but Mia could identify hot pink as being one of the colors on the person's clothes. The background of Mia's visual image was an even more extreme form of her unrealized image – it appeared to be black like there was no background at all, but there seemed to be movement as if things were happening in this background that she couldn't see. In addition to this image, Mia was hearing the muffled sound of "party noise," such as
hearing glasses being set down. This noise was understood to be the noise of the 80's image.

Sample #16 is an example of an image that was motionless and contained no accompanying sounds. Prior to the beep, Mia was viewing a slide in her art class that depicted a house with wood wrapped around half of it. Mia was trying to figure out how someone would get wood up on a house to make it look like that. At the moment of the beep, Mia was looking in front of her, towards a blank spot on the wall (the on-screen display which was off to the left had changed), and was experiencing an inner visual image of the slide she had just viewed except that Mia had superimposed a man onto her image of this slide. The man was hanging on a rope, attempting to wrap boards of brown wood around the house. The image was 90% clear – Mia could see the man, but could not see how he was doing his job. The man was known to be a worker, rather than the artist himself. He was dangling on a rope on the front right side of the house. The house looked normal on the left side but had pieces of wood wrapped around it on the right. The image was motionless and was seen in accurate color.

Summary

The most frequent feature of Mia's sampled inner experience was inner speech, which occurred in six (46%) of her 13 samples. Mia's inner speech was slightly different than her externally spoken voice – her inner speech seemed more neutral, dull, or bland, and was often “spoken” slightly faster and softer than her external speech. Despite these differences, Mia's inner speech was clearly recognizable as her own voice. Mia's inner speech usually occurred along with other characteristics of her inner experience.
Mia experienced sensory awareness in four (30%) of her samples. Three of these sensations were bodily in nature and one was an external sensory experience (following the lines of a drawing). All of Mia's sensations occurred in conjunction with other characteristics.

Unsymbolized thinking occurred in three (23%) of Mia's samples. These thoughts also always occurred along with other characteristics of her inner experience at the moment of the beep.

Feelings were present in three (23%) of Mia's sampled moments. All of Mia's feelings were experienced as bodily events, and one sample contained multiple feelings. Mia's feelings emerged as the sole characteristic of her inner experience in two samples, and along with other characteristics in one sample.

Mia experienced inner visual images in two (15%) of her samples. These two images were both in accurate color and included detail, but one included both motion and sound whereas the other did not. Both images occurred alone at the moment of the beep.
CHAPTER VII

DISCUSSION

In this study, we have attempted to investigate the inner experiences of three participants with symptoms of OCD. We remind the reader that these participants may not have satisfied the DSM-IV diagnostic criteria for obsessive-compulsive disorder, but did clearly exhibit symptoms of OCD and reported that their thoughts were distressing to them. As further evidence of their OCD symptoms, our OCD-symptom participants obtained raw scores on the SCL-90-R OCD subscale of 2.30 (Allison), 1.50 (Kelly), and 0.70 (Cathy). The literature for OCD indicates that we should expect to find on average raw scores of about 1.52 for OCD diagnosed outpatients (Woody, Steketee, & Chambless, 1995) which is quite close to our obtained average of 1.50. Although Cathy's raw score was lower than the average raw score obtained by average OCD diagnosed outpatients, this may be because her primary concern was with compulsions, not obsessions. Additionally, we recognize that a sample size of three is far too small to draw any definitive conclusions, so our comments should be considered tentative. Future research will need to determine the validity of the conclusions drawn from our preliminary investigation.
Review of Participants

Before we begin the discussion of the salient characteristics of inner experience shared by our OCD-symptom participants, we will first provide a review of each participant.

