

Descriptive Experience Sampling:  
A Method for Exploring Momentary Inner Experience

Abstract

Descriptive Experience Sampling (DES) is a method developed to provide high fidelity accounts of pristine inner experience. A DES investigator gives a subject a random beeper to take into her natural environments. When the beep sounds, the subject jots down notes about her ongoing experience. The subject repeats this process, typically collecting about six moments of experience in a sampling day. Within 24 hours the investigator interviews the subject. During this “expositional” interview subject and investigator collaborate to develop high fidelity accounts of each sampled moment of experience. This process is repeated over a number of days until an idiographic description of the subject’s inner experience has been developed. DES is open-ended, qualitative, and minimally retrospective. Because of the close examination of brief moments of experience DES is capable of providing highly detailed accounts of inner experience. We summarize some important DES results and contrast DES with the methods of van Manen and Moustakas.

Keywords: Descriptive Experience Sampling, Inner Experience, Subjective Experience, Qualitative Methods

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Exploring Moments of Inner Experience

The attempt to apprehend human experience the way it presents itself, undistorted by presuppositions, unencumbered by arbitrary measurement operations, is a center of gravity of the heterogeneous collection of methods known as phenomenological or qualitative psychology. The concern for objective validation, tempered by a substantial mistrust of subjective reports and the recognition of the distortions of memory is a center of gravity of the heterogeneous collection of methods known as experimental psychology. Descriptive Experience Sampling (DES; Hurlburt, 1990, 1993; Hurlburt & Akhter, 2006; Hurlburt & Heavey, 2006) is a scion of the marriage of those legitimate, powerful, creative, and often (or usually!) argumentative force fields. DES accepts the primacy of human experience and seeks to explore it in a way that honors the methodological sophistication of both the phenomenological tradition and the experimental psychology tradition. But honoring thy father and thy mother does not mean merely doing what they say; it means digesting their values and generating a fresh perspective. DES is one such attempt, begun by Hurlburt in the 1970s and elaborated since that time.

DES aims, fundamentally, to describe one aspect of human experience, which it calls 'pristine inner experience'. By 'inner experience' we mean directly apprehended ongoing experience, that which directly presents itself "before the footlights of consciousness" at some particular moment. A thought, a feeling, a tickle, a seeing, a hearing, and so on count as inner experience by our definition.

Inner experience as we define it includes the experience of both internal events (stomach growls) and external events (sunsets). Because the 'inner' of inner experience seems to privilege

the internal over the external, some (e.g., Schwitzgebel, in Hurlburt & Schwitzgebel, 2007) would prefer to call this ‘conscious experience’, or ‘phenomenal consciousness’, or ‘subjective experience’, or simply ‘experience’. Hurlburt and Akhter (2006) and Hurlburt (in Hurlburt & Schwitzgebel, 2007) argued that all such terms have advantages and disadvantages.

Our concern here is methodological, not terminological, but it is essential to understand what DES means by inner experience; then you may call it what you will. At any particular moment there impinges on a person a welter of internal and external energy fluctuations—visual, auditory, kinesthetic, proprioceptive, and so on—and out of that welter the person typically becomes directly aware of, or thematically involved with, or consciously apprehends, one pattern (or some small number of patterns). That pattern is what we call inner experience. For example, at 8:27:13 pm Julia is standing on a California beach with the Pacific Coast highway behind her. At that particular moment, Julia is seeing the sunset, noting the orange and gold and roundness and streakiness. She has, by our definition, an inner experience of the sunset. At that moment Julia is *not*, thematically, directly, explicitly in conscious awareness, hearing the traffic noise behind her, *not* (thematically, directly, explicitly in conscious awareness) feeling the cool breeze on her left cheek, *not* noting the pressure of her wristwatch on her wrist, *not* feeling the slight twist of her left leg as it digs into the sand, *not* noting the tickle in her right nostril as she inhales, and so on. She does not have, by our definition, an inner experience of the traffic noise, the breeze, the wristwatch, and so on. All those (and perhaps hundreds of others) are somehow present in the welter of her energy transducings at that precise moment, but it is the sunset that grabs her thematized attention, becomes her inner experience at that moment. At 8:27:14 (a second later), the twist of her left leg becomes her inner experience as she directly, explicitly notices the pain that begins at the outside of the kneecap and extends down her leg, lessening

toward the ankle. The sunset, still projected on her retina, still exciting the neurotransmitters in the LGN and visual cortex, is *not* part of her inner experience at this new moment—the sunset is merely now just one among the welter of other energy fluxes (along with the traffic noise, the cool breeze, the wristwatch pressure, etc.) that exist in her receptors, that are transmitted and processed by her central nervous system but are not part of her direct inner experience. At 8:27:16 her inner experience is the sunset; at 8:27:19 her inner experience is the wristwatch pressure; at 8:27:20 her inner experience is the coolness on her cheek from the breeze; at 8:27:21 the sunset; and so on.

We accept that Julia intelligently, skillfully responds to the coolness, the noise, the pressure, and so on, simultaneously—even while Julia is absorbed in the seeing of the sunset, she adjusts her posture as the sand shifts beneath her, pulls up her jacket in response to the coolness, and so on. Thus it can be said that Julia is experiencing all those things simultaneously—they impact her and she responds skillfully. But the *inner* experience explored by DES does *not* include those experiencings unless, at some particular moment, they take (more-or-less) center stage before the footlights of consciousness.

Thus by inner experience we mean that which is directly, consciously, thematically apprehended at a particular moment. Inner experience does *not* include meanings, significances, essences, narratives. Inner experience is *not* lived experience as the phenomenologists use the term. Inner experience does *not* include unconscious processes, subliminal processes. Inner experience does *not* imply the existence of some outer process of which the inner experience is a copy or representation. DES is agnostic about all that, preferring to limit itself to what is directly before the footlights of consciousness at any given moment.

By ‘pristine’ inner experience (Hurlburt & Akhter, 2006) we mean inner experience that is naturally occurring in natural, everyday environments, inner experience that is not altered or colored or shaped by the specific intention to apprehend it. If at 8:27:13 Julia is on the beach for whatever natural, personal reason (to watch the sunset, to be with her boyfriend, to take a swim, to exercise), and for whatever natural reason she happens to see the sunset (because she went to the beach especially to enjoy it, because her boyfriend wanted to go to the beach, because it happened to grab her attention as she walked toward the swim, because she happened to look up while exercising), then her inner experience of the sunset is ‘pristine’. By contrast, if at 8:27:13 Julia is purposefully introspecting on her experience as she watches the sunset, perhaps because she is a subject in someone’s psychological investigation, then her experience of the sunset is *not* pristine. (Perhaps you could say that her experience of herself-as-trying-to-pristinely-experience-the-sunset is pristine, but that is (a) not our concern here and (b) not the same thing as pristinely experiencing the sunset.)

Pristine inner experience, then, is what we actually directly, explicitly, thematically experience moment by moment as we go about our daily activities, what passes through the footlights of consciousness in everyday unscripted activity, what is directly but evanescently apprehended as the figure against the ground of all the welter of potential experiences.

DES is concerned with inner experience because inner experience honors both parents. Inner experience is the individual’s moment-by-moment point of contact with the (inner and outer) world, and therefore of central interest to the phenomenological/qualitative tradition that legitimately respects the individual, that values experience. At the same time, inner experience is directly observed (albeit by only one person), and therefore (perhaps) admissible to the experimental psychology tradition that legitimately demands to know the provenance of its data.

To the pristine inner experiences themselves! is the aim of DES, to apprehend inner experience faithfully, undistorted by presuppositions, measurement arbitrariness, and at the same time as free of subjectivity and distortions of memory as possible.

