

**Descriptive Experience Sampling, the Explicitation Interview, and Pristine  
Experience: In Response to Froese, Gould, & Seth**

**Russell T. Hurlburt**

**University of Nevada, Las Vegas**

I take the opportunity that Froese, Gould, and Seth (this issue) provide to clarify further (see the special issue of this journal, 2011 Volume *18* number 1) some aspects of Descriptive Experience Sampling (DES; Hurlburt, 1993, in press; Hurlburt & Akhter, 2006; Hurlburt & Heavey, 2006) by distinguishing DES from the Explicitation Interview (EI) method (e.g. Vermersch 2009; Petitmengin 2006; Petitmengin & Bitbol 2009); and to comment on Froese and colleagues' suggestion of the Double Blind Interview (DBI) as a way of evaluating DES, EI, and other methods.

**Pristine Inner Experience**

Here is a DES description. I choose this example because it is typical and at hand—I simply selected one from my most recent DES expositional interview<sup>1</sup>.

Sample 4.4 (7:46:03 pm). “Nathan” was sitting at the kitchen table looking at a magazine wristwatch advertisement. A few seconds before the beep, Nathan had been innerly saying to himself, “My dad has the same exact watch but nicer,” meaning that the advertised watch has a leather band whereas his father’s band is stainless steel. At the moment of the beep, he was thinking, now without words (an example of unsymbolized thinking, Hurlburt & Akhter, 2008; Hurlburt, in press) that his father’s watch was nicer (this wordless thought conveyed the

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<sup>1</sup> Conducted with Aadee Mizrachi.

“nicer” portion but not the “exact same” portion of the earlier inner speaking). Simultaneously he was seeing the wristwatch in the magazine, but the seen wristwatch had a stainless steel band (created, of course by his imagination but seen as if on the printed page). His mother was cooking, but he was not seeing or hearing her. The TV was on in the living room, but he was not seeing or hearing it.

By *pristine inner experience* DES means directly apprehended (“before the footlights of consciousness”) ongoing experience of actually existing people in their natural environments (Hurlburt, in press, 2011; Hurlburt & Akhter, 2006). Inner experiences include thoughts, feelings, tickles, seeings, hearing, and so on. Pristine inner experiences are naturally ongoing, before they are disturbed by any attempt at introspection, not manipulated or influenced by the investigator.

Thus DES aims at providing a high fidelity description of Nathan’s pristine inner experience at 7:46:03 as that experience existed undisturbed by the act of apprehending it. Of course it falls short of perfect non-disturbance, and the degree to which it falls short must be evaluated by science, as Froese and colleagues point out. DES is rather like parachuting blindfolded into a pristine forest; when you hit the ground, you take off the blindfold and radio back what you see. Of course the landing will disturb the forest somewhat, but much about pristine forests might be learned in that way.

DES accepts that there is a “welter” (Hurlburt & Schwitzgebel, 2011a; Hurlburt, in press) of energy fluctuations going on in Nathan’s outer and inner environments at 7:46:03 pm: sounds emanating from the mother’s cooking, the TV, rustling of magazine

pages, and so on; light being reflected from the magazine, table, walls, TV, and so on; pressure being applied to Nathan's back side by the chair, feet by the floor, neck by his collar, and so on; peristalsis, capillary contraction, and other olfactory, gustatory, proprioceptive, kinesthetic and so on energies far too numerous to enumerate.

DES observes that for whatever reason, most people most of the time select/choose/thematize/coalesce/attend-to/bring-directly-before-the-footlights-of-consciousness only one or a few aspects of the welter; those aspects are the pristine experiences. Nathan's pristine experience at 7:46:03 included the seeing the magazine-watch with its imaginarily substituted stainless steel band and thinking that his father's watch is nicer. The rest of the hundreds or thousands of processes in Nathan's welter are *not* part of Nathan's pristine experience at 7:46:03.