Kelly was a recent graduate of UNLV and was working for the University at the time of the study. The salient characteristics of Kelly's samples included inner visual images (48%), unsymbolized thinking (43%), feelings (43%), and bodily sensations (14%). She also obtained one sample each of inner speech, multiple experience, and localization. Additionally, 29% of her sampled moments contained characteristics of inner experience that were brought into her awareness by the beep. Prior to sampling Kelly had reported experiencing recurrent and intrusive thoughts as well as rapidly occurring thoughts. The results of sampling didn't find any thoughts that were recurring. However, Kelly did obtain one sample that contained an image (of herself smoking) similar to one she had described, prior to sampling, as a frequently recurring thought.

Allison was also a recent graduate of UNLV and was employed by the University at the time of her sampling. Allison's salient characteristics included localization (45%), unsymbolized thinking (40%), inner speech (35%), inner visual images (30%), feelings (25%), and multiple experiences (15%). She also obtained one sample each of the phenomena of inner hearing and just talking. Prior to sampling Allison had reported experiencing two or three recurring thoughts every day. These thoughts were undesirable, difficult to control, and she reported that she wished to be rid of them. Allison obtained one sample that she identified as being one of those distressing and undesirable recurring thoughts.
Cathy was completing her freshman year at UNLV at the time of the study. The salient characteristics that emerged from Cathy’s samples included unsymbolized thinking (57%), feelings (50%), localization (36%), concentrated doing (36%), inner speech (21%), and inner hearing (21%). Additionally, Cathy obtained one sample each of sensory awareness, imageless seeing, and just doing. Prior to sampling Cathy had reported engaging in various “checking” behaviors such as repeatedly flipping her car lights on and off to make sure that they were actually turned off, and checking her alarm clock to see if she had set it to the right time. Cathy felt that her checking behavior and related obsessions were “stupid” but found them difficult to stop. The results of sampling did not find any of the obsessions she had described prior to sampling, nor did it catch her engaged in any compulsive behavior.

Mia, our non-OCD-symptom participant, will not be included in this discussion.

Shared Characteristics

This investigation was conducted without formal hypotheses as to the characteristics that we would find to help prevent us from being blinded by those anticipated outcomes. Each participant’s salient characteristics emerged during the sampling process and were reported in the previous chapters. Our OCD-symptom participants were found to share a number of salient characteristics of their sampled inner experience (see Table 1).

Our participants experienced the phenomenon of unsymbolized thinking in a large number of their samples (mean = 47%), making it the most common shared characteristic of inner experience. Unsymbolized thinking is the experience of knowing the meaning
Table 1

Percent of Samples Containing Each Characteristic of Inner Experience

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Kelly</th>
<th>Allison</th>
<th>Cathy</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner Experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsymbolized thinking</td>
<td>43</td>
<td>40</td>
<td>57</td>
<td>47</td>
</tr>
<tr>
<td>Feelings</td>
<td>43</td>
<td>25</td>
<td>50</td>
<td>39</td>
</tr>
<tr>
<td>Localization</td>
<td>5</td>
<td>45</td>
<td>36</td>
<td>29</td>
</tr>
<tr>
<td>Inner speech</td>
<td>5</td>
<td>35</td>
<td>21</td>
<td>20</td>
</tr>
<tr>
<td>Inner hearing</td>
<td>5</td>
<td>21</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Image</td>
<td>48</td>
<td>30</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Imageless seeing</td>
<td></td>
<td></td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Multiple experience</td>
<td>5</td>
<td>15</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Sensory awareness</td>
<td>14</td>
<td></td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Brought into awareness</td>
<td>29</td>
<td>15</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Concentrated doing</td>
<td></td>
<td></td>
<td>36</td>
<td>12</td>
</tr>
<tr>
<td>Just doing</td>
<td></td>
<td></td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Just talking</td>
<td></td>
<td>5</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Number of samples</td>
<td>21</td>
<td>20</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Note. The percentage totals for each subject will exceed 100% due to the multiple characteristics obtained in some samples.
and content of a thought, and somehow directly knowing that thought is ongoing at the moment of the beep, but without that thought being represented by any verbal, visual, or emotional symbols. In many of the samples, unsymbolized thinking occurred in conjunction with other characteristics of inner experience, but in some it emerged as the sole characteristic in awareness at the moment of the beep. Occasionally, samples included multiple, but related, unsymbolized thoughts.