It may seem that no particular method is required to discover pristine inner experience—it is omnipresent; everyone has direct access to it; it is the most common of all phenomena. That turns out not to be true; the ubiquity, the evanescence, the distortions of retrospection, the individual differences are characteristics of the exploration of inner experience that require methodological solution. A glance at the math will show why: suppose Julia was on that beach for an hour; and suppose that each inner experience (of the sunset, of the knee twinge, of the sunset, of the wristwatch pressure, of the coolness, etc.) has an average duration of a couple of seconds. That’s roughly 1800 inner experiences per hour. It is not possible to give a complete retrospective accounting of such a throng of experiences, and it is likely that any retrospective account will distort the actual characteristics of those experiences in some important way. Any method that seeks to apprehend inner experience faithfully must, therefore, somehow avoid being overwhelmed and reduce the risk of retrospection.

In this paper we first introduce readers to the DES method and then discuss its similarities to and differences from some qualitative methods. Two notes before we begin. First, there may well be “siblings,” other legitimate offspring in the phenomenological/qualitative and experimental psychology lineage. We do not claim that DES is the only or the best way to harness those spirits. Second, the target of DES is always pristine inner experience as we have just defined it. In what follows, we will sometimes refer to that target, more simply, as ‘experience’ when there seems little risk of ambiguity.

The goal of Descriptive Experience Sampling (DES) is basic: to provide faithful portrayals of pristine inner experience. A subject is given a beeper and a small notebook. The beeper emits a 700-Hz tone through an earpiece. These beeps are typically programmed to occur at random intervals, uniformly distributed within a range of 0 to 60 minutes. The subject is asked to wear the beeper in her natural, everyday environments until it has beeped approximately six times. Typically it requires approximately three hours for the subject to collect six sampled moments of experience.

At each beep, the subject is to try to capture, and to jot down notes about, whatever was ongoing in her experience at the *last undisturbed moment before the onset of the beep*. By aiming at this moment, also called *the moment of the beep* for short, DES aims to “catch pristine inner experience in flight” so to speak, aims to examine the inner experience that was ongoing “a microsecond before” it was disturbed by the process of recognizing the beep. This experience is not, of course, actually perfectly undisturbed—the apprehension of the beep affects the ongoing experience to some degree. The DES *aim* is the last undisturbed moment; the DES *intention* is to fall short of that aim by as little as possible.

DES investigators are, initially, purposely somewhat vague about the definition of inner experience to avoid biasing the subject’s attention or reports in any particular direction. DES tries to cast as broad a net as possible, encouraging the subject to observe anything she was internally or externally directly aware of at the moments of the beeps: thoughts, feelings, tickles, seeings, hearings—whatever was immediately present at the moment of the beep. In an effort to avoid influencing the subject by the specific connotation of any particular definition, the investigator quasi-randomly varies the terminology used to refer to the desired target; for example, in the transcription of the six interviews that comprise Hurlburt & Schwitzgebel

(2007), Hurlburt used 'inner experience' 5 times, 'experience' 250 times, in 'awareness' 100 times, and in 'attention' 70 times (Hurlburt & Schwitzgebel, 2007, p. 15).

The notes that the subject jots down immediately after each beep can contain whatever she deems desirable to help her recall their experience that was ongoing at the moment of the beep. DES investigators typically do not ask to see these notes, so that subjects can focus on the ongoing experience itself rather than on the words they might jot down to help them recall that experience.

The DES investigator and subject jointly explore the subject's experience in a process called the *expositional interview*. The expositional interview is conducted within 24 hours of the time the subject collected the six beeped experiences. Thus the initial capture of a moment of experience by the subject occurs within a second or so of the experience; the jottings in the notebook occur usually within a minute or so of the occurrence of the experience, and the exploration of that experience during the expositional interview occurs within 24 hours thereafter.

As part of the development of the method we have sometimes varied the amount of time between the targeted experience and the expositional interview, sometimes shortening that interval to several minutes by following subjects into their natural environments, sometimes lengthening it to several days. Although we do not have systematic data to support our conclusion, we believe that under normal circumstances (i.e., unimpaired subjects), capturing the experience immediately and then participating in the interview within 24 hours allows the subject to retain a reasonably complete and vivid episodic memory of her experience at the moment of the beep.

During the expositional interview, interviewer and subject collaborate to develop a faithful apprehension of the subject's experience at the moment of the beep. The central element of this exchange is the question, What was in your experience at the moment of the beep? This question is asked repeatedly and in many different forms with follow-up questions used to help subjects provide details about their inner experience as faithfully as possible and to work toward a shared understanding of each moment of experience. After the interview is completed, the investigator writes a narrative description of each moment of experience.

The desired result of the first sampling day's sample/expositional-interview/write-description procedure is a faithful apprehension of six moments of the subject's inner experience. However, because the subject is initially not highly skilled, and because the subject has not yet adequately bracketed presuppositions about inner experience, and because the interviewer has not yet adjusted to the subject's idiosyncratic manner of reporting, the aim of faithful apprehension is only roughly approximated in the first sample/interview/write episodes. Therefore this sample/interview/write process is repeated over a number of days (typically four or more). Hurlburt and Heavey (2006) and Hurlburt and Akhter (2006), and Hurlburt (2009) showed that, typically, the subject's understanding of inner experience and the ability to bracket presuppositions improves during her first-day expositional interview, which enables her to be a more skillful apprehender of her experience during her second sampling day, which enables the second-day expositional interview to be even more effective in building the subject's understanding of her experience, which enables her to apprehend her experience even more skillfully on her third sampling day, and so on. DES refers to this successive approximation over occasions as 'iterative' (see hazard 10 below).

At the conclusion of sampling, the investigator can prepare written descriptions of the salient characteristics of the individual's inner experience, code or rate those experiences, or both. Hurlburt (1990, 1993) provides examples of extracting the salient characteristics of an individual's inner experience. This process involves reviewing all of the individual beeped experiences and then drawing out the characteristics that are common across multiple moments of experience. This, then, serves as the basis for writing an idiographic description of that individual's inner experience. Investigators can also examine the experiences of a group of individuals who have some external characteristic in common (psychiatric diagnosis, for example) to discover whether specific features of inner experience are related to the external characteristic.

As an example of the type of coding that can be done, Hurlburt and Heavey (1999) developed a codebook of some forms of inner experience and showed that raters using the most common forms described in this codebook can have extremely high interrater reliability (Hurlburt & Heavey, 2002). Heavey and Hurlburt (2008) described the relative frequencies of various forms of inner experience and the individual differences in those relative frequencies.

## 1.1 Hazards to the Exploration of Inner Experience

In our view, there are ten fundamental hazards that threaten any exploration of inner experience. We take no position on whether there is one best way to navigate around these hazards; we do believe that any method that explores inner experience must develop a strategy to confront each of them. We describe each, and then discuss how DES responds.

1.1.1 *Hazard 1: Retrospection.* The first fundamental hazard is the threat of the distortions of retrospection. There is a huge experimental psychology and eyewitness testimony

literature (e.g., Hurlburt, Heavey, & Seibert, 2006; Hurlburt & Schwitzgebel, 2007) that demonstrates convincingly, to our view, the pervasive, motivated and unmotivated, noticed and unnoticed, recognized and unrecognized distortions of memory for external events, and that demonstrates, in general, that the more distant the retrospected event, the more the distortion. DES accepts the likelihood that such distortions are at least as powerful when retrospecting inner experience, probably more powerful because there are on the order of 1800 inner experiences per hour. Any exploration of inner experience must contend with such distortions in some way; the DES strategy is to be as minimally retrospective as possible. Subjects are to try to capture the experience that is immediately ongoing, right then, when the beep sounds; such an attempt at capturing is retrospective to be sure, but that retrospectivity is measured in milliseconds (or, at most, seconds) and is constrained by the fact that the inner experience itself, or parts thereof, continues. The retrospectivity of the jotting of notes is measured in seconds, and that is constrained by the just-prior capturing. The retrospectivity of the expositional interview is measured in hours and is constrained by the notes jotted within seconds. When the occasion suggests it, the retrospectivity between experience and interview can be reduced to minutes.