DES accepts that there may not be a bright-line distinction between what is and is not part of pristine experience. At 7:46:03, seeing the watch and thinking father's is nicer *was* pristine experience; peristalsis, the sensations in his left little toe, and so on *were not* pristine experience; the sounds from the TV and from his mother in the kitchen *maybe* were *a little* in pristine experience. As a practical matter, the distinction between a little experience and no experience is very difficult if not impossible to make, so DES excludes from its investigation aspects about which there is little or no experience (Hurlburt & Schwitzgebel, 2011a).<sup>2</sup>

Nathan's pristine experience is created by Nathan for Nathan in Nathan's way (Hurlburt, in press). That creating is not constrained by reality (there was no stainless steel band in his immediate vicinity); it may differ dramatically from one moment to the

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<sup>2</sup> That is a strategic maneuver—perhaps when the salient characteristics of pristine experience are well understood it will be appropriate to explore the little-or-no-experience aspects.

next; and it may differ dramatically from one person to the next (many people *never* imaginarily overlay something onto a real seeing). Furthermore, DES shows that people often do not know important characteristics of their own pristine experiences (Hurlburt, in press; Hurlburt & Heavey, 2006). If it had not been singled out by the random beep, Nathan's imaginarily-overlaid-seeing would likely have been quickly forgotten, disappearing like a dream on waking among the 20,000 other experiences that occurred to Nathan that day (that's a rough estimate assuming that a typical experience for Nathan lasts a few seconds, or  $20 \text{ per minute} \times 60 \text{ minutes} \times 16 \text{ hours}$ ).

Pristine experiences are thus directly before the footlights of consciousness but are quickly forgotten. DES is designed to produce faithful accounts of those experiences and nothing else. DES takes random samples of Nathan's pristine experiences in his own natural environments to obtain representative pristine experiences without being overwhelmed by 20,000 experiences per day. We find Nathan reading a magazine at the kitchen table because *that's a naturally occurring part of his everyday experience*. Furthermore, DES minimizes retrospection because pristine experience is quickly forgotten.

### **Terminology**

Some, like Froese and colleagues, apparently use the term "reflective consciousness" where I would use "pristine experience." I avoid using "reflective consciousness" because it implies things about the nature of consciousness that I neither endorse nor deny and because pristine experiences are not (or at least are not necessarily) bits of *consciousness*; they are *phenomena* that present themselves directly.

Some would prefer to drop the “inner” and call these phenomena simply “experiences,” on the grounds that the term “inner” favors phenomena such as thoughts and feelings over “external” phenomena such as seeings and hearings. However, the bare term “experience” is too broad, including such uses as “I profited greatly from my four years of experience as an engineer.”

All terms have advantages and disadvantages (Hurlburt & Schwitzgebel, 2007). Regardless of terminology, the aim of DES is to describe naturally occurring, directly apprehended, before-the-footlights-of-consciousness phenomena, either inner (thoughts, feelings, etc.) or outer (seeings, hearings, etc.). DES calls these “pristine inner experience,” or, when there is no ambiguity, “pristine experience” or “experience.”

### **Distinguishing DES from EI**

There are important distinctions between DES and EI, and because understanding those distinctions clarifies important issues in consciousness studies, I agree with Froese and colleagues that it is desirable to discuss them. Before turning to those distinctions, I make four preliminary comments.

First, characterizing the difference between DES and EI as a “dispute” is quite misleading, more or less like characterizing the difference between a hammer and a screwdriver as a dispute. Each has its range of convenience, and it is important to understand what that range of convenience is.

