

## TRANSCRIPT WITH COMMENTARY

### *A Case of Face Blindness*

#### Sadie Interview 'minus 1':

#### Initial Contact

Below in black is a word-for-word transcript of the February 8 interview with Sadie. The video starting at 21:39 is available on YouTube at <https://youtu.be/WCeCgVZA9I0> (there is no recording of the first 21 minutes). In green are comments about and explanations of the Descriptive Experience Sampling process. If you have corrections, suggestions, or questions, please post them as YouTube comments.

RTH = Russ Hurlburt

Sadie = Sadie Dingfelder

On February 6, Sadie Dingfelder sent Russ Hurlburt (whom she had never met) this email:

Dr. Hurlburt,

Last year, I found out that I am faceblind, which is sort of surprising for a reporter. The Washington Post story I wrote about that experience ended up being wildly popular and I've been asked to write a book proposal that explores current research on my other brain quirks, and reflects on how these forces may have invisibly shaped my life. In addition to prosopagnosia, I can't visualize anything (aphantasia), I have no inner monologue (that I'm consciously aware of), and I have a very limited memory of my own life (SDAM?).

I read a bunch of your papers, and downloaded an app that asks me what I'm thinking at random few times a day -- and so far, it's mostly snippets of pop songs and spacing out (unsymbolized thought?).

Do you have time to chat with me about the different modalities for thought, and more generally about how interest in other people's inner experiences seems to have exploded recently? If so, please let me know when you might be free for a videochat. (I use Google Meet because its auto transcription feature makes my life so much easier.)

Also, please consider me for any studies you have coming up -- especially ones that triangulate reports of inner experience with more objective measures! I am great in an fMRI machine,

Thank you!

Sadie Dingfelder

After a few backs and forths regarding scheduling, they agreed to meet by video on February 8. This is a record of that first meeting.

## Notes:

- We call this interview “minus 1,” because DES calls the pre-sampling meeting (where the operation of the beeper is explained, etc.) “interview 0.” That way the first actual DES interview can be called “interview 1.”
- **There is no audio/video until 21:39 into the interview.** The transcript up to 21:39 is a cleaned-up version of a Google-Meet automatic transcript.
- The first 6:44 of the meeting was spent working out audio/microphone difficulties. We omit that part of the transcript.

Sadie has a series of question prepared for this interview, and proceeds to ask them.

06:44 Sadie: Yes, well thank you for figuring it [the microphone issues] out. Google Meet is so nice for me because it automatically transcribes things so I don't have to try to type everything you're saying at the same time or do it later. But don't worry. This is really just for me. Right now, I'm really just sort of trying to gather information. [RTH: Okay.] And also I'm trying to convince people to sign me up for their studies. But anyway, what did you say? Sorry.

07:18 RTH: I said “okay.” I don't think I had anything more particularly to say than that.

## The history of DES

07:24 Sadie: Okay, thank you. Um thank you so much for talking with me by the way. So okay, so DES is such a cool concept and I was wondering how you came up with that idea. What made you think to do it? Like, did beepers [inaudible] anything to use a buzzer, a beeper?

07:44 RTH: Well, it's that's a fairly long story and it goes back a long way. I was, in a previous lifetime, an engineer, but while working as an engineer I was interested in people. I guess I wanted to know what people were like, and, and I thought I should interrupt people. Well, actually, while I was working as an engineer, I read an article (I think in *Fortune Magazine*, maybe, but I haven't really tracked it down so I don't know. This was a long time ago and so my memory is probably fallible). But I read an article about (if you really want to know about it) an article written by an executive for executives. And he was saying if you want to be a good executive, what you really need to know is how you spend your time, so you should have your secretary look in on you every half hour and write down what you're doing. And then you should look at that after a while and decide what, of all that you do, what do you *like* to do? And where are you adding value? And what could you delegate? And I thought, well, that was a good idea, but it shouldn't be every half an hour, and it shouldn't be your secretary and it shouldn't be about what you were doing. It should be about what you were thinking about, because that's what I was interested in the time.

So what, what was needed in 1968ish, I thought, is a way of interrupting somebody at random times, and asking them what they were thinking about. But in the 60s, there was no way to do that, but that was sort of what my interest was.

So then I left being an engineer to be a trumpet player. Then I left being a trumpet player to become a psychology graduate student. And on my way in the truck moving to graduate school it occurred to me how I could make a beeper.

So I invented the beeper in the truck on my way to the University of South Dakota. And when I got to the University of South Dakota, the director of clinical training said, "Russ, well nice to meet you. What is it that you want to do here?" And I said, "Well, I want to randomly sample thoughts, and I figured out how to do that in the truck on the way here." And he said, "Well, that's a good idea, but I don't believe that you can do that; that's not possible." And I said, "Well, I think it's actually possible." And he said, "Well, then, go for it. We'll, we'll see what happens."

So it turned out that what I had figured out in the truck actually worked, and within a few months of arriving at my PhD program I had built a beeper. This was 1973, and beepers didn't exist until the advent of the first Motorola pager. I don't know whether you're old enough to remember what a Motorola pager looked like, but they (I believe) we're invented or became available in about 1978 (something like five years after I had built a beeper). So I built a beeper and patented in it and I've been using it more or less ever since (I've updated it a little bit).

### The beeper

10:56 Sadie: So you don't use a commercially available beeper? You use your own?

11:00 RTH: That's correct. I do have an app.

11:05 Sadie: I downloaded it and have been using it. IPromptU.

11:08 RTH: IPromptU.

11:10 Sadie: Yeah. Yeah.

11:12 RTH: I hardly ever use that app because I don't think it's good enough. So I use a beeper. I guess I've got one around here somewhere if you want to see a beeper. But...