Feelings, defined as emotional experience, emerged as the next most frequent shared phenomenon of inner experience (mean = 39%). Feelings were experienced as bodily events, as mental events, or as a combination of bodily and mental events. Our participants could readily identify the nuances of their feelings but experienced some difficulty when attempting to describe precisely how they were experienced, especially when a particular feeling was experienced as a mental event. Feelings that were perceived to be localized somewhere in the body were a great deal easier for our participants to describe.

All of our OCD-symptom participants found that, on many occasions, their inner experience was located in some specific location in their heads (mean = 29%). For the purpose of this study, and in accordance with other studies addressing localization (Hebert, 1991), we did not include feelings (perceived as bodily events) or bodily sensations as localized characteristics of inner experience. The experience of localization does not imply that the characteristic is actually occurring in the specific location identified, merely that the characteristic was perceived as occurring in that particular location. Our participants’ ability to localize the characteristics of their inner experience varied widely – from 5% of Kelly’s samples to 45% of Allison’s samples. Unsymbolized
thinking emerged as the characteristic that was most frequently identified as occupying a particular space in our participants' heads. Although inner speech, images, and concentrated doing were also identified as localized characteristics.

Inner speech is the experience of speaking words in the person's mind, with the same vocal characteristics (tone, pitch, inflection, rate of speaking, pauses, etc.) as external speech, but with no external noise being produced. Inner speech was experienced by all of our OCD-symptom participants, ranging from 5% to 35% (mean = 20%). Inner speech usually occurred in conjunction with other characteristics at the moment of the beep, but occasionally emerged as the sole characteristic of inner experience. Both Allison and Kelly obtained samples of inner speech that had a "happening" quality to it – they appeared to be passive listeners of their inner speech rather than directing or initiating it in any way. We refer to this variant of inner speech as "inner speech (happening)."

Two of our participants, Kelly and Allison, obtained a number of samples involving inner visual images (mean for the two = 39%). Their images were accurately colored, varied in clarity and detail, and often included motion and sound. Almost all were realistic representations of something previously seen or something that might possibly occur. Their images usually occurred along with other characteristics of inner experience at the moment of the beep. It should be noted that Kelly and Allison, who obtained rather high rates of inner visual images (48% and 30%, respectively), both had reported prior to sampling experiencing only obsessions, not compulsions – whereas Cathy, who obtained no inner visual images, had reported experiencing a variety of compulsions but not obsessions. Although purely speculative because of the small
number of participants, it may be that obsessive individuals experience a high rate of inner visual images whereas compulsive individuals experience images infrequently.

Although she did not experience inner visual images, Cathy did obtain a sample containing what we call “imageless seeing.” Imageless seeing is the clear experience of seeing something without the thing seen being directly in awareness. For example, in sample #16 Cathy was reading a sentence and storing the words so that, when she had finished reading, she could make sense of the words and react to the sentence. This “storing” involved lining up the words, from left to right, in her head. Although each individual word was known to be there, Cathy did not actually visually see any of these words. This line of words was experienced as a hint of an image – a solid line, known to contain the words, but not broken into individual words to make up that sentence. The line appeared fuzzy, like a vapor trail, and contained the meaning of the words she had read so far. The line remained the same size and shape as Cathy continued reading the sentence.

Whereas Cathy was the only OCD-symptom participant who did not obtain any samples involving inner visual images, she was also the only participant who obtained a relatively large number of samples involving the characteristic of inner experience that we have come to call “concentrated doing.” In fact, Cathy experienced this phenomenon so frequently (36% of her samples) that we felt compelled to create a new category for it. Concentrated doing is the experience of being involved in some cognitive process that occupies the person’s full attention and is central in their awareness. Cathy’s concentrated doing samples often had a critical or analytical component to them. As previously mentioned, Cathy is the only participant in our study who had reported
experiencing a number of compulsions, which, by their very nature are “doing” activities that occupy the person’s full attention. It may be that compulsive individuals exhibit a high frequency of concentrated doing, although this hypothesis clearly awaits further investigation.

