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The Mind's I

Hofstadter, D. & Dennett, D. (1981)

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Where Am I?

Now that I've won my suit under the Freedom of Information Act, I am at liberty to reveal for the first time a curious episode in my life that may be of interest not only to those engaged in research in the philosophy of mind, artificial intelligence, and neuroscience but also to the general public.

Several years ago I was approached by Pentagon officials who asked me to volunteer for a highly dangerous and secret mission. In collaboration with NASA and Howard Hughes, the Department of Defense was spending billions to develop a Supersonic Tunneling Underground Device, or STUD. It was supposed to tunnel through the earth's core at great speed and deliver a specially designed atomic warhead "right up the Red's missile silos," as one of the Pentagon brass put it.

The problem was that in an early test they had succeeded in lodging a warhead about a mile deep under Tulsa, Oklahoma, and they wanted me to retrieve it for them. "Why me?" I asked. Well, the mission involved some pioneering applications of current brain research, and they had heard of my interest in brains and of course my Faustian curiosity and great courage and so forth. . . . Well, how could I refuse? The difficulty that brought the Pentagon to my door was that the device I'd been asked to recover was fiercely radioactive, in a new way. According to monitoring instruments, something about the nature of the device and its complex

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interactions with pockets of material deep in the earth had produced radiation that could cause severe abnormalities in certain tissues of the brain. No way had been found to shield the brain from these deadly rays, which were apparently harmless to other tissues and organs of the body. So it had been decided that the person sent to recover the device should *leave his brain behind*. It would be kept in a safe place where it could execute its normal control functions by elaborate radio links. Would I submit to a surgical procedure that would completely remove my brain, which would then be placed in a life-support system at the Manned Spacecraft Center in Houston? Each input and output pathway, as it was severed, would be restored by a pair of microminiaturized radio transceivers, one attached precisely to the brain, the other to the nerve stumps in the empty cranium. No information would be lost, all the connectivity would be preserved. At first I was a bit reluctant. Would it really work? The Houston brain surgeons encouraged me. "Think of it," they said, "as a mere *stretching* of the nerves. If your brain were just moved over an *inch* in your skull, that would not alter or impair your mind. We're simply going to make the nerves indefinitely elastic by splicing radio links into them."

I was shown around the life-support lab in Houston and saw the sparking new vat in which my brain would be placed, were I to agree. I met the large and brilliant support team of neurologists, hematologists, biophysicists, and electrical engineers, and after several days of discussions and demonstrations, I agreed to give it a try. I was subjected to an enormous array of blood tests, brain scans, experiments, interviews, and the like. They took down my autobiography at great length, recorded tedious lists of my beliefs, hopes, fears, and tastes. They even listed my favorite stereo recordings and gave me a crash session of psychoanalysis.

The day for surgery arrived at last and of course I was anesthetized and remember nothing of the operation itself. When I came out of anesthesia, I opened my eyes, looked around, and asked the inevitable, the traditional, the lamentably hackneyed postoperative question: "Where am I?" The nurse smiled down at me. "You're in Houston," she said, and I reflected that this still had a good chance of being the truth one way or another. She handed me a mirror. Sure enough, there were the tiny antennae poking up through their titanium ports cemented into my skull.

"I gather the operation was a success," I said. "I want to go see my brain." They led me (I was a bit dizzy and unsteady) down a long corridor and into the life-support lab. A cheer went up from the assembled support team, and I responded with what I hoped was a jaunty salute. Still feeling lightheaded, I was helped over to the life-support vat. I peered through the glass. There, floating in what looked like ginger ale, was undeniably a human brain, though it was almost covered with printed