11:23 Sadie: I've seen pictures.

11:25 RTH: Okay.

11:25 Sadie: I even set the iPromptU tone to the same, to the right tone.

11:34 RTH: Well, well that's, that's almost as good as you can do. There are better ways, but they're a little bit harder. But here's what a good beeper has to be. It has to be a beep that means one thing and one thing only. So there's no question about it. That's why you downloaded the 700 hz beep, and that's good.

And the signal has to have a rapid rise time, so that it has to be nothing and then suddenly it has to be something. The iPromptU beep is good as far as that's concerned.

And then the beep has to come from a device that has absolutely unambiguous meaning for you. So the beep can't come from your phone very well because if it comes from your phone, you, you will have to say something to yourself something like, "rather than answer my phone, the way I usually do, this is the high priority beep and I've gotta respond to that." But that screws things up pretty badly, actually, because if

you're thinking about what it is that you should do, then that wipes out what it was actually going on.

So I use a beeper, not iPromptU. Also, I forget exactly how iPromptU actually works, but I think it first puts an alert up onto the screen, doesn't it, that says "what are you thinking?"

13:09 Sadie: It might, but I'm never looking at my phone so I always just get the beep.

13:18 RTH: Well, the moral to the story is that if you really want to pay attention to what's going on in your experience, you have to recognize that inner experience is evanescent, short lived. So whatever happens in inner experience, it's easily disturbable. What you're thinking about now, what's passing through the footlights of your consciousness at this particular moment, might be very, very different from what's going through the footlights of your consciousness a half a second or a quarter a second later, and maybe particularly so if it's interrupted by some device that's saying, "Hey, wait a minute, what's going on?" So, you have to be a little careful about what the signal is like.

### Thinking in words?

14:05 Sadie: Yeah, and I thought it was interesting in one of your papers that you wrote that you think inner speech might be over-represented. Do you think like there's something like people just automatically kind of translate those like fleeting experiences we don't maybe have words for into language, and then they experience it as speech? Or, like, why do you think inner speech might be reported more frequently than it actually happens?

14:31 RTH: So I think there's a couple of reasons for that. One is, when you ask yourself, *what am I thinking about right now?* (which is the way most of what I call 'armchair introspection' takes place), you're asking yourself a question in words. And so you have primed or invoked or whatever (however you'd like to conceptualize it) your verbal system, and then you go look and see what was there. Not surprisingly, you find verbal characteristics.

And I think (for whatever reason) that society has come to think of thinking as being a verbal kind of a deal, maybe from the philosophical tradition of some number of Millennia, but so, when people think, well, it must, I must have been thinking in words. But I've never really spent too much time trying to explain *why*. I am pretty confident that there *are* a whole lot of people out there who are pretty sure that they think in words *all the time* and don't, and *maybe almost never* think in words and yet, they believe that they think in words. I think that is a totally common phenomenon.

15:41 Sadie: That is so interesting. And so I was curious, was that guy--what's his name? Maybe Russell or something. Oh no! I mean Ryan. Like how did he and what was his dominant mode of thinking? Was it words like he thought? Was he excited or surprised to learn about other ones?

15:41 **Comment:** Sadie is inquiring about Ryan Langdon; see part 2 of this series.

16:02 RTH: He was surprised about the characteristics of his inner experience, but at this moment I can't remember what they were. He did have some, some verbal inner speech but by no means did it dominate. Maybe 10 or 15% of his experiences, but I'd have to go back and look and see what it was. But it was not predominantly verbal.

16:25 Sadie: Interesting. Um,

16:27 RTH: So, most people are, to some degree, mistaken about the characteristics of their inner experience. And most people are quite confident about the characteristics of their experience, but that doesn't make them right about it.

### How DES works

16:39 Sadie: Yeah. So how do you help people in a general way? How do you help people to focus in on what they were actually doing at the moment of that beep? Or what their brain was doing? Or their mind, I guess?

16:54 RTH: Well, in a way it's a totally simple thing. If you're a subject in my research, I give you a beeper and I send you out into your natural environment, doing whatever it is that you're naturally doing. When it beeps, I ask you to pay attention to what's going on with you, what's in your footlights of your consciousness at the moment of the beep. And get a half a dozen beeps like that. And then we'll get back together and we'll talk about them, and you'll explain to me what was going on in at the moment of the beep, except that you probably won't be explaining what's going on at the moment of the beep. You'll be telling me about your *history*, or you'll be telling me about your *favorite stuff*, or whatever.

There'll be a lot of stuff that you might be saying that wouldn't actually be your experience at the moment of the beep. And in the conversation that we would have, that would become more or less evident to you because I would be saying, "Well, y'know, that's interesting, what your mother said back in the day (or whatever you're telling me about), but that's not really in your experience at the moment of the beep. Or is it? Is it in your experience at the moment of the beep?" And you'd say, "Well, it's not really there. That's the context." And I'd say, "Well, let's try to keep a clear distinction between context and actual experience, and I would like us to focus on your experience."

And so on the first day, you're not likely to be very good at focusing on your experience, but on the second day, you're likely to be somewhat better at it because you will have made, or we will have made together, a distinction between context and experience, and between explanation and experience, and between presuppositions and experience, and between all the other things and experience. And you'll start to get better at some point at apprehending what is actually in your experience. And we'll do that over some number of days, and after a while, usually after two or three or four days, you get to be sort of good at it.

And eventually you would say, "Oh! Well, now when the beep occurs I'm no longer shocked by it. I'm able to grasp what was what was going on and jot down some notes and tell you about it."