The other characteristics of inner experience obtained by sampling included inner hearing (mean of all three = 9%), multiple experience (7%), sensory awareness (7%), brought into awareness (15%), just doing (2%) and just talking (2%).

Now that we have described the most notable characteristics that emerged from our participants’ samples, we shall attempt to compare some of these characteristics to those found in the normal participants discussed by Hurlburt (1990) and to other reports gathered by Hurlburt and his colleagues. The pool of participants that have been previously sampled using this method (normal, anxious, and depressed participants, among others) have each comprised a small, diverse, and non-representative sample of the population from which they were drawn. No systematic attempt has been made to obtain representative reports of their inner experience. Therefore, the following comparisons should be considered to be extremely speculative and based primarily on Hurlburt’s impressions (R. T. Hurlburt, personal communication, August 13, 1999).

As previously mentioned, unsymbolized thinking emerged as the most frequently experienced shared characteristic among our OCD-symptom participants (mean = 47%). Normal participants have been found to experience wide variability in the frequency of their unsymbolized thoughts, but the 47% obtained by our OCD-symptom participants seems to be a higher percentage than would be typically found in the normal population. Depressed participants, on the other hand, have been found to experience high rates of
unsymbolized thinking, occurring in 75% of their samples or more (Hurlburt, 1990). As we mentioned in our review of OCD, depression has been found to be common among OCD sufferers. For example, one study found that 31% of their sample were depressed at the time of the interview and 67% had a lifetime history of depression (Rasmussen & Eisen, 1992). Therefore, the high rate of unsymbolized thinking in our OCD-symptom participants appears consistent with results indicating that depressed individuals have a high occurrence of unsymbolized thoughts. Anxious individuals have also been found to have high rates of unsymbolized thinking, occurring on average in 46% of their samples (Hebert, 1991). Thus, this may suggest that highly emotional individuals experience a higher rate of unsymbolized thinking than do less emotional individuals.

Consistent with the previous hypothesis, our study found that feelings, defined as emotional experience, emerged as the next most frequent shared phenomenon of inner experience (mean = 39%). Our impression is that normal participants experience feelings somewhat less frequently. A study of anxious individuals found feelings to occur, on average, in 41% of the samples (Hebert, 1991). Although these anxious individuals obtained feelings in their samples as frequently as our participants, the way in which feelings were experienced differed between the two populations. Most of the anxious individuals experienced negative emotions and they almost always experienced a lack of bodily awareness (except when experiencing the feeling of anxiety). Our participants, on the other hand, experienced positive emotions in a third of their samples and experienced their feelings as bodily (or a combination of bodily and mental) events in about two-thirds of their samples.
The frequency of inner speech in our participants seemed to be somewhat lower than that found in the normal population. Thus, it appears that our OCD-symptom participants think in words less often than do normal individuals.

Conclusions

Unfortunately, very little research has been conducted on the inner experience of individuals with obsessive-compulsive disorder. As you will recall from our review of the literature, only two studies identified and described aspects of inner experience— one study addressed "just right" perceptions (Leckman et al., 1995) and the other investigated the experience of guilt in OCD sufferers (Savoie, 1996). None of our OCD-symptom participants obtained any samples in which they experienced either the phenomenon of "just right" perceptions or feelings of guilt. This raises the question as to whether or not the individuals in these two studies actually experienced these phenomena. Both investigations asked their participants to describe retrospectively, via interview or self-report form, their OCD symptoms and "just right" perceptions or feelings of guilt. As previously mentioned, many studies have indicated that there is little reason to believe that people can accurately describe aspects of their inner experience retrospectively (Freeman, Csikszentmihalyi, and Larson, 1986; Hurlburt, 1979). Thus, these two studies have speculated about the phenomenon of "just right" perceptions and the experience of guilt without first determining whether their participants actually do experience these phenomena in their momentary awareness. Of course, it is possible that these characteristics might have emerged in our study had we sampled with individuals who fit the DSM-IV diagnostic criteria for obsessive-compulsive disorder, had we had more
participants, or had we obtained more samples from each participant. Clearly, more investigations are needed to determine whether these phenomena are actually being experienced by OCD sufferers and, if so, to accurately describe them.