1.1.2 *Hazard 2: Presuppositions.* The second fundamental hazard is the threat that a subject's or investigator's presuppositions may distort the process. The DES strategy is the relentless bracketing of presuppositions about the nature of the inner experience of the subject. DES investigators attempt to begin with the view that they do not know the characteristics of anyone's inner experience until they discover those characteristics through careful exploration. For example, they bracket the presupposition that any particular person's inner experience actually has sequential, evanescent characteristics like those described in Julia's beach-at-sunset

experience above. Hurlburt and Heavey (2006, ch. 10) discuss in some detail how the bracketing of presuppositions is effected in DES.

The DES method has three structural characteristics that aid the bracketing of presuppositions: (a) DES beeps subjects at random times rather than at times that are presupposed to be important. This randomness helps overcome both the subject's and experimenter's presuppositions about what experiences should be explored; (b) DES asks 'open-beginninged' questions (Hurlburt & Heavey, 2006, p. 121; Hurlburt & Akhter, 2006; Hurlburt & Schwitzgebel, 2007, p. 24) that aim at whatever experience happens to be ongoing, rather than at some specific presupposed-to-be-ongoing feature of experience. An open-beginninged question is, "What was ongoing, if anything, in your experience at the moment of the beep?" That question allows the subject to report feelings, thoughts, sensations, or nothing at all—that is, it allows the subject to begin her description at whatever aspect of experience happened to be ongoing at the beeped moment. By contrast, a *non*-open-beginninged question is, for example, "What were you feeling at the moment of the beep?" because that question *presumes* that feeling was occurring at the beeped moment, which may or may not be true; (c) the entire method, not just the questions it asks, is open-beginninged, a characteristic that DES calls "iterative" and which is described below.

1.1.3 *Hazard 3: Semantic memory.* The third fundamental hazard to any exploration of inner experience is the threat that semantic memory will override episodic memory for a particular event (Tulving, 1984). The DES strategy is to focus only on precisely identified (by the beep), brief (momentary), and recent (as we have seen above) experiences, and relentlessly avoid all else. Focusing on precisely identified, brief, recent moments maximizes the anchoring of reports to episodic memories. Furthermore, this anchoring to recent episodic memory reduces

(but does not entirely eliminate) the likelihood that external factors such as leading questions and demand characteristics will bias reports of experience (Hurlburt & Schwitzgebel, 2007).

Subjects are trained in distinguishing between episodic and semantic memory through the iterative process described below.

1.1.4 *Hazard 4: Differentiating experience.* The fourth fundamental hazard is the risk that subjects will fail to differentiate between experiences that are actually ongoing and which they actually can directly apprehend, and things that they assume to be ongoing but which are impossible to apprehend). The DES strategy is to focus only on inner experience (which, as we have seen, is directly apprehendable) and relentlessly to avoid discussing processes or hypothetical constructs that have been shown to be difficult or impossible to access. One of the main reasons for the demise of introspection was the failure to make this distinction. For example, Nisbett and Wilson (1977) showed that people very often think they know the cause of their behavior, but are mistaken in this belief; Tourangeau (2000) made a similar observation about people's failure to know the general characteristics of their experience. DES systematically avoids discussing causes, generalities, and so on, training subjects iteratively as described below.

1.1.5 *Hazard 5: Objectifying persons.* The fifth fundamental hazard is the risk of objectifying the individual person, to treat people as data points, to be primarily interested in group averages, and thereby to lose sight of the subject as the source of experience. The DES strategy is to require a careful exposition of each sampled moment, and, usually, an idiographic account of each subject as the beginning point of an investigation.

1.1.6 *Hazard 6: Reluctance.* The sixth fundamental hazard to any exploration of inner experience is the risk that subjects will not be forthright in their descriptions of experience,

experience which is, after all, private and perhaps embarrassing or confrontational. The DES strategy has three main aspects: (a) Subjects are regarded as genuine co-investigators. The investigator and subject are truly partners, one with a method, the other with the experience; together they can do what neither by themselves can do; (b) Because experience is fundamentally private, so investigators take pains to protect their subjects' privacy. Subjects' reports always remain the exclusive property of the subject until the subject explicitly allows them to be made public. Furthermore, DES investigators explicitly acknowledge that there may be moments of experience that subjects do not want to discuss, and they inform subjects that declining to discuss the experience at any particular beep is perfectly acceptable. However, the co-investigator stance requests that once a subject has agreed to discuss a beeped experience, the subject's task is to give complete descriptions and forthcoming answers to any questions the investigator asks about that beeped experience; (c) Investigators cultivate a non-presuppositional, nonjudgmental view of experience, the result of (a), (b), and the bracketing of presuppositions. The co-investigator position is established as part of the iterative process described below.

1.1.7 *Hazard 7: Language.* The seventh fundamental hazard is the seductive nature of language: people think they are carefully describing experience but their talk is not adequately discriminated. The DES strategy is to cleave to talk that can be discriminated and eschew all other talk.

Skinner (1974) correctly noted that it can be more difficult to shape the talk about private experiences than the talk about publicly observable things. For example, the verbal community can shape quite precisely the talk about geometry by presenting sequences of known shapes (e.g., six-sided, three-sided, five-sided figures) and rewarding correct responses ('hexagon', 'triangle', 'pentagon') and punishing other utterances. However, such differentiation of talk is substantially

more difficult with some aspects of private experience because it can be impossible to present sequences of known inner experience. As a result, talk about inner experience is often not well discriminated: people may use the same words to refer to quite different things or use different words to refer to the same thing. Skinner's concerns must be taken seriously by anyone who would study inner experience. DES tries to differentiate the talk about inner phenomena in five ways.

(a) DES interviewers encourage subjects to describe all phenomena that are directly, ongoingly occurring at the moment of the beep. Particularly in the first few expositional interviews, some subjects inadvertently overlook or systematically exclude some aspects of their experience. For example, as a result of a preconception that feelings are the only important aspect of experience, a subject at the outset might report only feelings. The DES interviewer consistently presses gently for completeness of reporting (e.g., 'Was there anything else in your experience at the moment of the beep?'), and as a result the subject may (or may not) come to realize, iteratively (see below), that there are indeed other aspects of experience (thoughts, visual experience, etc.) that are present and ongoing.

(b) DES differentiates all talk that can be differentiated, and avoids all talk that cannot be differentiated. For example, talk about inner seeing can be differentiated because at least some of the vocabulary of exterior seeing (which can be shaped quite precisely by the verbal community) applies to inner seeing as well. Yesterday's sample from 'Andrew' is typical: At the beginning of the expositional interview he said he saw himself driving his friend's car. What exactly did you see? we asked. Careful questioning revealed that he saw the car from the front, but he didn't see actually see *himself*, as he had originally stated. He saw the car moving toward the viewing perspective, and then passing to the left as the perspective shifted to the right; thus

driver's side of the car was seen passing. The seen car was red, seen to be the same maroony red as the real car. All that talk can be differentiated in the interview: it can be determined which portions of Andrew's original utterance was incorrect (he didn't actually see *himself*, he saw the car); what is meant by the experienced 'moving,' 'passing,' and 'red' can be determined by careful comparison to talk that has been shaped about external things. That does not imply that Andrew experiences red the same way that you experience red, nor that Andrew is correct when he says that his imaginarily experienced red is the same as his real-seeing-of-the-car experienced red. It does imply approximately the same kind confidence that you can have when your friend telephones from his cell phone to ask you whether he is seeing your car—it's the same color as yours.

Thus some private talk can be differentiated quite precisely. But other private talk—the kind referred to as general or conceptual or causational above—cannot be precisely differentiated. If your friend says, 'That really boosted my self-concept,' it is not possible to differentiate *boosting my self-concept* with the same degree of precision that is possible to differentiate *innerly seeing my red car*.

(c) DES interviewers help subjects to distinguish between experience that occurs at the moment of the beep and experience that occurs at some other time. At the outset of sampling, subjects report a much broader slice of experience than the last undisturbed moment before the beep. DES investigators therefore iteratively work to focus subjects on that brief moment of experience, which is often described as the thinnest slice they can capture. Shaping this aspect of subjects' talk about experience is important for two reasons: first, it may not be possible to shape with precision talk about experiences that occur at times that cannot be specified with precision;

and second, allowing talk about experiences remote from the beep undermines the value of randomness in minimizing the intrusion of presuppositions.