circuit chips, plastic tubules, electrodes, and other paraphernalia. "Is that mine?" I asked. "Hit the output transmitter switch there on the side of the vat and see for yourself," the project director replied. I moved the switch to OFF, and immediately slumped, groggy and nauseated, into the arms of the technicians, one of whom kindly restored the switch to its ON position. While I recovered my equilibrium and composure, I thought to myself: "Well, here I am sitting on a folding chair, staring through a piece of plate glass at my own brain. . . . But wait," I said to myself, "shouldn't I have thought, 'Here I am, suspended in a bubbling fluid, being stared at by my own eyes?'" I tried to think this latter thought. I tried to project it into the tank, offering it hopefully to my brain, but I failed to carry off the exercise with any conviction. I tried again. "Here am I, Daniel Dennett, suspended in a bubbling fluid, being stared at by my own eyes." No, it just didn't work. Most puzzling and confusing. Being a philosopher or firm physicalist conviction, I believed unswervingly that the tokening of my thoughts was occurring somewhere in my brain: yet, when I thought "Here I am," where the thought occurred to me was *here*, outside the vat where I, Dennett, was standing staring at my brain.

I tried and tried to think myself into the vat, but to no avail. I tried to build up to the task by doing mental exercises. I thought to myself "The sun is shining *over there*," five times in rapid succession, each time mentally ostending a different place: in order, the sunlit corner of the lab, the visible front lawn of the hospital, Houston, Mars, and Jupiter. I found I had little difficulty in getting my "there"'s to hop all over the celestial map with their proper references. I could loft a "there" in an instant through the farthest reaches of space, and then aim the next "there" with pinpoint accuracy at the upper left quadrant of a freckle on my arm. Why was I having such trouble with "here"? "Here in Houston" worked well enough, and so did "here in the lab," and even "here in this part of the lab," but "here in the vat" always seemed merely an unmeant mental mouthing. I tried closing my eyes while thinking it. This seemed to help but still I couldn't manage to pull it off, except perhaps for a fleeting instant. I couldn't be sure. The discovery that I couldn't be sure was also unsettling. How did I know *where* I meant by "here" when I thought "here"? Could I *think* I meant one place when in fact I meant another? I didn't see how that could be admitted without untying the few bonds of intimacy between a person and his own mental life that had survived the onslaught of the brain scientists and philosophers, the physicalists and behaviorists. Perhaps I was incorrigible about where I *meant* when I said "here." But in my present circumstances it seemed that either I was doomed by sheer force of mental habit to thinking systematically false indexical thoughts, or where a person is (and hence where his thoughts

are tokened for purposes of semantic analysis) is not necessarily where his brain, the physical seat of his soul, resides. Nagged by confusion, I attempted to orient myself by falling back on a favorite philosopher's ploy. I began naming things.

"Yorick," I said aloud to my brain, "you are my brain. The rest of my body, seated in this chair, I dub 'Hamlet.'" So here we all are: Yorick's my brain, Hamlet's my body, and I am Dennett. *Now*, where am I? And when I think "where am I?" where's that thought tokened? Is it tokened in my brain, lounging about in the vat, or right here between my ears where it *seems* to be tokened? Or nowhere? Its *temporal* coordinates give me no trouble; must it not have spatial coordinates as well? I began making a list of the alternatives.

1. *Where Hamlet goes, there goes Dennett.* This principle was easily refuted by appeal to the familiar brain-transplant thought experiments so enjoyed by philosophers. If Tom and Dick switch brains, Tom is the fellow with Dick's former body—just ask him; he'll claim to be Tom, and tell you the most intimate details of Tom's autobiography. It was clear enough, then, that my current body and I could part company, but not likely that I could be separated from my brain. The rule of thumb that emerged so plainly from the thought experiments was that in a brain-transplant operation, one wanted to be the *donor*, not the recipient. Better to call such an operation a *body* transplant, in fact. So perhaps the truth was,

2. *Where Yorick goes, there goes Dennett.* This was not at all appealing, however. How could I be in the vat and not about to go anywhere, when I was so obviously outside the vat looking in and beginning to make guilty plans to return to my room for a substantial lunch? This begged the question I realized, but it still seemed to be getting at something important. Casting about for some support for my intuition, I hit upon a legalistic sort of argument that might have appealed to Locke.