Obsessive-compulsive disorder is classified in the DSM-IV as an Anxiety disorder. However, our OCD-symptom participants share very few characteristics of inner experience with the anxious individuals who have been studied using the Descriptive Experience Sampling method. As previously mentioned, anxious individuals experience difficulty describing their feelings in detail, experience a high frequency of negative feelings, and almost always lack bodily awareness, except when experiencing anxiety (Hebert, 1991). Our participants did not share these characteristics. Additionally, two of the anxious individuals in Hebert's study experienced a characteristic called "rumination" that involved thinking or innerly speaking one thought after another, over and over, at a continuously rapid rate of speed. This definition of rumination appears to be a fundamentally OCD concept – it incorporates both the intrusiveness and the repetitiveness of the OCD individual's obsessions. Indeed, "obsessive rumination" is an old term for the form of obsessions now called "obsessive thinking." The old term was discarded because it was felt the repetition implicit in the word "rumination" was characteristic of all the subtypes of obsessions and was not a specific attribute of that particular form (Akhtar et al., 1975). None of our OCD-symptom participants obtained samples that match Hebert's definition of rumination. The only samples that appear to come close are those involving sequential images – such as Kelly's sample of the magazine, Showbiz Weekly, as it might be found in various places she had been – and those involving a repeated inner speaking – such as Kelly's
repeatedly spoken “white people, white people, white people.” or Cathy’s repeatedly spoken “save as, save as, save as” that had discontinued once she clicked the Save As icon on her computer. However, it appears unlikely that our participant’s sequential images sample matches Hebert’s definition because she excluded images in her definition of rumination (including only unsymbolized thinking and inner speech). Additionally, our participants’ examples of repeated inner speech are unlikely to be a match because they do not alternate with any other unsymbolized thoughts or inner speech – they merely occur repeatedly by themselves.

As you will recall from our review of the literature, no direct investigation of the recurrent, persistent, and intrusive thoughts, impulses, or images of individuals with OCD has been adequately undertaken. We explained that without such an investigation, researchers could not definitively state whether individuals with OCD actually do experience recurrent and intrusive thoughts or whether they mistakenly believe that they do. Additionally, we speculated that the thoughts of OCD individuals may, in fact, be no different than those of normal individuals but that for some unknown reason they mistakenly believe that these thoughts are recurrent, persistent, and intrusive. This investigation constitutes the first step in answering the question of whether individuals with OCD actually do experience recurrent, persistent, and intrusive thoughts, images, and urges. Admittedly, there are a number of reasons why we are unable to answer this question adequately. First of all, our participants may not have fit the diagnostic criteria for OCD. Secondly, we may not have obtained enough samples to capture all the characteristics of inner experience. Lastly, we have no operational definition for what constitutes a “frequently occurring” characteristic of inner experience. Obviously the
more samples we obtain with a particular characteristic, the more confident we are that this characteristic occurs frequently in inner experience, but we do not know how many samples it would take for us to definitively state that it is a “frequently occurring” or repetitive characteristic. That being said, the results of the sampling procedure indicated that only Allison experienced an image (of the aftermath of a car accident) that she identified as being one of the frequently recurring and intrusive thoughts she experienced on a daily basis. Kelly obtained one sample in which she thought about smoking cigarettes, but at the moment of the beep she was not thinking about the possibility of getting or already having cancer in her jaw (her identified recurrent thought). Cathy did not obtain any samples involving her identified recurring thoughts, although this may be because she did not sample at times when these thoughts would be most likely to occur. Additionally, since each of our participant’s samples differed in content from all the others, no content categories appeared to be recurring. Thus, our results seem to suggest that our participants did not experience frequently recurring thoughts, impulses, or images. That is not to say that our participants never experience intrusive or recurring thoughts, impulses, or images, nor that these thoughts are not distressing to them when they do occur, but simply that the samples we obtained seem to suggest that their identified recurrent thoughts are not as frequently occurring as they believe.