(d) DES interviewers iteratively encourage subjects to report as much detail about their experience as they can, but not more, to avoid adding confabulatory details. DES investigators listen carefully for any sign of filling in/guessing/confabulating and discourage it. The investigator explicitly communicates his genuine belief that “I don’t know” is a perfectly acceptable answer to any question.

(e) DES interviewers help subjects make explicit the meanings of the terms that they use. DES investigators do not assume that there exists a shared understanding of the terms being used. Hurlburt and Heavey (2001), for example, showed that the term ‘thinking’ is used to denote a cognitive event by some subjects, an affective event by other subjects, and a perceptual event by yet other subjects. DES holds that it is possible to differentiate such meanings, but that it requires substantial focus and repetition, a characteristic of the iterative procedure (see below).

1.1.8 *Hazard 8: Ecological validity.* The eighth fundamental hazard is the risk of assuming that an analog observation adequately mirrors a direct observation. The DES strategy is two-fold. First, it values ecological validity. Pristine experience occurs in subjects’ naturally occurring activities and environments, and DES values observing it there. Second, it eschews armchair introspection (Hurlburt & Schwitzgebel, 2007) unless it has been established somehow that the armchair introspector can successfully simulate pristine experience.

1.1.9 *Hazard 9: Investigator’s skill.* The ninth fundamental hazard to any exploration of inner experience is the fact that faithfully apprehending the inner experience of another requires substantial skill on the part of the investigator. The DES strategy has two parts. First, it must be accepted that DES investigators require substantial training, and that despite training there will

be substantial differences in the skill of investigators. Second, DES recognizes that the consumer of any description of inner experience, including those made by people who claim to be “doing DES” (including us), will have to be evaluated with regard to the quality of the description in the same vein as the consumer evaluates the skill of a violinist or baseball player.

1.1.10 *Hazard 10: Subject’s skill.* The tenth fundamental hazard is that the subjects are not, at the outset, likely to be adequately skilled, first at the apprehending of their pristine experience and then at the reporting of it. The DES strategy is to build the subject’s skill gradually, a procedure DES calls iterative (Hurlburt, 2009; Hurlburt & Akhter, 2006; Hurlburt & Heavey, 2006).

As we have seen frequently above, the iterative, successive improvement of the processes of apprehending and describing experience cuts across nearly all aspects of DES; we focus on it here. Note that iterative does not mean merely repetitive. Iterativity does involve repetition, but each of those repetitions results in an incremental improvement of the process so that the fidelity of the process is improved on the next iteration.

There are ten reasons that it is necessary to iterate the method: (a) DES wishes to explore a subject’s experience as free of suppositions as possible, so at the outset of sampling DES should *not* systematically define potential characteristics of experience. To provide the subject, for example, with a list of possible kinds of experience would be to influence subjects to expect those particular kinds of experiences and not others, an undesirable presuppositional influence. (b) Therefore, the DES investigator is deliberately vague about the target of the investigation and deliberately inconsistent about the terminology for that target, sometimes referring to ‘inner experience’, or to ‘subjective experience’, or to ‘conscious experience’, or to ‘whatever appears directly in awareness’, and so on. The iterative nature of DES makes possible that neutralization

of terminology, makes possible “open-beginninged” references to experience so that the subject herself can orient the investigation to whatever (inner or outer, subjective or objective) directly presents itself to her experience at the moment of the beep as free of terminological pressures as possible; (c) As a result of (a) and (b), subjects are therefore at the outset “flying blind,” fumbling their way through the observation and the description of their experience. The DES investigator maintains a steady focus on the moment of the beep, and most subjects find this support adequate to facilitate the differentiation of their own observational and descriptive abilities, but that takes time and practice; (d) Presuppositions are stubborn, and the bracketing of them takes time and repetition; (e) Despite detailed pretraining, most subjects do not at the outset realize the level of detail DES requests. That cannot be imparted except by participating in the first one or two expositional interviews; (f) Despite detailed pretraining, most subjects are very surprised at how short is “the moment of the beep” in which DES is interested. That cannot be imparted except by participating in the first one or two expositional interviews; (g) Despite detailed pretraining, most subjects at the outset give general accounts or explanations of their experience, which, as we have seen above, DES seeks to avoid. The giving of simple descriptions without generalizing or explaining is a skill that needs on-the-job training and practice; (h) DES investigators need time to adjust their questioning to the particular experiences of the subject; (i) The iterative nature of the DES process also serves to reduce reactivity—subjects usually report by the second sampling day they are accustomed to wearing the beeper and that it no longer causes them to alter their behavior; and (j) The iterative nature gives the researcher time to draw the subject into the role of co-investigator and to allow the subject to see, successively unfolded, that true the goal of the research is a high fidelity apprehension of her inner experience.

The alert reader will have noticed that some of these hazards are particular sensitivities of the phenomenological/qualitative tradition; some are sensitivities of the experimental psychology tradition. We have intentionally *not* divided them up or identified each hazard with a tradition because if one digs deep enough, all hazards are important to both traditions. In some cases one doesn't need to dig too deeply. For example, our discussion of the seventh hazard (the shaping of verbal behavior) referred primarily to Skinner, a prime contributor to the experimental psychology tradition. However, one could build a similar discussion around phenomenologists such as Husserl or Gurwitsch.

## 1.2 An Illustrative Example

'Steven' sought psychiatric treatment because he was tormented by incessant internal arguments: he argued, in his imagination, with his professors, his wife, the store clerk, his friends, the driver in the next car, over and over, outside his control. These arguments lasted nonstop for hours and sometimes days and caused him great distress. His psychiatrist suspected both depression and obsessive-compulsive disorder and referred him to our DES study of depression. He participated in one DES sampling day per week for ten weeks, collecting about six samples per sampling day, 56 samples in all. Two aspects of his experience emerged that are important to us here: sensory awareness and his internal arguments.

1.2.1 *Steven's Sensory Awareness.* As we have seen, DES does not begin with presuppositions about what will be found; in fact it studiously brackets such presuppositions. The aim of DES is to allow features of inner experience to *emerge* (or not!) from a series of one-by-one carefully examined moments. Usually, but not always, some characteristics do emerge from a subject's participation, and that was the case with Steven. By far the most salient feature to emerge from Steven's sampled experience was his direct focus on some specific sensory

aspect of his body or environment without regard to its instrumental function or its perceptual significance. Here are examples:

Day 3, Beep 1 (Beep 3.1). Steven was cleaning up his office. At the moment of the beep he was visually focused on the angle made by plastic shelves and wooden shelves where they overlapped in the corner. This overlap created an intersection of geometric planes that was the predominant characteristic of his visual experience. That is, Steven was not seeing the shelves as objects to clean up, but was instead drawn to a functionally insignificant but sensorially prominent detail—the particular way the planes happened to intersect when viewed from his perspective. He was also seeing the corner of the blue lab book he was holding and was particularly noting the intensity of the blueness of the book. That is, he was not merely seeing a book that happened to be blue; he was drawn to the particular blueness of the book. Thus this sample contained two instances of Steven's particular sensory focus, the seeing of the intersecting planes and the noting of the intense blueness.

Beep 5.2. Steven reading about Iraq on the web. He was scrolling the screen and was focused on the particular shape of the font and the contrast of the black letters against the white of the screen. The word he was looking at happened to be 'Iraq', but the meaning or implications of that word were not what drew his focus at that moment—he was only interested in the shape and contrast of the letters.

Beep 5.4. Steven was walking down the dark hallway. He was drawn to the orangeness and the greenness of the flickering lights from his cable modem. That is, he was not interested in whether his modem was turned on, or whether it was in use; he was, at the moment of the beep, attracted to the orangeness and the greenness themselves.

Beep 9.3. Steven was talking to his wife, paying some attention to what she was saying. But at least half of his awareness was on seeing an imaginary curvy parallelogram that appeared to be floating in the darkness but did not correspond to any existing object or reflection. His interest was primarily in the shape of the imaginary parallelogram.