Second, Froese and colleagues imply that the aim of DES is to provide “increasingly refined verbal reports about *what it is like to be conscious*” (italics in the original). That is *not* the aim of DES, which is simply to describe in high fidelity pristine experience. The distinction between “reporting what it is like to be conscious” and

“describing pristine experience in high fidelity” is important. *What is it like to be conscious?* asks about an *essential* quality that extends across all moments of conscious existence. Answering that requires *abstracting away* every feature of your current experience *except possibly the one* (or a few) *feature(s)* that makes this moment conscious (if there is such a feature). That is, it requires you to attend to essentiality and turn away from particularity. By contrast, *Describe your pristine experience in high fidelity* asks you to stay in contact with the features of your directly-apprehended-at-this-one-particular-moment experience, asks you specifically to *avoid* abstracting, asks you specifically to *avoid* being influenced by distant moments, asks you specifically to *avoid* speculating about or being influenced by essentialities or generalities. That is, DES asks you to attend to particularity and turn away from essentiality. DES eventually accumulates several particular moments of pristine experience and allows their “salient characteristics” to emerge—for example, to note that Nathan’s experience frequently includes inner seeing. But that is not a statement about an essentiality of consciousness; it is a characterization of directly apprehended pristine experience.

Third, Froese and colleagues hold that the distinction between DES and EI rests on differing conceptions of consciousness: DES has a shallow conception of consciousness whereas EI has a deep conception. That mischaracterizes DES. DES explores pristine experience not because it thinks pristine experience exhausts consciousness but because it thinks (at this stage in the history of consciousness and psychological science) that the exploration of pristine experience holds great promise.

Farmers till only the topmost foot because that's how to feed the world, but they accept the existence of the rest of the lithosphere as well as the asthenosphere, mantle, and core of the earth.

Fourth, Hurlburt & Akhter (2006) discussed differences between EI and DES, so I will focus here only on those aspects that are made salient by Froese and colleagues.

Now to the main differences between DES and EI, of which I think there are two: their aims and their methods.

### **The Aim**

When Froese and colleagues write “The debate...centers on the following fundamental question: *Can past pre-reflectively lived experience be re-lived reflectively in the present?*” they imply, incorrectly, that both DES and EI have the same aim: to make the pre-reflective reflective. That is indeed the aim of EI:

Practising introspection is going into myself to find information which is largely invisible until I have brought it into reflective consciousness. (Vermersch 2009, p. 36)

That is, EI would aim at helping Nathan discover what was *not* directly experienced (was “invisible”) at 7:46:03 pm—it would aim at the *source* of the visible, try to help Nathan discover the “felt meaning,” the “source dimension,” that which is “below the threshold of awareness,” the “source where differentiated experience originates and takes on a meaning” (all phrases from Petitmengin, 2007).

However, that is *not* the aim of DES. DES might give the appearance of trying to make the invisible visible<sup>3</sup>, as when Petitmengin asks:

Is not it the function of the [DES] interview to lead the subject to become aware of dimensions which are not directly accessible, and that the beep is not sufficient to bring into awareness? (Petitmengin, 2011, ref???)

I answer No: the DES aim is to make the *visible* visible, that is, to apprehend the visible with sufficient fidelity and endurance to be useful to science.

At 7:46:03 pm, Nathan was seeing the wristwatch-with-overlaid-imaginary-band and thinking that his father's watch was nicer. Those were manifestly, unambiguously "visible" in Vermersch's sense—there was *nothing* "pre-reflective," hidden, or invisible about either aspect. Without the beep they might soon be forgotten, so DES aims only at extending the ability to describe the already ongoingly directly experienced.

In sum, in Vermersch's terminology, DES aims to make the visible rememberable; EI aims to make the invisible visible.

## **The Method**

*Everyday/unusual.* DES aims at pristine experience; therefore it selects everyday experiences to investigate, using a random beeper to select the experience to be examined to ensure that no special characteristic will be sought. Thus we examined Nathan's magazine thumbing/seeing a composite wristwatch/thinking his father's is nicer not because his magazine thumbing or composite-seeing had special a priori interest for us, but because a dispassionately random beep chose it.

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<sup>3</sup> Here, following Vermersch (2009), "visible" means "directly experienced," not merely "visually seen."

By contrast, EI typically aims at some particular kind of event or experience; therefore the essence of the EI method is to select special events. For example, Petitmengin-Peugeot (1999) aimed at the experience of intuition. Therefore she asked subjects to recall some particular (and presumably rare) occasion when intuition prominently occurred.