So it's really simple in the sense that all I do is ask you, "What was in your experience at the moment of the beep?" And then together we clarify what was and

was not in experience. And then as we do that, we get better at it. And that's really all there is to it.

Except that it's almost not possible for one person to do it by himself. So you asked me in your email, how you can, how you can learn to do this. And the answer is, it's hard to learn on your own how to do it. Because whatever presuppositions you have about your own inner experiences are likely to translate into your learning how to look at your own inner experience. And so you end up looking at your own presuppositions unless you have a relatively unbiased external observer to help you along the way.

19:51 Sadie: Yeah. Yeah, definitely. Have you noticed that people have sort of a dominant mode of thinking? Or like one or two that they always use? Or do people usually see from all the options?

We should video this conversation

20:07 RTH: So let me answer that question, but before I do that, so is Google recording this? Both audio and video?

20:16 Sadie: Just the words. Yeah, do you want me to turn it off?

20:20 RTH: No. I'm gonna turn on a video, which I should have done at the beginning.

20:27 Sadie: Oh, cool. I'm gonna be on your website.

20:31 RTH: I'm gonna turn on a video and then what we do with that, with any video that I ever make of you, will belong to you.

20:40 Sadie: Thanks.

20:59 RTH: Now, my, now I can't turn my microphone on. I had this problem once before, too. Testing, testing. Okay, so now can you hear me?

21:29 Sadie: Yes.

21:30 RTH: Okay, good. And my computer can hear me, too. It's two for two!

21:33 Sadie: Great.

21:33 [Comment: The audio/video starts at this point in the interview. See https://youtu.be/WCeCgVZA9I0](https://youtu.be/WCeCgVZA9I0)

21:39 RTH: Alright. So I should have done this [start the video] in advance here, but so ask me that question, again and we'll...

Do people have a dominant mode of experience?

21:45 Sadie: It was like, do people um like have a consistent sort of favorite modality for thinking? Or do they kind of sample from all the options? And also I'm curious if certain types of thought are maybe more useful for certain types of situations.

22:00 RTH: So, the answer to the first is that there are big individual differences. So, so people are very different from each other, and *don't know* that they're different from each other. And they don't know the characteristics of their own experience. And some people are, are always in one mode. So I have people who are always visual imagery. Every time, every time the beep goes off, there's a visual image going on. And, and sometimes they knew that there was a visual imagery. I've had people who had said at the outset, "I've read about your visual, people with visual imagery, and that sounds really cool to me but I never have it." And then when we sample with them, we find that they have it all the time.

22:39 Sadie: Oh!

22:39 RTH: And, and the other way around, too. People will come and say, "Well, I'm a visual imagery, imager." And I'd say, "That's interesting. We'll get a chance to see what visual imagery looks like for you." And then they don't have any visual imagery at all. So, so people, people just don't know. But the answer to your question is that there are some people who are visual imagers mostly all the time. And other people who are, really are inner speakers pretty much all the time. And then there are other people who are a lot of stuff. They're just sometimes visual imagery, sometimes inner speech, and y'know, whatever.

And the second half of your question: Is there some kinds of inner experience that's better in some kinds of situations? And I think the answer to that is Yes, at least in part. So if you're gonna try to remember a telephone number, you're probably better off to do that in, in words, most people do that, saying to themselves "702..." or whatever. And, but, y'know, if you were, if you were highly skilled visual imager, imager, you might be one who could see the telephone number. But that would be relatively rare, rarer, I would say.

23:47 Sadie: Or if you're trying like to get a mattress through a door, like if you could image that, I imagine that probably be helpful. [Sadie laughs]

23:55 RTH: Maybe.

### Why don't people know their own experience?

23:57 Sadie: Um, I think it's so interesting that people don't know their own thoughts. Like if I think that I'm not an imager, like I think I can't summon up images. Um how could that be, how could it possibly be that I am wrong, if I'm immersed in my own experience all the time?

24:22 RTH: So that's a great question and, and I think it is, the answer is that when you reflect on your, in your inner experience, when you look back on your inner experience and say, "Well, do I ever engage in...?" That's a special, that's a very special kind of mental task that you're setting for yourself. You're putting yourself into an introspective mode. And

when you're in the introspective mode, then maybe you don't have any images, images. And so when you're in the... *And*, and you make the mistake, like which is a common mistake, of thinking, "Well, when I'm in the introspective mode, that's just like all the time, I'm like that all the time." But it's not really, it's not *necessarily* the case.

25:06 Sadie: Right.

25:06 RTH: So when you're *not* in the introspective mode, you might be visualizing all over the place! But then when you look, think back about it then you might not at all. So it's, so what you have to do is you have to, you have to try to get at inner experience *without being in the introspective mode*. That's really the, the challenge of all inner-experience philosophy is just how do you do that? And the answer is, you can't do it perfectly. And, and the best I've been able to do it is by delivering a beep, which is a pretty good signal for most people, not, not all people, but most people; the beep... And, and *they* say that, that "when the beep comes, it was easy for me to grasp what was going on with my..." And, and the science sort of bears that out. Y'know we, there's, there are memories, short-term memories that last a second or so, something like that. And so if you can get into the introspective mode in less than a second, then you can probably find out what mostly what was there.

26:11 Sadie: Yeah, and I can.

26:13 RTH: You won't.... Go ahead.

26:14 Sadie: Oh, I was just thinking like and I bet also when you, you don't automatically remember the *way* that you're thinking. All you ever maybe remember is or focus on is like *what* you were thinking, like what the conclusion was.

26:27 RTH: That's it. That's exactly right. You're interested in what you're interested in, not in, you're not interested in how it happened to appear to you.