In these 4 examples and in 38 others (or 42 of his 56 beeps, 75%), Steven was focused on some sensory detail of his inner or outer environment. In all these, Steven's primary interest was in the specific sensory aspect—he was not merely taking in the sensory aspect as a means of meeting some functional, utilitarian, or perceptual purpose. This is an *idiographic* characteristic of Steven: Steven is thematically drawn to sensory details of his inner and outer environment without regard for whether anyone else on the planet is or is not similarly drawn to sensory details. It turns out that DES has discovered that many people besides Steven share this preoccupation with sensory aspects, so DES invented a name for the phenomenon: sensory awareness (Hurlburt, Heavey, & Bensaheb, 2009; Hurlburt & Heavey, 2006). But we underscore that we did *not* set out to discover whether Steven did or did not have sensory awareness—we bracketed in our investigation of Steven the existence of sensory awareness in other subjects. Steven's sensory awareness forces its way out of his own sampled experiences.

Prior to sampling, Steven had no idea that he spent so much of his time focused on sensory aspects. That ignorance turns out to be shared by most people who have frequent sensory awareness (Hurlburt, Heavey, & Bensaheb, 2009), which doubtless contributes to why sensory awareness is not well known to science. After sampling, he freely accepted that his sensory focus was indeed a major characteristic of his experience.

1.2.2 *Steven's Internal Arguments.* Prior to sampling, Steven believed that he had internal arguments occurring nearly continuously. That belief was strong enough to lead him to seek psychiatric assistance. However, only 2 of his 56 samples (4%) contained internal arguments:

Beep 1.3. Steven was mentally arguing with his friend James, who (in Steven's imagination) was accusing him of spewing nonsense. At the moment of the beep, Steven innerly heard James saying, 'spew nonsense!' Steven's experience was auditory, a recreation of his friend's voice saying these exact words to him. In addition, Steven was agitated and frustrated, experienced as accelerated breathing and an apple-sized tightness behind his sternum.

Beep 5.1. Steven was pacing around his condo engaged in a mental argument with Allen. At the beep Steven was saying the word 'whatever' aloud. This was part of a thought related to his ongoing mental argument, but he did not remember the exact surrounding context. In addition to being aware of the word he was saying aloud, Steven was mentally seeing a vague image of Allen. He could see Allen's upper torso and head, but there wasn't much detail in this seeing. Allen was slightly to his right and facing to the left so Steven could see the left side of his face. Steven also had some sense of the presence of several other people off to the left and the sense that this imaginary scene was occurring in his sister-in-law's living room. He was also aware of a sense of frustration and an accompanying sensation of heat and outward pressure behind his ears and eyes. He also had a feeling of "frenetic" energy in his arms and legs which made him feel like he had to be moving and gesturing, which he was. This frenetic energy seemed to be associated with the movable joints in his arms and legs.

Thus inner arguments occurred far less frequently than Steven had supposed, and the only two that did occur were somewhat questionable. The first example was on the first sampling day, and DES investigations typically discard the first sampling day's samples (part of the iterative philosophy) because subjects frequently exaggerate, overspecify, avoid, or otherwise misrepresent their inner experiences on the first day. In the only remaining argument sample, from the fifth day, the argument itself is apparently quite diffusely experienced. Steven is an experienced DES participant by this day, yet he cannot specify the details of the argument except that he was frustrated with Allen.

Regardless of whether one counts this as 0, 1, or 2 imaginary arguments, the low frequency of arguments was a great surprise to Steven. Faced with the DES data, which he himself had collected and examined, and so for the validity and interpretation of which he could personally vouch, he easily gave up the notion that his arguments were as frequent as he had thought. Furthermore, he had believed that his imaginary arguments occurred uninterrupted for hours or even days. However, he relinquished that belief when he found that even though he collected samples during periods in which he believed the internal arguments were occurring, he frequently was not internally arguing at the moment of the beep.

1.2.3 *Discussing Steven's Experience.* The moment-by-moment examination of Steven's beeped experiences painted a far different view of his experience than Steven had held prior to sampling. The sampling process discovered characteristics of Steven's inner experience that, on retrospection, he systematically overlooked (he had no prior knowledge of the sensory awareness focus that occurred much of the time) and characteristics that he systematically overemphasized (the inner arguments were far less frequent than he had thought). By the time he had seen 56 random samples of his own experience, Steven had radically reshaped his view of his inner

experience. Steven accepted the fidelity of the bit-by-bit mosaic created by the DES method: like a scientist who yields to the data, at the end of sampling he accepted that he spent much of his time focusing on the minute sensory details of his environment and that the internal mental arguments he had been so distressed about actually occurred much less often than he had believed.

Furthermore, this view of Steven's inner experience may not be attainable by other methods, for one of two reasons. Any method that accepts Steven's retrospective reporting would likely completely overlook his sensory awareness (it would be difficult to induce Steven to report something of which he had no knowledge) and would overemphasize the importance of the inner arguments. However, any method that directly challenges Steven's retrospective reporting would probably be strongly resisted by Steven (even though the challenge would be correct) because those inaccuracies are delusions, and it is difficult if not impossible to talk someone out of a delusion. DES sidesteps both those impediments. At each step in the DES procedure, the aim is merely to try to apprehend in high fidelity a randomly selected minutia that has immediately occurred. The immediacy avoids the retrospective bias, and the attempt to apprehend in high fidelity is *not* the confrontation of a delusion—it is merely one randomly identified minutia being apprehended in high fidelity, and what could be confrontational about that! However, by the time 56 samples have been collected (samples that Steven knew, on his own first-hand authority, were each apprehended in high fidelity), there could be no denying the obvious conclusion that his retrospective views were incorrect.

You may protest that this view of Steven's experience was based on only 56 samples, and those samples obtained only in a narrow slice of Steven's existence. We entirely agree but note that the method inherently allows, in fact encourages, the collecting of more samples on more

occasions if desired. Each sample is a brand new direct contact with the wellspring of experience (*unlike*, for example, the repeated administration of a questionnaire; *unlike* a series of interviews that rehash the same interpretive narrative), with the potential of enriching the observational process in new directions as well as corroborating the original observations.

### 1.3 Some DES Findings

We now turn to the results of DES. First we discuss four general, overall results of applying the method across hundreds of subjects; then we turn to specific studies.

*1.3.1 General Results.* First, for most subjects most of the time, as best we can determine by extremely careful interviewing, the beep does catch one or some very small number of inner experiences ongoing. That is, the Julia-at-the-beach example does typify the stream of inner experience most subjects experience. The Steven samples that we cited are also typical in this regard: At beep 3.1 Steven is paying predominant attention to one thing—the shape of the shelf intersection—out of the welter of potential experiences that were in his inner and outer environments at that moment. That there is usually one or a few main coalescences of experience is a *result* of DES, not a *presupposition that drives* DES. DES brackets that likelihood of a focus of experience, and therefore is open to finding that some subjects do not, apparently, have this stream of inner experiences (e.g., Hurlburt & Heavey, 2006, ch.2) and some subjects have a highly complex, multiple stream (e.g., Jones-Forrester, 2006).

Second, most subjects are not good at capturing or reporting their inner experiences on their first sampling day. This again is a *result* of DES, not a *presupposition that drives* DES. This result drives DES to be an iterative method not on some theoretical ground but because it is forced to be so by the data it encounters.

Third, it does not in fact matter, as best we can ascertain as the result of careful questioning, whether the investigator calls the target of the investigation ‘inner experience’, ‘conscious experience’, ‘subjective experience’, or whatever. Once the subject masters the notion that we are aimed at whatever actually, directly, ongoingly grabs her attention at the moment of the beep, there is typically little definitional equivocation, little ambiguity about whether the internal or the external counts. At beep 3.1, Steven was focused on the intersecting planes of the bookshelves regardless of whether we called that experience, inner experience, conscious experience, in attention, and so on. (By the way, this example illustrates why DES prefers the term ‘inner experience’. Even though the shelves are part of the external world, and even though Steven’s point of view on the shelves is a part of the external world, Steven’s focus on the shape of the intersection (rather than on the books on the shelf or the dust on it or the store where he bought it or any of the thousands of other potentials in his welter) is an inner event. But that is an aside; the main point here is that as an empirical fact in the DES investigation, it doesn’t matter what we call it.)