As you will recall, at the end of the sampling procedure each participant took part in a final follow-up interview in which they provided a brief description of themselves and their life, and reported any effects that they felt the sampling procedure had had on them. At this time, the participants also reported how they felt about the sampling procedure itself. In general, our participants were less enthusiastic about the sampling
than other participants who have previously been sampled. Although they felt that the results illuminated aspects of their thinking that they had never before considered, and although they were genuinely interested in these results, the sampling procedure itself was generally felt to be a nuisance – overall an unpleasant experience. Additionally, one of our participants seemed concerned with how her sampled inner experience compared with those of other participants – she was afraid her results were unusual or atypical. In fact, when the author described an inner visual image of a can of Diet Coke that she had just experienced during the sampling discussion meeting, our participant looked visibly relieved and reported that she was glad she wasn’t the only one who experienced inner visual images.

Limitations and Recommendations

An obvious limitation of our study is our small sample size. Clearly we have not obtained a sufficient number of participants to allow for the generalization of our results to the population of individuals with OCD symptoms. Furthermore, our participants may not have met the diagnostic criteria for OCD, although they did experience symptoms of OCD that they perceived as distressing. Future research will need to be conducted with larger sample sizes of diagnosed OCD individuals before the inner experience of OCD sufferers can be adequately described.

Additionally, future studies should attempt to collect a larger number of samples over a variety of times in the day to increase the generalizability of the results. In an effort to decrease attrition rate and reinforce to our participants that they exerted total control over the project, we asked that they wear the beeping device for a period of 3-4
hours at a time that was convenient for them. Subsequently, we received samples from each participant that were restricted to limited hours in their day. Thus, our study may not have gathered enough samples at a variety of times throughout the day to obtain a representative sample of the inner experience of our participants.

Lastly, the information obtained from the sampling process is only accurate to the extent that our participants understood their inner experiences, could remember them from the time of the beep to the time of our discussion meeting, and were willing to honestly discuss them with us. In an effort to minimize the chance of participants forgetting aspects of their sampled moments, we had scheduled our discussion meetings the same day or the day following their sampling. In our opinion, our participants were readily able to recall the aspects of their inner experience when referring to the notes they had written after they had been beeped. Additionally, we made it clear to our participants that they could refuse to discuss any samples that they were uncomfortable sharing with us. We believe our participants were honest and forthcoming, to the extent that they understood their experience, about the aspects of inner experience that were occurring at the moments of the beep.
REFERENCES


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VITA

Graduate College
University of Nevada, Las Vegas

Daniela S. Hugelshofer

Local Address:
3255 Casey Drive #201
Las Vegas, NV 98120

Home Address:
26542 Esteban
Mission Viejo, CA 92692

Degrees:
Bachelor of Arts, Psychology with honors, 1997
Claremont McKenna College

Special Honors and Awards:
Magna cum laude, Claremont McKenna College, 1997
Phi Beta Kappa honor society, Claremont McKenna College, 1997
Phi Kappa Phi honor society, University of Nevada, Las Vegas, 1999

Publications:

Thesis Title: Descriptive Experience Sampling of Individuals with Symptoms of Obsessive-Compulsive Disorder.

Thesis Examination Committee:
Chairperson, Dr. Russell T. Hurlburt, Ph. D.
Committee Member, Dr. Christopher Heavey, Ph. D.
Committee Member, Dr. Marta Meana, Ph. D.
Graduate Faculty Representative, Dr. Alan Simmons, Ph. D.