In sum, DES aims at the randomly selected everyday; EI aims at the premeditatedly selected special.

***Undisturbed/evoked.*** DES aims at pristine experience; therefore it attempts to apprehend experience exactly as it was in its undisturbed (“pristine”) state. That is, DES seeks *to minimize disturbing* the ongoing experience in its apprehension of it.

By contrast, EI explicitly and repeatedly aims at (“evokes”) its target event with the intent of integrating the pre-reflective or unrecognized experience more and more fully on each evocation. That is, EI attempts *to alter* experience to produce a richer apprehension. For example, if Nathan’s 7:46:03 pm experience were subjected to an EI interview, the interview would likely systematically evoke the smells in the kitchen, the sound of the TV, the feel of the magazine, and so on, in the expectation that those details would help Nathan gain a fuller appreciation of the felt meaning of the composite image and the my-father’s-is-nicer thought.

In sum, DES tries to leave experiences as they are; EI tries to flesh them out.

***Apprehend/re-enact.*** DES aims at apprehending pristine experience in high fidelity; therefore it (iteratively) trains subjects, *before* the experience occurs, to be skilled apprehenders of their experience, and it keeps as short as possible the interval between the pristine experience and the commitment to the description thereof.

By contrast, EI trains subjects to re-enact, in the explicitation interview, experiences that took place in the (possibly distant) past. (Froese and colleagues refer to this re-enactment as “re-living,” as did Petitmengin in earlier writings, e.g., Petitmengin, 2006). For example,

You did not voluntarily memorize the first thought you had when you woke up this morning. But this information is still available. You can turn yourself toward this moment, and make this information reappear. And to do that, it is quite probable that there would be no other way for you than returning in thought to your bed at the moment when you awoke, recalling what you were seeing at that moment, the birds singing or the alarm clock going off, and the position of your body. These sensorial triggers may then allow the emergence into awareness, by itself, of your first thought of the morning. (Petitmengin, 2011, ref???)

This view that the memory of a thought can subsequently be retrieved is an instantiation of the storage/retrieval metaphor for memory, which is, “in both cognitive science and folk psychology, the dominant metaphor for memory” (Schwitzgebel, in Hurlburt & Schwitzgebel, 2011c, ref???). However, I think (Hurlburt & Akhter, 2006), as does Schwitzgebel (2011c), that that metaphor is substantially misleading. Your first thought of the morning probably does *not* exist as a memory that can be retrieved, whether by evocation or any other means. Instead, what seems to be a retrieved memory is more properly a reconstruction based on inferences, schemata, background beliefs, and presuppositions (Hurlburt & Schwitzgebel, 2011c). To “re-enact” the morning’s first thought, taking into consideration the birds, alarm, body position, and so on, is, I fear, to

invite the elaboration of those inferences, schemata, background beliefs, and presuppositions.

Therefore I think there is *no reliable way at all* for you to retrieve your first thought of this morning, unless you were prepared, skilled, and ready to apprehend it as it was immediately occurring.

Petitmengin (2011) correctly points out that DES subjects engage in something like evocation when they try, during the DES expositional interview, to recall what was ongoing at the moment of the beep. That is most evident on the first or second sampling day before the iterative training has had its effect. I further accept, as Petitmengin (2011) points out, that some evocation might occur even in skilled subjects even as they jot down notes immediately after the beep. However, DES tries to minimize the effects of that evocation by advising subjects against it and, granting that subjects might engage in it anyway, keeping the interval between the pristine experience and such evocation as short as possible so that the immediate experience, not reconstructions thereof, can drive the evocation.

In sum, DES tries to *minimize* evocation whereas EI tries to *maximize* evocation. The practical differences between maximization and minimization can be important. For example, aerodynamic drag occurs on all vehicles traveling through the air. The attempt to minimize drag (among other considerations) results in an F-22; the attempt to maximize drag results in a parachute.