Fourth, minimizing the risk of retrospective generalizations is important to the study of inner experience. This again is an empirical result of the method, not a theoretical presupposition. Steven’s case illustrates this risk: he got his retrospective generalities wrong in two major ways (overlooking what has frequently occurred, recalling what didn’t occur). Steven is by no means unusual in this regard. Some subjects pre-sampling retrospective general impressions of the characteristics of their experience are more accurate than was Steven’s, to be sure; some are worse. Almost everyone gets it wrong to some degree, and the subject’s level of confidence is not a reliable guide—Steven was quite confident (but markedly mistaken) about his inner experience prior to sampling. For example, *none* of Jones-Forrester’s (2006) bulimic

women subjects (see below) knew, retrospectively, of the existence of their multiple experience prior to sampling.

1.3.2 *Specific Studies.* In the first major investigation using DES, Hurlburt (1990) explored the inner experience of six undiagnosed individuals and four individuals suffering from schizophrenia. He observed substantial differences between the inner experience of normal and schizophrenic subjects. Some of these differences were in line with extant theory and others were not. For example, his schizophrenic subjects exhibited the blunted affect seen in many schizophrenics, but he observed that their inner emotional experiences “were quite clear to them; they were easily capable of describing nuances and discriminations of their inner emotional experiences; and the range of such emotions was quite varied” (p. 254). This observation is consistent with later studies of the disconnect between the facial expression of emotions and inner experience in schizophrenia (Kring, 1999). In fact, Hurlburt observed that some of the emotional experiences of schizophrenic subjects were hyper-clear, substantially more physically differentiated than those of non-schizophrenic subjects. Hurlburt (1990) also observed that his schizophrenic subjects had less frequent inner speaking but more frequent inner seeing (aka mental images), and that these mental images were often “goofed up,” a characteristic entirely missing from the normal subjects.

Hurlburt (1993) used DES to examine the inner experience of individuals with mental health difficulties including depression, bipolar disorder, eating disorders, anxiety, and one individual with borderline personality disorder. In each case study he used DES to develop a detailed idiographic description of the individual’s inner experience, often observing unexpected or unknown characteristics of their inner experience. These descriptions revealed common types of inner experience that were anticipated and have been discussed by others, such as inner

speaking of words and inner seeing (aka mental images), as well as types of inner experience that had not been anticipated in the literature, such as thinking without any words or other images present in awareness. He called this type of experience ‘unsymbolized thinking’ and believed it to be the same phenomenon called ‘imageless thought’ by early introspectionists. His case study of borderline patient ‘Fran’ revealed that she experienced multiple simultaneous images with no figure-ground phenomenon. Hurlburt (1997) presented five pieces of corroborating evidence for the observation that Fran did not experience figure-ground phenomenon.

Hurlburt (1993) found that his depressed and bipolar patients experienced decreases in the symbolization of their inner experience as their moods moved from manic to depressed. Among his anxious subjects he observed frequent rumination, less differentiated emotional experience that was, however, often accompanied by clear bodily sensations such as butterflies in the stomach or tension in the face/jaw, a preponderance of negative emotions and a high frequency of self or other-critical thoughts.

The seven bulimic subjects studied by Doucette and Hurlburt (1993) all frequently experienced multiple simultaneous unrelated facets of inner experience. Moreover, their inner experience was more multiple when bulimic symptomatology was worse. Doucette and Hurlburt’s bulimic subjects also frequently had difficulty differentiating thoughts and feelings, something that is rare among normal subjects. Jones-Forrester (2006) also found multiplicity of inner experience in all five of her bulimic subjects, most of whom also had difficulty distinguishing thoughts from feelings. Jones-Forrester and Hurlburt (in preparation) used DES with 13 additional bulimic women. So far, all 24 bulimic women explored with DES have had multiple experiences, at frequencies ranging from 44% to 92% (Jones-Forrester & Hurlburt, in preparation). That is striking given that multiple experience occurs at a low frequency in the

nonbulimic population. (Heavey and Hurlburt (2008) found the median and modal frequency of multiple experience to be 0% and the highest frequency to be 30%, percentages so low that they did not include them in the final version of that paper).

Hurlburt and Heavey (2002) established that they could reliably code the presence of the five most common forms of inner experience—inner speech, inner seeing, unsymbolized thinking, feelings, and sensory awareness. Heavey and Hurlburt (2008) reported that these five common phenomena of inner experience were not mutually exclusive, with each occurring about a quarter of the time in a stratified sample of 30 college students. They also observed large individual differences in the relative frequency of these phenomena across individuals but no gender differences. Inner speech correlated inversely with psychological distress.

Hurlburt and Schwitzgebel (2007) performed an in-depth examination of DES from both psychological and philosophical perspectives. To accomplish this, Hurlburt and Schwitzgebel, a skeptic of introspective procedures, used DES with ‘Melanie’. They explored DES in real time as it unfolded with a real subject and conducted an in-depth exploration of their agreements and disagreements. They included annotated transcripts and theoretical exchanges, tentatively concluding that DES may be well suited to the task of exploring inner experience.

## 2. Comparing DES to Other Qualitative Methods

As a way of clarifying what DES is and is not, we compare and contrast DES with two qualitative approaches, van Manen’s (1990) hermeneutic phenomenological inquiry and Moustakas’s (1994) human science research. Qualitative psychology is a rich and varied field; our aim here is to highlight DES when viewed from alternative perspectives. We could have chosen any two alternative perspectives; we chose van Manen’s and Moustakas’ because their method of presentation allows us to highlight similarities and differences with DES. Hurlburt

and Heavey (2006) performed a similar comparison between DES and Kvale's (1996) InterView method and between DES and Giorgi's (1985) phenomenological psychology. Hurlburt and Akhter (2006) compared DES with Petitmengin's (2006) interview method.

At the outset we underscore that it is not our intention to criticize van Manen's or Moustakas's approach. Their aims are different from that of DES, and there is certainly room for many different approaches. Our goal is to examine DES from the point of view of van Manen and from the point of view of Moustakas, and in so doing to illustrate in greater relief the DES method.

### 2.1 van Manen's Hermeneutic Phenomenological Inquiry

Van Manen's (1990) *Researching Lived Experience* sought to describe a human science research approach that employs the methods of phenomenology and hermeneutics. We will extract one passage, which consists of an introductory paragraph and six methodological suggestions, and use that as a vantage point for clarifying the DES approach. We will comment on van Manen's passage paragraph by paragraph.

For example, we may start with a body or space experience such as the experience of "being sick in bed," "going for a swim," or "a favourite childhood play-space." Sometimes the research question is concerned with the human significance of an object, such as "the child's toy," "the playground," or "the secret place." But even here we need to be aware that the human science question always is concerned with the *experience* of the toy, the *experience* of the playground, the *experience* of the secret place in the life of the child. (van Manen, 1990, p. 64, italics in original)

First, we note that DES in general avoids starting with a particular experience such as “being sick in bed.” Instead, it starts open-beginninged—with randomly selected moments because we believe that that is the most direct path to apprehending pristine inner experience. Starting with a request for a predetermined particular experience risks at least six of the ten hazards described above: it (1) asks for retrospections over long intervals, measured perhaps in years; it (2) does not bracket presuppositions about the subject matter (for example, it assumes that sick in bed with the flu has the same characteristics as being sick in bed with tuberculosis, or that being sick at age 9 is the same as at 69, etc.); it (3) does not focus on specific moments of experience and therefore cannot distinguish between the general characteristics of being sick from the particular characteristics of being sick on some particular occasion; it (4) does not adequately differentiate the actual experience of being sick from the person’s beliefs about what causes that experience; it (8) does not explore being sick in the actual environment of being sick, but only in the interview-room simulated environment; and it (10) presumes the subject was a skilled apprehender of experience at the time of the being-sick episode and at the time of van Manen’s interview.