Suppose, I argued to myself, I were now to fly to California, rob a bank, and be apprehended. In which state would I be tried: in California, where the robbery took place, or in Texas, where the brains of the outfit were located? Would I be a California felon with an out-of-state brain, or a Texas felon remotely controlling an accomplice of sorts in California? It seemed possible that I might beat such a rap just on the undecidedness of that jurisdictional question, though perhaps it would be deemed an interstate, and hence Federal, offense. In any event, suppose I were convicted. Was it likely that California would be satisfied to throw Hamlet into the brig, knowing that Yorick was living the good life and luxuriously taking the waters in Texas? Would Texas incarcerate Yorick, leaving Hamlet free to take the next boat to Rio? This alternative appealed to me.

Barring capital punishment or other cruel and unusual punishment, the state would be obliged to maintain the life-support system for Yorick though they might move him from Houston to Leavenworth, and aside from the unpleasantness of the opprobrium, I, for one, would not mind at all and would consider myself a free man under those circumstances. If the state has an interest in forcibly relocating persons in institutions, it would fail to relocate *me* in any institution by locating Yorick there. If this were true, it suggested a third alternative.

3. *Dennett is wherever he thinks he is.* Generalized, the claim was as follows: At any given time a person has a *point of view*, and the location of the point of view (which is determined internally by the content of the point of view) is also the location of the person.

Such a proposition is not without its perplexities, but to me it seemed a step in the right direction. The only trouble was that it seemed to place one in a heads-I-win/tails-you-lose situation of unlikely infallibility: regards location. Hadn't I myself often been wrong about where I was and at least as often uncertain? Couldn't one get lost? Of course, but getting lost *geographically* is not the only way one might get lost. If one were lost in the woods one could attempt to reassure oneself with the consolation that at least one knew where one was: one was right *here* in the familiar surroundings of one's own body. Perhaps in this case one would not have drawn one's attention to much to be thankful for. Still there were worse plights imaginable, and I wasn't sure I wasn't in such a plight right now.

Point of view clearly had something to do with personal location, but it was itself an unclear notion. It was obvious that the content of one's point of view was not the same as or determined by the content of one's beliefs or thoughts. For example, what should we say about the point of view of the Cinerama viewer who shrieks and twists in his seat as the roller-coaster footage overcomes his psychic distancing? Has he forgotten that he is safely seated in the theater? Here I was inclined to say that the person is experiencing an illusory shift in point of view. In other cases, my inclination to call such shifts illusory was less strong. The workers in laboratories and plants who handle dangerous materials by operating feedback-controlled mechanical arms and hands undergo a shift in point of view that is crisper and more pronounced than anything Cinerama can provoke. They can feel the heft and slipperiness of the containers they manipulate with their metal fingers. They know perfectly well where they are and are not fooled into false beliefs by the experience yet it is as if they were inside the isolation chamber they are peering into with mental effort, they can manage to shift their point of view back and forth, rather like making a transparent Necker cube or an Escher drawing;

change orientation before one's eyes. It does seem extravagant to suppose that in performing this bit of mental gymnastics, they are transporting *themselves* back and forth.

Still their example gave me hope. If I was in fact in the vat in spite of my intuitions, I might be able to train myself to adopt that point of view even as a matter of habit. I should dwell on images of myself comfortably floating in my vat, beaming volitions to that familiar body *out there*. I reflected that the ease or difficulty of this task was presumably independent of the truth about the location of one's brain. Had I been practicing before the operation, I might now be finding it second nature. You might now yourself try such a *troupe l'oeil*. Imagine you have written an inflammatory letter which has been published in the *Times*, the result of which is that the government has chosen to impound your brain for a probationary period of three years in its Dangerous Brain Clinic in Bethesda, Maryland. Your body of course is allowed freedom to earn a salary and thus to continue its function of laying up income to be taxed. At this moment, however, your body is seated in an auditorium listening to a peculiar account by Daniel Dennett of his own similar experience. Try it. Think yourself to Bethesda, and then hark back longingly to your body, far away, and yet *seeming* so near. It is only with long-distance restraint (yours? the government's?) that you can control your impulse to get those hands clapping in polite applause before navigating the old body to the rest room and a well-deserved glass of evening sherry in the lounge. The task of imagination is certainly difficult, but if you achieve your goal the results might be consoling.