***Other.*** Other important methodological differences between DES and EI are discussed in Hurlburt & Akhter (2006); for a discussion of these features of DES see Hurlburt (in press) and Hurlburt & Heavey (2006):

- DES minimizes retrospection. By contrast, EI does not take a particular stand on retrospection. It accepts that short retrospections are desirable, and uses them when convenient, but finds it adequate to investigate experiences that occurred years ago.
- DES relentlessly pursues moments of experience and finds that moments of experience typically have durations of a few seconds. By contrast, the occurrences that EI investigates may have durations of minutes or longer.
- DES holds that explorations of pristine experience must be iterative (Hurlburt, 2009, 2011, in press), refreshed by ever new experience as the subject's apprehensional skill improves. EI relies mainly on repetition within sessions as an aid toward evoking a deeper reflective consciousness, but because those repetitions return again and again to the original event, they are not iterative in the DES refreshed-by-new-encounters-with-pristine-experience sense. EI also values repetition across sessions, but that is not an essential feature.
- DES relentlessly attempts to bracket presuppositions at each step of its process (Hurlburt, in press; Hurlburt & Heavey, 2006; Hurlburt & Schwitzgebel, 2007, 2011c): it uses a random beep, not the investigator's or subject's presuppositions about what is important, to choose the moment to be investigated; it uses an open-beginning procedure (Hurlburt & Akhter, 2006; Hurlburt & Schwitzgebel, 2006); and so on. EI also values the bracketing of presuppositions (Petitmengin, 2011) but not as centrally as does DES (Hurlburt & Akhter, 2006).<sup>4</sup>

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<sup>4</sup> Petitmengin holds that the bracketing of presuppositions is as central to EI as to DES (personal communication, November, 2010). However, I think that EI does not relentlessly bracket presuppositions in important phases of its investigations (Hurlburt & Akhter, 2006; Hurlburt & Schwitzgebel, 2011c). For example, Petitmengin-Peugeot's (1999) investigation of intuition began, I

## **Discussion**

This comparison of DES and EI highlights the differences between the two methods, but there are substantial similarities, particularly in the skills and sensitivities of the interviewers.

The importance of the differences in aim and methodology between DES and EI depends on the situation. For example, in some situations the DES centrality of the bracketing of presuppositions may not be important: pristine experience and presuppositions do, after all, come from the same bag of bones and neurons, and one might be able to learn something about that bag from either pristine experience or presuppositions. But in other situations, the bracketing of presuppositions is vital (as it turned out to be in Hurlburt and Jones-Forrester's (in press) study of bulimic women).

I think it may be difficult if not impossible to specify in advance which procedure would be more effective in which situation—it would be the function of a mature science to develop a range of procedures, apply them to a diversity of situations, and discover which is more likely to deliver the desired result. Consciousness science is a long way from that maturity.

### **Double Blind Interview**

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think, with the presupposition that the experience of intuition would be the similar across a variety of disparate events that are labeled “intuition” (the unexpected emergence of an idea, the solution to a problem, a scientific breakthrough, a psychotherapeutic insight, a creative/artistic intuition, etc.). DES tries to mitigate such risks by insisting that investigations be open-beginninged. And as we saw above, I fear that EI's within-session repetitive evocations invite the elaboration of presuppositions. DES mitigates this risk by insisting on beginning each iteration with new pristine experiences apprehended on new occasions.

Froese and colleagues hold that the descriptions generated using DES, EI, or other methods<sup>5</sup> need somehow to be verified. I wholeheartedly agree (Hurlburt, in press ch. 21; Hurlburt & Schwitzgebel, 2007, 2011b). I accept that most introspective claims have not withstood the test of time and therefore need to be held to a high validation standard.

Froese and colleagues propose the Double Blind Interview (DBI) as “a first step toward an objective measure of [the] fidelity” of DES, EI, or other methods, and whereas their motivation seems laudable, their suggestion of the DBI seems problematic for six overlapping reasons.