For example, we did *not* start with Steven’s experience of imaginary arguments and ask about the significance of them. Had we done so, we would never have arrived at the realization that these arguments were not nearly as prevalent as Steven had believed.

DES may *discover* important aspects of the pristine inner experience of being sick in bed if beeps happen to occur while subjects are sick in bed. Furthermore, we believe that DES *may* be used to target specific environments if subjects are initially trained for several days of random-beep collection. That practice can build the skills of and commitment to the faithful apprehension of inner experience. For example, Dickens (2008) was interested in inner

experience while golfing. He recruited golfers, but for each subject conducted iterative sampling/expositional interviews for three sampling days *away* from the golf course, that is, away from the particular activity that subjects may have the most investment in, the most presuppositions about. Then he arranged a golf tournament and randomly beeped subjects during it. That allowed aiming directly at a particular activity (golf) once the method had been mastered in a variety of neutral environments. That is an expensive data collection procedure, of course, and it remains to be determined which conditions it is appropriate and which wasteful.

The golf scenario also illustrates how the random nature of DES can be set aside: once golfers, through several days of random training, are accustomed to the method, then non-random (but still intermittent) beeps might be employed. We could, say, beep all golfers in the tournament on the backswing on the first hole, beep them in the preparing-to-putt routine on the third hole, and so on. In that way, we could more efficiently aim at particular experiences—the backswing, the putt preparation—but only after we had trained our co-researcher subjects in the valuing of presupposition-free reports.

Second, we note that van Manen's use of the term 'experience' is much different from DES's 'pristine inner experience'. Van Manen holds that human science aims at understanding the meaning of human phenomena, whereas DES aims at the phenomena themselves. Therefore, when van Manen explores the "experience of being sick in bed" he is seeking to reveal the meaning or human significance of being sick in bed. One aspect that might reveal that significance is the pristine inner experience while being sick in bed—pristine experience might be what van Manen seeks below in his "(2) Describe the experience from the inside, ... the feelings, the mood, the emotions" and "(5) Attend to how the body feels, how things smell(ed), how they sound(ed)," but that is not unambiguously clear.

From the standpoint of DES, the pristine experience *of being* sick in bed is rare or nonexistent. Instead, there are many pristine inner experiences that occur *while* sick in bed: of the soreness while swallowing, of Bob Barker saying “Come on down!” on the TV game show, of the stale un-fizz of the ginger ale, and so on. We suspect that very few, if any, of the inner experiences that occur *while* sick in bed will be *of being* sick in bed.

Here are some suggestions for producing a lived-experience description:

(1) You need to describe the experience as you live(d) through it. Avoid as much as possible causal explanations, generalizations, or abstract interpretations. For example, it does not help to state what *caused* your illness, *why* you like swimming so much, or why you feel that children *tend to* like to play outdoors more than indoors. (van Manen, 1990, p. 64)

DES parallels van Manen’s suggestion (1) completely except for the size of the retrospection implied by the “(d)” in “live(d).” DES targets experiences that are immediately ongoing (or, technically, immediately retrospected, but that retrospection occurs while events remain in short term memory). Van Manen’s targets can require retrospection over years or more (as in his childhood play space example).

(2) Describe the experience from the inside, as it were; almost like a state of mind: the feelings, the mood, the emotions, etc. (van Manen, 1990, p. 64)

DES parallels van Manen’s suggestion (2) completely except that it excludes the subjunctives “as it were” and “almost like.” The at-the-present-moment nature of DES allows the simple description of experience from the inside, *period*.

(3) Focus on a particular example or incident of the object of experience: describe specific events, an adventure, a happening, a particular experience. (van Manen, 1990, p. 65)

DES is partially parallel, partially the reverse of van Manen's suggestion (3): As does van Manen, DES wants its subjects to "describe specific events, ... a happening, a particular experience." However, van Manen's practice asks for an experience that is *an example of* something, not for an experience itself. Thus the van Manen subject's report always has two focuses: the experience, and the thing that the experience is an example of. That's the reverse of DES. DES starts with a particular experience and tries to apprehend it faithfully, not because it is an example of something but because it *is*. From a series of such one-at-a-time apprehensions, it may be possible to extract a generality, of which the one-at-a-time apprehensions will *already have been* examples. Van Manen starts with an unquestionably-assumed-to-exist generality and *then* seeks particular experiences to instantiate it.

For example, we did *not* ask Steven to focus on a particular example of his imaginary argument. Had we done so, he would easily have complied—such narratives formed the basis of his presentation to his psychiatrist, to himself, to his friends. The focus on Steven's narrative would have exaggerated the frequency of his imaginary arguments. Furthermore, we did *not* ask Steven to focus on a particular example of his sensory awareness. Sensory awareness *emerged* as an important general feature of his experience. Sensory awareness could never have emerged by van Manen's procedure.

(4) Try to focus on an example of the experience which stands out for its vividness, or as it was the first time. (van Manen, 1990, p. 65)

DES is entirely contrary to van Manen's suggestion (4). DES is interested in the everyday, the recurrent, the mundane, whereas van Manen is interested in the atypically vivid. In our Steven example, focusing on particularly vivid examples seems likely to be a main contributor to his biased view of the frequency of his inner arguments.

Suggestions (3) and (4) provide the occasion to understand the DES bracketing of presuppositions. The DES investigators bracketed all presuppositions about Steven's inner arguments. That is, they did not presume that the arguments existed, nor that they did not exist. It is that bracketing that allowed us (and Steven!) to come to a clearer understanding of those phenomena.

(5) Attend to how the body feels, how things smell(ed), how they sound(ed), etc.

(van Manen, 1990, p. 65)

DES parallels van Manen's suggestion (5) with two important caveats: First, DES wants its subjects to attend to feelings *only if feelings are immediately present to be attended to*; to attend to smells *only if smells are immediately present to be attended to*; and so on. That is part of the bracketing of presuppositions about feelings, smells, sounds, and so on. Second, DES believes it prudent to be skeptical about the retrospection of feelings, smells, sounds, and so on. Recall that Steven was quite unaware that he attended to sensory aspects nearly all the time.

(6) Avoid trying to beautify your account with fancy phrases or flowery terminology. (van Manen, 1990, p. 65)

DES parallels van Manen's suggestion (6) completely.

It is important to realize that it is not of great concern whether a certain experience actually happened in exactly that way. We are less concerned with the

factual accuracy of an account than with the plausibility of an account—whether it is true to our living sense of it. (van Manen, 1990, p. 65)

DES could not be more contrary. It is of the *highest* importance to DES to ascertain “whether a certain experience actually happened in exactly that way,” and DES steadfastly eschews plausibility: plausibility is an enemy of the careful description of momentary experience. Steven’s inner argument accounts (as to his psychiatrist) were highly plausible and factually inaccurate. We do not think that a scientific account of experience can rest on plausibility.

## 2.2 Moustakas’s Human Science Research

As we did with van Manen, we will extract one passage from Moustakas’s (1994) *Phenomenological Research Methods* and use that as a second vantage point for clarifying the DES approach. We will comment on Moustakas’s passage paragraph by paragraph.

In deriving scientific evidence in phenomenological investigations, the researcher establishes and carries out a series of methods and procedures that satisfy the requirements of an organized, disciplined and systematic study. These include: (1) Discovering a topic and question rooted in autobiographical meanings and values, as well as involving social meanings and significance; (Moustakas, 1994, p. 103)

The DES position is contrary to Moustakas’s method/procedure (1). As discussed above with respect to van Manen’s introductory paragraph, DES does *not* in general discover a topic (such as “being sick in bed”) prior to an investigation; instead, it starts with randomly selected moments and allows a topic to emerge. DES does frequently start with a target group (such as bulimic women; Jones-Forrester, 2006), but the questions about those women’s experience

emerges from the collected data. That is, Jones-Forrester did *not* begin by asking a question such as “What is the experience of food for bulimic women?” Instead, her research question was open-beginninged: “What are the characteristics of the experience of bulimic women?” If the experience of food is indeed important for these women, it would emerge as important from the data.