### Unsymbolized thinking

26:37 Sadie: Yeah. Let's see. What I don't. I'm looking at my questions. [consults her notes] Oh, yes. How is unsymbolized thought different from just spacing out, because I think that's my dominant mode.

26:55 RTH: So unsymbolized thought is a technical term from my point of view and, and it's not at all anywhere close to just spacing out. What I call unsymbolized thought is a, it's a specific thought but it doesn't have... and so at the moment of the beep you would recognize, I am in fact, thinking at this particular moment and, and it would be exactly, you would know exactly what it is that you were, you were thinking about. So you could be thinking, *well, should I have a hot dog for lunch or should I have a hamburger for lunch?* And I know exactly that I'm trying to decide whether I should have a hamburger or hot dog, but I don't have, there's no word "hamburger" and there's no words "hot dog." And there's no picture of a hamburger and there's no picture of a hot dog. I have... And yet there's no question about it that I am thoughtfully thinking, directly-before-the-footlights-of-my-consciousness thinking something that *if I put it into words*



would be, “should I have a hot dog or hamburger?” But yet there no words. So it’s, it’s... Unsymbolized thinking is every bit as specific as an, as a worded thought. So it’s *not* spacing out by any means. It’s just thinking about something that doesn’t happen to use words.

### What words mean

28:08 Sadie: Up. So would you accept like “nothing” for an answer for a beep?

28:12 RTH: Absolutely. Absolutely. And then we would have a conversation about, “Well, what exactly do you mean by “nothing”?” Because “nothing” could ... “nothing” means a lot of different things to a lot of different people. “Nothing” could be, well, I’m just not thinking about anything *important*.

28:29 Sadie: Mmm.

28:33 RTH: And other, and for other people, “nothing” means there is *absolutely nothing* going on in front of the footlights of my consciousness—I’m just moving through the world with no.... Nothing is registering.” And, y’know, the same *word* applies, but you have to figure out what it means. So when I, we were talking about how you do DES, and I said it’s very simple: all you do is you ask people what they were what was going on them and then have a conversation about it. That, that’s actually true. *But* you have to be skilled enough to recognize that what people mean, by whatever words they use, doesn’t necessarily... well, you have to, you have to figure out what people mean by whatever words they use.

29:17 Sadie: Yeah, I’ve... communication is so much harder than people think it is. [laughs]

29:23 RTH: Yep, that’s exactly right.

### Unworded inner speech

29:25 Sadie: Um, have what are the, like... (I feel like I should be able to answer this question but I can’t remember.) Well, actually, what is the difference between unworded inner speech? How is that different from conceptual thinking?

29:45 RTH: So by unworded inner speech, do you mean? Do you mean that literally? “Unworded inner speech”?

29:52 Sadie: Yeah.

29:53 RTH: Or do you mean “unsymbolized thinking”?

29:57 Sadie: Oh, I meant literally that because it was that’s what it said in your paper.

30:01 RTH: Okay, so you meant “unworded inner speech.”

30:03 Sadie: Yeah. How’s that different from, from conceptual...

30:12 RTH: So let's, let's first off, let's establish what I mean by "unworded inner speech," and see whether we're in agreement with about the same thing. So, most people, when they engage in inner speaking, will be able to tell you, "This is what I was saying, and these are the exact words. And, and it had inflection, it went up for, if it was a question mark, it went up at the end, and if I stutter maybe I stuttered in my inner speech, too." So they can tell you the characteristics of the of the inner speech. And *sometimes* people will say, "Well, I was, I was saying something to myself *but there was a word missing.*" So, the *gist* of it was this, but the middle of the sentence, like the word was just missing. So I was saying to myself, "Should I have a hot dog or hamburger" except this time I'm actually saying that in inner speech. Except that the word "hot dog" wasn't there. And so what I was actually saying, what I was *actually* saying was, "Should I have a \_\_\_\_ or a hot, or a hamburger?" [corrects his mistake] "Should I have a \_\_\_\_\_ or a hamburger?" Rhythmically, there was a space for it, what I call a "hole," there was a hole in the, *h-o-l-* e hole in the sentence, but the word wasn't there. So that's what I would call *partially* unworded speech. [Sadie: Okay.] But there's, it also sometimes happens, not very often but, but sometimes happens where somebody will, I was, will believably report / describe "I was innerly speaking and yet there were no words at all. Everything was holes." So, so it's like partially unworded speech taken to the entire, entirety. And that's what I call unworded inner speaking. So I experienced myself as *speaking* and yet there aren't any words.

So the difference between that and unsymbolized thinking is that in unsymbolized thinking there was *no* experience of *speaking*, there was just an experience of *thinking*.

32:04 Sadie: Yeah. That makes sense.

32:07 RTH: So now, so now we have to try to answer your question about what, what *conceptual thinking* is. Well, we'd have to figure out exactly what you mean by that. That's not a technical term of mine. So, so if you meant by unsymbolized thinking, the difference between, the difference between unsymbolized thinking and unworded inner speaking is that in unsymbolized thinking there is no experience of *speaking*.

And then what, what conceptualization (and what some people think of as deep thought or something like that) that that's not necessarily worded at all and it's not necessarily unsymbolized at all. I think your whole body, whatever, is engaged in that kind of process. And so, when you're trying to, trying to solve some problem for yourself and later on the, the answer appears to you. Well, how you got from, how you got from here to there is not, I don't think we actually know much about that. For sure *I* don't know much about it.

33:11 Sadie: It seems to require taking walks for me. Um,

33:16 RTH: There are a lot of people for whom that is true. And, and there are... I'm reading a paper right now where the theorist is saying it's, taking a walk is just exactly what you need to do to reunite the body with the mind.