First, DES aims at pristine experience, but the 50 ms tachistoscopic display of the DBI may inhibit or prevent pristine experience. It is likely that Nathan, for example, *could not* produce a superimposition of an imaginary seeing onto a real seeing within 50 ms of the original seeing. It is therefore likely that the DBI tachistoscopic procedure would *prevent* Nathan from engaging in at least some of his customary kinds of pristine experience.

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<sup>5</sup> Froese and colleagues refer to DES as a “second person” method, but it is better thought of as a “first person plural” method (Hurlburt & Akhter, 2006). The distinction carried by those terms is important because referring to DES as a second person method substantially under-appreciates the iterativity essential to DES.

In a second-person method, the investigator instructs the subject (*you* should do this...); then the subject reports to the investigator (I report to *you* what I found). In DES, subject and investigator work together (first person plural), iteratively improving their joint ability (*we* investigate...) to apprehend the subject’s experience.

I accept that the DES *first sampling day* is a second-person procedure, but DES *discards* first-sampling-day reports because they (like one-shot reports or multi-day reports without truly iterative involvement) are usually distorted or obliterated by a variety of presuppositions, distractions, and so on. However, the iterative procedure creates a first-person-plural joint investigative procedure in the ashes of the initial second-person procedure. For example, Nathan’s reports on his first sampling day suggested that he was nearly always innerly talking to himself. However, subsequent (iteratively improved) sampling suggested that inner speech did *not* typify Nathan’s inner experience, suggested that his first-day reports were almost entirely based on the (commonly held but untrue) presupposition that everyone talks to himself all the time.

DES is a first-person-plural endeavor despite the fact that the experience presents itself only to the subject. A bomber has two crew members: only the bombardier sees the target while the pilot flies the plane. But bomb delivery is *not* by the bombardier only—it is jointly effected by pilot and bombardier.

Second, DES aims at pristine—that is, naturally occurring—experience, but the DBI situation is highly unnatural. Nathan produced his superimposition of imaginary on actual seeing because he is highly skilled and practiced at experiencing the natural, everyday world of magazines, wristwatches, fathers, and so on. By contrast, Nathan has no prior experience viewing a tachistoscopically presented rectangular array of letters, so there is little reason to believe that Nathan would create in this situation an inner experience of the kind he typically creates.

Third, pristine experience is created by the person him or herself out of the welter of already ongoing natural processes. At 7:46:03 Nathan creates the seeing the magazine and the superimposition of the stainless steel band out of a lush welter of potential ingredients—TV, mother in kitchen, magazine text, collar pressure, stomach contraction, and so on, including some that are not directly present (the stainless steel band, for example). By contrast, the DBI tachistoscopic display is specifically designed to *eliminate* as much as possible the welter, so that the tachistoscopically presented array of letters, and *only* that array, is available to Nathan. That prevents Nathan's natural interests or proclivities from choosing among or combining a welter of options—it's the array of letters or nothing.

Fourth, Nathan's inner experience is a skill, highly practiced in his own natural situations over every minute of his waking life (Hurlburt, in press). He is interested in magazines and wristwatches at least in part because he has developed the skill of seeing real things and overlaying imaginary things. By contrast, Nathan probably has little or no inner experiential skill of dealing with tachistoscopically presented arrays of letters. It is

sometimes argued that the multiple presentations of arrays allow for skill to be acquired, but a few hours of skill building is not comparable to a lifetime of skill acquisition.

Fifth, pristine experience is entirely meaningful for the person at the moment that it occurs, but the DBI display is meaningless. Nathan sees a printed watch with an imaginary band because, for whatever reason, he is interested in/connected to/concerned about/finds meaningful at that moment watches and watchbands (Hurlburt, in press). By contrast, the array of letters is expressly designed to be *meaningless*.

Sixth, DES aims at describing a few important salient details, whereas the DBI tries to consider as many trivial details as possible. DES specifically denies the desirability of trying to capture all the details of the beeped experience (Hurlburt & Schwitzgebel, 2011a).