Furthermore, DES believes that choosing a question “rooted in autobiographical meanings and values” is, at best, a double-edged sword. The autobiographical nature of such a project may provide energy to carry out the procedures, which is good, but such meanings and significances usually come laden with stubborn presuppositions, and the more meaning and significance, the more stubborn the presuppositions. Moustakas gives these examples of the desirable deeply rooted autobiographical significance: LaCourse (1990) studied the experience of time because “issues of time are prominent in my own life...I am in conflict with time. There is a lack of clarity within me as to the meaning of time in my life” (p. 7). Trumbull (1993) studied the experience of undergoing coronary artery bypass surgery because his uncle and his father had this surgical procedure. Moustakas believes that “in phenomenological research, the question grows out of an intense interest in a particular problem or topic. The researcher’s excitement and curiosity inspire the search. Personal history brings the core of the problem into focus” (Moustakas, 1994, p. 104).

By contrast, DES holds that such excitement, curiosity, and personal history may make the bracketing of presuppositions more difficult. For example, suppose that the investigator in the Steven example was drawn to explore Steven’s case because the investigator, like Steven (not!), had pervasive imaginary arguments. Such a pairing would have made it *more* difficult to arrive at a high fidelity apprehension of Steven’s experience.

- (2) Conducting a comprehensive review of the professional and research literature; (Moustakas, 1994, p. 103)

DES is orthogonal to Moustakas's method/procedure (2). Moustakas holds that before an investigation the investigator should assess the prior relevant studies and determine "what new knowledge he or she is seeking and expects to obtain" (Moustakas, 1994, p. 111). DES holds that the gaining of knowledge from the prior literature is important, but that gaining that knowledge appends a substantial bracketing-presuppositions burden: all seeking and expecting, whether acquired in the review of the literature or elsewhere, has to be bracketed in a DES investigation. Certainly eventually the DES results should be brought into contact with the relevant literature, but there is no necessity that that be done before the DES investigation is performed.

- (3) Constructing a set of criteria to locate appropriate co-researchers;
- (4) Providing co-researchers with instructions on the nature and purpose of the investigation, and developing an agreement that includes obtaining informed consent, insuring confidentiality, and delineating the responsibilities of the primary researcher and research participant, consistent with ethical principles of research; (Moustakas, 1994, p. 103)

DES is parallel to Moustakas's method/procedure 3 and 4.

- (5) Developing a set of questions or topics to guide the interview process; (Moustakas, 1994, p. 103)

[Questions that] facilitate the obtaining of rich, vital, substantive descriptions of the co-researcher's experience of the phenomenon [include]:

1. What dimensions, incidents and people intimately connected with the experience stand out for you?
2. How did the experience affect you? What changes do you associate with the experience?
3. How did the experience affect significant others in your life?
4. What feelings were generated by the experience?
5. What thoughts stood out for you?
6. What bodily changes or states were you aware of at the time?
7. Have you shared all that is significant with reference to the experience?

(Moustakas, 1994, p. 116)

DES is austere orthogonal to Moustakas's method/procedure (5). First, these questions reveal that the "experience" that Moustakas is questioning his subjects about is *not* pristine inner experience as we define it, not a phenomenon that presents itself at some particular moment in time. A phenomenon that presents itself to you cannot, for example, "3....affect significant others in your life."

Second, DES is skeptical of the subject's ability to answer some of these questions faithfully for reasons that we have discussed above. Question 2 requires that the subject understands her own causation (that she knows how an experience affects or changes her). Question 4 requires that the subject know that experience generates feelings (rather than, for example, that the feelings generate the experience). Questions 2, 4, 5, and 6 require that the retrospection risk can somehow be overcome.

By contrast, DES asks only the one question about inner experience that subjects can be expected, with some confidence, to have access to: “What was in your experience at the moment of the beep?”

(6) Conducting and recording a lengthy person-to-person interview that focuses on a bracketed topic and question. A follow-up interview may also be needed; (Moustakas, 1994, p104)

DES is partially parallel to Moustakas’s method/procedure (6). DES requires lengthy person-to-person interviews, but those interviews do not focus on a particular topic and question (other than “What was in your experience at the moment of the beep?”). Follow-up interviews are *always* necessary in the iterative sense described above.

(7) Organizing and analyzing the data to facilitate development of individual textural and structural descriptions, a composite textural description, a composite structural description, and a synthesis of textural and structural meanings and essences. (Moustakas, 1994, p104)

DES is orthogonal to Moustakas’s method/procedure (7). DES does not analyze texts; it does not pursue meanings or essences.

Thus there is substantial common ground between DES and van Manen’s hermeneutic phenomenological inquiry and between DES and Moustakas’s human science research method. However, there are also important differences. Substantial research remains to be done to work through which approach is appropriate in what situation.

### 3 Concluding Comments

Here we described a qualitative, minimally retrospective method, Descriptive Experience Sampling (DES), designed to provide faithful description of moments of actual pristine inner

experience. These moments can then be used to build, from the bottom up, descriptions of the characteristics of an individual's inner experience, and then, potentially, to describe the characteristics of the inner experience of groups of people. DES is well suited to explorations of inner experience because of its minimal retrospection, its open-beginning as well as open-ended nature, its focus on suspending presuppositions, its iterative nature (which allows subjects to become careful observers of their experience and researchers to develop facility in apprehending the subject's reports of her experience), and its focus on randomly chosen, precisely identified moments of experience which ideally tether both the subject and investigator to exploring a representative sample of concrete experiences.

DES has limitations. It focuses on brief moments of experience, which may preclude examination of the flow of thought. It cannot apprehend all that populates even brief moments of experience. The target of DES is what is readily available in awareness. Some nuances or more remote recesses of experience certainly elude subject and investigator alike and infrequent experiences may be missed. Additionally, despite the investigator's attempt to bracket presuppositions, there is always some degree of reactivity present. The reactivity to wearing the beeper itself typically becomes reasonably small after a day or so of sampling, but that can vary across subjects. Thus the inner experience apprehended by DES is, to some extent, neither complete nor pure.

DES is also only as good as its practitioner, and it may be difficult for an outsider to discern the level of skill any particular practitioner has brought to the endeavor. DES is best thought of as a collection of techniques facilitating faithful apprehension of inner experience, but merely claiming to be using DES does not ensure the faithful apprehension of inner experience. Along this line, DES is a time consuming method for both subject and researcher, and the level

of skill required for its proper implementation necessitates that most of the work cannot be done by relatively low-skill research assistants. This limits the feasible sample sizes of DES investigations. The time required of subjects also potentially impacts the representativeness of samples. Furthermore, the qualitative nature of the data gathered through DES makes the process of data reduction and drawing conclusions sometimes difficult and fraught with the potential for bias and errors of commission or omission.

The major question is whether DES is a useful tool in the armamentarium of those interested in understanding inner experience. We described above examples where DES seems to provide important perspectives: the very high frequency of multiple experience in bulimia is an unknown phenomenon in the bulimia literature; the hyperclarity of emotional experience in schizophrenia is similarly unexamined in the schizophrenia literature.

If one accepts that DES can potentially produce worthwhile reports of inner experience, it is useful to consider its proper role in the study of inner experience. One factor relevant to this question is the observation that DES is relatively difficult to do. Thus DES cannot be deployed on the same large scale as methods such as questionnaires. But then again, fMRI studies are difficult, too. Ultimately the effort involved in conducting this type of research is not a major obstacle if the field values basic observations such as those produced by DES. Our experience has been that those studying human consciousness have disproportionately valued theory testing over basic observation and subsequent description.

We think a suitable role for DES is similar to that of a scout in the army. Armies are well advised to deploy a few observers to reconnoiter the battlefield before deciding where to deploy their armored forces. Scouts use different equipment and operate according to different procedures from the armored forces. Similarly, we believe that the study of consciousness would

be well served by supporting the work of some observers who provide careful descriptions of phenomena and suggest possible directions for future research that can then be conducted on a larger scale using complementary methods.

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