33:33 Sadie: Oh.

33:34 RTH: I'm not I'm not so sure that I think that's necessary. But I like to take walks too, so maybe.

### All experience is just like mine

33:42 Sadie: I thought that it was really kind of funny how... I don't know if this was your paper but probably was how all the like famous philosophers and scientists tended to just assume that everyone has the same experience as them, inner experiences as them. Like Socrates or someone was like, "There's no thinking without symbols!" And then someone else was like, "there's no thinking without words, and symbols are garbage!" Or y'know images. Um, why do you think like we all assume that everyone else's inner experience is the same as ours?

34:18 RTH: Well *that* question (I think) is sort of easy, and the answer to that (I think) is sort of easy. And that is that in in the course of *your* life (we could, we could do a calculation here maybe a couple of seconds per inner experience and however many years old you are and multiply that out and, and we would come out with some number, let's say a couple hundred thousand inner experiences that you have encountered in your life)...

34:41 Sadie: Um hmm.

34:42 RTH: ...and, and every single inner experience that you have ever encountered has some characteristics in common, and so you would assume that well, I've seen a whole lot of inner experiences--I've seen hundreds of thousands of inner experiences and they're all this way. And therefore, that must be the way inner experience is. And you fail to take into consideration that all the inner experiences that you ever encountered happened to be *from you*. And, and most people don't do, don't recognize the, the logical necessity of getting outside themselves.

35:19 Sadie: Um, so...

35:21 RTH: So it's not just the philosophers who think everybody is like them. Every—almost everybody thinks that everybody is like them.

### A metaphor for DES?

35:27 Sadie: [laughs] So, if you came up with a metaphor for DES, like, what would it be? Like you are turning up the lights really fast and trying to glimpse something, I guess.

35:39 RTH: Well, *yes*. So, so James was right, you can't turn up the lights really fast. But James was, James, James was turning up the *gas*, y'know, he was, he was writing when, when there was no such thing as a beeper. You couldn't, you could not possibly do a beeper. So now, the beeper is has a much faster rise time than the jet, gas jets of James's time. So that so that's an advantage for us.

But, but it's, it's certainly is not an adequate advantage. So, so we're certainly, if you were a subject in my research, you, we would we would not be capturing your experience as it actually occurs. We would be capturing your experience as you retrospect it from one quarter of a second later. So, it would be a retrospective account.

And there's no way to be sure about what that retrospective act does to your inner experiences. No doubt it does something, and maybe something pretty dramatic. We really don't know.

So, the metaphor that I would use instead of turning up the gas (because I'm, I'm on board with, I'm great with James), I think turning, I think retrospective, retrospection *does* screw things up and screw things up in the sense that, y'know... I, I never get a chance to see what I call your pristine experience as it actually is. I'm gonna, I'm gonna screw up your pristine experience. You're gonna screw up your pristine experience in the telling of it to me. So I accept that. So the metaphor that I would use in this regard is: it's like parachuting into a forest. I can parachute into a pristine forest and when the parachute comes down, the animals are just gonna run, run away. And I'm not in... It's because they're gonna have seen the parachute up there and whatever. But not *all* the animals are gonna run away, and not all of them are gonna be able to run away by the time I get into the trees. And the *trees* aren't gonna be able to run away. So I'm gonna, by parachuting into a pristine forest, I'm gonna be able to say *something* about what's in the pristine forest, even though I might not be able to say *everything* about what's in the pristine forest.

### The future

37:53 Sadie: Do you think in the future we might have an even better technology for peeking into people's minds.

38:02 RTH: Probably. I think, I think we're still a long way away from there, and because I think, I think the inner experiences are totally complex things, and it's pretty hard to get at it from the outside. So we can hook a lot of electrodes on your on your head and whatever. But I've been around long enough and made enough errant predictions about technology. 20 years from now, I think, maybe or 100 years from now the world could be a different place.

38:45 Sadie: So is there (Um, there probably is), but is there is there like converging evidence like from scanners like fMRI or EEG or um, for the for like, your findings with people?

39:01 RTH: I have done one, one fMRI study, a very small study, and it does, in, in my estimation it says, well I knew what I was talking about when I was, when I was doing the sampling in the first place. But it's not totally obvious, and it was a small sample, and there's a lot of reasons to criticize that study. I do think that *that* kind of evidence *will* happen. I'm confident that we'll be able to do more and more of that. But the hard part is not so much the fMRI. We've got, there are, y'know, 100,000 fMRI machines out there. But there aren't, there's hardly anybody--you can count on your fingers of one hand, basically--people who are really trying to, to get at inner experience as it actually occurs, in what I would call high fidelity. That's a rare occurrence.

### The past

39:59 Sadie: I'm kind of surprised it hasn't taken off, like...

40:02 RTH: Me too.

40:04 Sadie: [laughs] Did... But on the other hand, maybe I'm not because there's such a, what's the word, like a taboo against even *thinking* about inner experience in psych, in the world of psychology for so long! Like you probably wouldn't even have done it if you weren't kind of an outsider when you joined the area.

40:24 RTH: I think I think that's probably, I think that's probably true. But I have thought from the very beginning... When I wrote my first book, which is in 1990 or something like that, that I thought, "Well y'know, the world is, world is about to change because this book is out there. People will read this and say, 'Obviously you gotta do that!'" But it hasn't happened. And it, and it, I, y'know, there's lots of socio-, social-psychology reasons why that is. But, but it seems to me so obviously something that people should be interested in that I would have thought that there would be a long line of people at my door trying to get into my studies. But that isn't really the case.