For those reasons, it seems to me that the DBI would not likely be useful as a tool to validate DES.

### **Validating and Calibrating**

Even though I think the DBI is a false start, Froese and colleagues are correct to grapple with the problem of the skill required for performing DES investigations. I think it likely that most people who will say “I’m doing DES” will *not* be doing it very well, and science will have to figure out what to do about that (Hurlburt, in press). It is possible that that fact will be enough to render DES scientifically useless, but that would be unfortunate: if it is possible for *some few* investigators to apprehend pristine experience in high fidelity, but their deliverances get drowned out in the noise created by the unskilled, that will imply that pristine experience does exist, that it is possible to apprehend it, but that science will ignore it anyway.

I think Froese and colleagues blur the distinctions among (a) validating a method (concluding, for example, that DES produces accurate descriptions), (b) certifying an investigator (concluding, for example, that *X* is a skilled DES investigator), and (c) validating some particular DES result.

(a) I think that it is *impossible* to validate the DES method. DES is only as good as its practitioner, so DES can no more be validated than a Stradivarius can be validated. A Stradivarius can be capable of producing beautiful tone, but that does not mean it will be played skillfully.

(b) I think it may be possible in a limited way to certify that an investigator has some basic skill level. An earlier draft of the Froese, Gould, & Seth paper proposed that it might be possible to ascertain a basic level of skill by watching interviewer behavior; I agree and I'll recast and extend their ideas here. It is possible to watch an interviewer at work and ascertain whether she moves unerringly toward the moment of the beep (a quite difficult task), attends to pristine experience, does not attend to theory or generality, understands subjunctification and draws appropriate inferences from it (Hurlburt, in press; Hurlburt & Heavey, 2006), distinguishes among known features of pristine experience when they occur (inner speech, inner seeing, unsymbolized thinking (Hurlburt & Akhter, 2008), sensory awareness (Hurlburt, Heavey, & Bensaheb, 2009), and so on), does not impose her own concepts, skillfully levels the playing field where it needs to be leveled (as about inner speech on Nathan's first day), and so on (Hurlburt, in press). I think those aspects are directly observable with a fairly high reliability, and they are, I think, highly correlated with the ability to apprehend pristine experience with fidelity. You can do a very good job of judging the beauty of violinists' tone by viewing

videotapes of their playing *even with the volume turned off* because the dexterity with which they handle the bow, the unerring and repeatable placement of fingers on strings, the visual beauty of the vibrato movement, and so on, are highly correlated with tone production (Hurlburt, in press). So I think it is possible to judge reliably (not perfectly) the fidelity with which a DES investigator is likely to be able to apprehend a subject's experience, even with absolutely no access to that subject's experience.

However, if that were incorporated into a formal certification process, that process is likely soon to be undermined by politics, economics, guild issues, and so on. Furthermore, even effective certification is no guarantee that some particular deliverance of DES is actually on target: *X* might be a certified very good DES investigator in most situations, but in *some* particular situation, because of presuppositions or some extraneous influence, *X* might be substandard. Therefore whether certification is desirable or profitable from the standpoint of science remains to be seen.

(c) I think that it is possible and highly desirable to validate the particular results of DES or EI. For example, Jones-Forrester and I (Hurlburt & Jones-Forrester, in press) have used DES to replicate the earlier DES work by Doucette and me (Doucette & Hurlburt, 1993) and concluded that women with bulimia nervosa frequently have fragmented inner experience. That kind of conclusion can and should be tested in a variety of non-DES ways. Science has to decide who should perform such validation studies; I think science should firewall away the phenomenological investigators from the validators (Hurlburt, in press; Hurlburt & Akhter, 2008) both because the phenomenological and validation skill sets are (or should be) substantially different and

because the urge to validate makes the bracketing of presuppositions more difficult. I applaud Froese and colleagues' attempt to begin to sort such things out.

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**Author Note**

Correspondence:

R.T. Hurlburt: russ@unlv.nevada.edu.

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