41:07 Sadie: Yeah, I've been wondering, I feel like there's been a bit of a shift recently. Maybe because the internet has allowed like sort of minority groups of people, or people with maybe like unusual experiences like face-blind people, to find each other and, and sort of talk about their experiences. Like I thought that might be part of why it's taking off. And also the other part of it being that we can get a little bit of objective data with scanners these days.

### The work required

41:38 RTH: So I think you're right, I think there is more interest now than there has been. So when I started this work, which is in 1973 (I built my first beeper in 1973), the, I was way, well out on the outer fringes and now I'm more or less in the center of the world. So the world, and I don't think it's that I've changed much. I think the world has changed somewhat. But the... And, and I do think it the reasons that you gave are part of it. But, but even now people don't, aren't willing to do the work that is required. So you, you say, well, people who are face-blind can get together and trade stories about being face-blind, but, but this, but I would say, skeptic that I am, I would say you've gotta be... You cannot believe... There's *no reason* to believe that what *you* would call face-blind is the same thing as somebody else would call face-blind, and that your inner experience is the same as somebody else's. And there's no reason to believe that you would, that you and somebody else could figure that out by chatting about it. You need to be, you need to be substantially careful about it and, and then you might, then you might find something pretty interesting if you do that.

43:05 Sadie: Yeah, definitely. I think it's all, it's a little bit of a like a gross effect like that everyone can agree on. Like all the people who are non-imagers, y'know, are like "I always thought counting sheep was a metaphor." And all the face-blind people are like "my friend cut her hair and I couldn't find her!" And, but like the way they get to that problem could be different for everyone. Or different, there could be a couple category different ways, I guess.

## Description vs. metaphor

43:35 RTH: So let me give you a couple of examples of why you shouldn't believe anybody that tells you about their inner experience. And so, so it turns out that, that people experience feelings. And that's not too surprising because people are talking about feelings all the time. But, but when somebody says... when, when somebody reports about their feelings "I was feeling this," it turns out that the actual inner experience--as best I can figure out, and I've been pretty careful about it--that there's a lot of different things that come up in the feeling business.

So: there are some people who say "I feel in, in my heart that X or whatever," and what *they* mean by that is "I feel it in my [gestures to his chest] maybe not in the physical organ but where the physical organ is--in here. That, that's what, that's what it means to say "I feel it in my heart." And somebody else would say, "I feel it in my heart," and they mean something entirely mental, that has no physical referent at all. And what *they* mean by that is metaphorical: "I mean, I mean, this, I, I experience this very deeply." And, and when two people who are talking to each other say "I feel it in my heart," and the other guy says, "Well, I feel it in my heart, too," *they don't ever know* that their experience that they're describing is different from the other. They *believe* (it goes back to what we were talking about everybody thinks everybody else is like them) so if I'm the kind of guy who feels it in my heart really, really, in my body, and *you* say, "Well, I feel it in my heart," well I think you're talking about your physical body. And if you're the kind of person who feels it mentally and I say, "I feel it in my heart," well then you think you're, I'm describing the same thing that you're describing.

45:20 Sadie: Right.

45:21 RTH: And it's, and it's quite difficult to tease those things apart. I think it's *possible* (I've spent my career trying to do it) but, but I think that it's, it's quite differ, difficult.

And another example is that people use the word "think." And you and they think they think they mean they mean the same thing. So when I said I was thinking about this and you say I was thinking about that, I think that you think that you're thinking like I'm thinking and you think that I'm thinking just like you're thinking. But it's not the case. People use the word *think*—when they're describing their own processes—they use the word *think* to mean whatever is their most frequent mode, most frequent mode of inner experience. So if I'm an imager, a visual imager most of the time, when I say, "*I think* about something," I, what I really mean is "I was seeing a visual image." And if you're a feeler most of the time, so you spend most of your time engaged in emotional things, then you will say *I think*. And when you say *I think*, you mean "Well, I was really feeling it." And when somebody else is engaged in inner speech frequently, and then when they say, "Well, I was thinking about something," they mean "I was saying it to myself." And nobody knows the difference. Everybody says *I think* and then they believe that everybody else understands what they mean. It's not true.

46:49 Sadie: Yeah, it's funny because I mean, I remember, of course, I think this happens to every kid at some point. They're like, what if the red I'm seeing isn't the same red that someone else is seeing? And we've all just learned to call it the same word, y'know? And that actually is the problem with every, every conceptual word.

47:09 RTH: Whether it's, it *is* the case that some people when they say when they're angry, they say "I see, I was seeing red!" they mean that absolutely descriptively. That the beep happens right then and they've got a red, it's red! Stop, stop-sign red.

47:28 Sadie: Wow!

47:28 RTH: And other people who say "I was seeing red," they mean that entirely metaphorically. They, "I see, I was seeing red" has entered the language as a way of describing more or less extreme anger....

47:40 Sadie: Yeah.

47:40 RTH: ...and, and they will say, I was seeing red in that and there's no, there's no red feature to their experience at all. And the same with *blue* and, and other characteristics. Some people say "I was thinking in the back of my head" and *they mean* it was back here [points to the back of his skull]. And other people, when they say "I was thinking in the back of my head," they mean "well, I just wasn't really paying too much attention."

### People don't know

48:04 Sadie: Yeah. So when you go and speak do conferences, do you just open with like "None of you know what you're thinking or what anyone else is thinking"?

48:13 RTH: Yeah, basically. [Sadie laughs] Maybe I don't open with it, but it's gonna come out, pretty, pretty soon.

48:21 Sadie: So, who is doing this research that I can pester, because I really would like to find out what I'm thinking.

48:29 RTH: Well, there, the, the DES kind of research, I would say, the only people who are doing it are people in my lab. There's... Unfortunately I haven't been able to sell the ideas too widely, which is also surprising to me. But so if you want to do it, if you want to do it my way, you're gonna have to with me. [Sadie gestures excited applause] And I would, I would say well maybe we should do that. And so we *could* decide that you could be a subject like Ryan and Lena in the Ryan and Lena things and, and I think that would be interesting. So from my point, so from my point of, so from my point of view this would be something like, well, here's someone that I don't know from Adam who, who wrote to me and says "I got face-blindness," and whatever other characteristics you said you had.

49:16 Sadie: Yeah.

49:16 RTH: And I said, "well let's let's hook you up and see, see what's going on." And we, and we could do it in the, in the same way that we did it with Lena and Ryan, which would be, we could roll them out on YouTube, sort of as we go. The reason that I, the reason that I did that that way with Lena and Ryan is that people very often accuse me of cherry picking my data or whatever and reporting only the things that appeal to my sensibilities. And I don't think that's true, but, y'know, I can say, "well, I don't do that!"

and somebody can say, “well, I don’t believe you.” And so, the Lena and Ryan experiment was something like, well, I’ll, I’ll videotape them and I’ll provide the transcripts of them and I’ll put them out there as they happen and, and then you can figure that out.

50:11 Sadie: I wonder if Ryan ever wrote a blog post where he was like, “I thought I thought and words all the time, but it turns out I think in these other ways.”

50:20 RTH: He wrote a blog post something like that. What I think, what... You can look up his blog posts and for yourself and see what you think he said. But most, I would say most people, they go, they go through phases which is like “I didn’t know that I did that.” And now I know that I did that and that’s a *shock* to me. My inner experience is sort of shocking to me.” And then a little bit later it’s “well, I knew that all along.” [Sadie: Oh, wow!] And, and it’s, it wasn’t really, it wasn’t really true. But, but the fact, the fact is that it’s very hard to remember what it was like when you were different, y’know.

51:05 Sadie: Yeah.

51:05 RTH: So if you, if you learn something about yourself, after a while, it, it seems like you’ve known that all along.

51:14 Sadie: Yeah.

51:14 RTH: And that’s true for me too. I’m so I’m not being externally critical. [Sadie: Yeah.] I mean, I, I, everything that I’ve ever written about, about inner experience, it always seems like I’ve known this all along. And yet I can go back and read what I wrote 20 years ago and, and I can see well, apparently, I didn’t think that *then*! But it, but I don’t remember not thinking that, y’know. Like, I have evidence that I wasn’t thinking that, but it seems like I always thought that.

### Sadie characterizes her inner experience

51:40 Sadie: [laughs] Well. [inaudible] it seems like I can summon up the faintest of mental images. So I can’t imagine that I would use that modality for thinking very often. Whenever I sample myself or y’know with the app so far, I’m always just singing a song and, let’s see, so occasionally fragment I get fragments of monologue, of words. But mostly it’s music and let’s see... What are the other options? Oh! um,

52:18 RTH: Feeling, unsymbolized thinking, ...

52:20 Sadie: Yeah, I don’t know. I don’t have a great prediction on that. I probably have a lot of feelings. Probably some unsymbolized thinking. Yeah, probably some of that. But I don’t think I have much inner monologue and I don’t think I have *any* visualization.

52:20 Comment: Spoiler alert—Sadie’s sampling will show that she will turn out to be right on three of those four predictions and substantially wrong on the other one.

52:35 RTH: Any what?



52:37 Sadie: Visualization.

52:38 RTH: Oh, visualization.

52:39 Sadie: Yeah. So it would be so exciting if I was wrong. [laughs]

### Face-blindness and DES

52:47 RTH: Well, the, the ground rules of the interchange, as far as I'm concerned, would, would be, we, let's just try to be honest with each other. Because it's, y'know, it would be interesting no matter how it comes out, as long as, as long as it's more or less high fidelity (as good as we can do in high fidelity). Then it *is* gonna be interesting, because if y'know, if it turns out that you've got a screen that covers everybody's face, [gestures with his hand in front of his face] so you never, you never can see anybody's face and that's what, that's why you're face-blind, well, that would be totally fascinating to find. And it would be, but it would be equally fascinating to find that you don't really have anything like face blindness, that it's, that's a figment of your imagination. And that would be that would be interesting to find, too. Either way is totally interesting.

53:38 Sadie: Yeah, no. It's really. I'm onboard. I'm an empiricist and a journalist. But I did get diagnosed by the Harvard [inaudible] a team from Harvard Medical School. So I'm not just self-diagnosed. Actually, I didn't think I was that face-blind at all. I thought I was kind of bad with faces. And then it turns out I'm atrocious, like I'm one of the worst people. But I've just been faking it kind of poorly my whole life, and the person I mostly convinced was just myself. [laughs]

54:10 RTH: Well, so that would, that would be interesting. So if you've got a Harvard, a Harvard diagnosis of face blindness, then, then we will then we'll have an *n* of one study of what it looks like from the inside, is best DES can figure it out.

54:27 Sadie: Yeah. Cool. You better read my story about face-blindness. It was nuts. I like, it was so crazy. Anyway...

54:34 RTH: So you broke up a little bit, so read your what?

54:38 Sadie: Oh, I'm like please read my story or if you don't have the time, listen to *The Washington Post* podcast.

54:44 RTH: I, I saw your, your 2019 maybe *Washington Post* story about prosopagnosia.

54:51 Sadie: Yeah. Yeah.

### Should Sadie do DES?

54:53 RTH: Well, that, so that would, y'know, from my point of view that would be the kind of thing that is, that is interesting. And I would think that the, the people who follow me on my website at which there are a couple hundred, would find that interesting. There that

y'know we can refer them to your "this is what you said back in 2019" about what, what you were, and, and this is what the Harvard people say about what you are, and we'll see what DES has to say about that.

55:26 Sadie: Awesome. We'll eventually triangulate me. [laughs]

55:31 RTH: Right. So if you're, you're game...

55:34 Sadie: Um, yes.

55:38 RTH: Alright, then I should send you a beeper.

55:41 Sadie: Yay!

55:42 RTH: There are there are ways to get around without a beeper but, but the beeper is enough that I think we should, we should, we should use it. The beeper's a good enough tool, enough better...Sorry?

55:57 Sadie: And, oh, I just said my cell phone's glitchy.

56:02 RTH: Yeah, well everything, everything is glitchy, including my beepers but, but they're still, it's still better than any of the alternatives that I know of. So, why don't you email me your address to send you a beeper...

56:17 Sadie: Okay.

56:18 RTH: ...and, and I guess the first thing, the first thing is that after we hang up here you should think about this as to really whether you want to do it or not. And so it's not my force of personality that is somehow coercing, coercing you across the airwaves that...

56:35 Sadie: I think I coerced you, but cool. [laughs]

### DES ground rules

56:40 RTH: And, and I would say, part of the ground rules should be either one of us should be able to, to resist that coercion at any at any time. If I decide, "Oh, hell, now that I really met this woman, I don't have anything to do with it." I should be able to do that. And you should be able to do the same thing at any, at *any* point...

56:57 Sadie: Okay.

56:58 RTH: ...and, y'know, We'll take a step. And I'll send you a beeper and hook you up for, for a session. And then you can say, well, now that I've seen what's actually going on, I don't, I don't want the world to know *that*. Or I don't want *Hurlburt* to know that for sure. And

57:17 Sadie: Oh no!

- 57:18 RTH: Whatever! You should, you should have the right to, with no prejudice, send me back the beeper and we'll say, "That's, that was..."
- 57:26 Sadie: If it turns out like my mind is just wall to wall, like murdering puppies. Um, would do I have the option to be like, "please don't post that one?"
- 57:35 RTH: Yes! [Sadie: Okay! (laughs)] Yes. Your world is your, your inner world is *absolutely* private. There are few things in this in the universe nowadays that are absolutely private. But your inner experience is one of them. And, and I, I have no interest at all in, in making public what you would prefer to keep private [inaudible].
- 57:59 Sadie: Cool.
- 58:00 RTH: So, so we will work that, we will work out the murdering puppies scenarios as they go. Most people don't think about murdering puppies and, and so then and they don't care but and, and other people who do think about murdering puppies end up thinking, well, it's all right with, with them, if, if we make that public because, y'know, it's just a *thought* about murdering puppies. Or whatever. But the, but we should, we should respect your, and I, and I *will* respect your privacy. And, and so the, the agreement that I had with Lena and with Ryan and with you, I would have would be: So we'll talk. Well, I'll give, I'll send you the beeper, and we'll figure out how to make the beeper work. We'll videotape everything that we do, so that everything, so everybody knows what we're doing. And, and then we'll have that first interview, and I will send you a video of the first interview before I post it on YouTube. So what I'll, what I'll really do is I'll post it as an unlisted YouTube video and, and then you can think about whether you really want that kind of a record to be available. And if you say no, then I will, I'll take it down. And, and if you say yes, I might even give you sort of two cracks at this so that you get a chance to see what it, what it's really like, and then, and then we'll start releasing them one week behind what we actually do. So that you can... And, and all of those things will be your property in the sense of if you if you say, I want you to destroy those things, I will do that.
- 59:45 Sadie: Okay, I doubt it, though. I mean there's a nothing we could do would be more embarrassing than things that are already on YouTube.
- 59:55 RTH: And I think that's probably true, but
- 59:59 Sadie: Cool. Well, it's been so fun chatting with you. I can't wait to get the beeper. I will send you my address and...
- 1:00:05 RTH: Alright. So when, when you get the beeper, then what we'll do is we'll have another conversation like this about the instructions of the beeper, how to use the beeper. So when you get the beeper, let me know and we'll schedule another, another time, which I think probably we will, I will, I would prefer to do by Skype. Are you a Skype person?
- 1:00:25 Sadie: Yeah, I can Skype. That's great.

1:00:27 RTH: Okay, Skype. The Skype videos, the best video recording that I've been able to figure out is Skype. So so, let's Skype when, when that happens and so, so maybe a week. Where are you located?

1:00:44 Sadie: I'm in Washington DC. Where are you?

1:00:47 RTH: Las Vegas.

1:00:48 Sadie: Oh wow. My husband's family's... no wait no never mind I got Las Vegas confused with Los Angeles for a second.

1:01:01 RTH: Easy, easy to do! Alright, so you're gonna, you'll email me your address. I will send you a beeper. And, and then a week or so, down the road, we will have another conversation by Skype about how to use the beeper and what, what actually you're gonna do. And then some days after that, we'll do it. And, and I might invite a student of mine to participate. Is that alright with you? [Sadie: Absolutely.] If so I'll probably ask Alek, the same Alek who's in the Ryan and Lena [videos], just because it's good for everybody to have a little, little honesty and keep a little honesty involved.

1:01:47 Sadie: Yeah, great.

1:01:48 RTH: All right. All right. Well, it'll be interesting.

1:01:53 Sadie: Yeah, thank you so much.

1:01:55 RTH: All right, my pleasure.

1:01:57 Sadie: Bye.