Anyway, there I was in Houston, lost in thought as one might say, but not for long. My speculations were soon interrupted by the Houston doctors, who wished to test out my new prosthetic nervous system before sending me off on my hazardous mission. As I mentioned before, I was a bit dizzy at first, and not surprisingly, although I soon habituated myself to my new circumstances (which were, after all, well nigh indistinguishable from my old circumstances). My accommodation was not perfect, however, and to this day I continue to be plagued by minor coordination difficulties. The speed of light is fast, but finite, and as my brain and body move farther and farther apart, the delicate interaction of my feedback systems is thrown into disarray by the time lags. Just as one is rendered close to speechless by a delayed or echoic hearing of one's speaking voice so, for instance, I am virtually unable to track a moving object with my eyes whenever my brain and my body are more than a few miles apart. In most matters my impairment is scarcely detectable, though I can no longer hit a slow curve ball with the authority of yore. There are some compensations of course. Though liquor tastes as good as ever, and

warms my gullet while corroding my liver. I can drink it in any quantity please, without becoming the slightest bit inebriated, a curiosity sort of my close friends may have noticed (though I occasionally have *feign* inebriation, so as not to draw attention to my unusual circumstances). For similar reasons, I take aspirin orally for a sprained wrist, but if the pain persists I ask Houston to administer codeine to me *in vitro*. In times of illness the phone bill can be staggering.

But to return to my adventure. At length, both the doctors and I were satisfied that I was ready to undertake my subterranean mission. And so I left my brain in Houston and headed by helicopter for Tulsa. Well, in any case, that's the way it seemed to me. That's how I would put it, just off the top of my head as it were. On the trip I reflected further about my earlier anxieties and decided that my first postoperative speculations had been tinged with panic. The matter was not nearly as strange or metaphysical as I had been supposing. Where was I? In two places, clearly: both inside the vat and outside it. Just as one could stand with one foot in Connecticut and the other in Rhode Island, I was in two places at once. I had become one of those scattered individuals we used to hear so much about. The more I considered this answer, the more obviously true it appeared. But, strange to say, the more true it appeared, the less important the question to which it could be the answer seemed. A sad, but not unprecedented, fate for a philosophical question to suffer. This answer did not completely satisfy me, of course. There lingered some question to which I should have liked an answer which was neither "Where are all my various and sundry parts?" nor "What is my current point of view?" Or at least there seemed to be such a question. For it did seem undeniable that in some sense I was not merely *most of me* was descending into the earth under Tulsa search of an atomic warhead.

When I found the warhead, I was certainly glad I had left my brain behind, for the pointer on the specially built Geiger counter I had brought with me was off the dial. I called Houston on my ordinary radio and told the operation control center of my position and my progress. In return, they gave me instructions for dismantling the vehicle, based upon my on-site observations. I had set to work with my cutting torch when of a sudden a terrible thing happened. I went stone deaf. At first I thought it was only my radio earphones that had broken, but when I tapped my helmet, I heard nothing. Apparently the auditory transceivers had gone on the fritz. I could no longer hear Houston or my own voice, I could speak, so I started telling them what had happened. In mid-tellence, I knew something else had gone wrong. My vocal apparatus had become paralyzed. Then my right hand went limp—another transceiver

had gone. I was truly in deep trouble. But worse was to follow. After a few more minutes, I went blind. I cursed my luck, and then I cursed the scientists who had led me into this grave peril. There I was, deaf, dumb, and blind, in a radioactive hole more than a mile under Tulsa. Then the last of my cerebral radio links broke, and suddenly I was faced with a new and even more shocking problem: whereas an instant before I had been buried alive in Oklahoma, now I was disembodied in Houston. My recognition of my new status was not immediate. It took me several very anxious minutes before it dawned on me that my poor body lay several hundred miles away, with heart pulsing and lungs respirating, but otherwise as dead as the body of any heart-transplant donor, its skull packed with useless, broken electronic gear. The shift in perspective I had earlier found well nigh impossible now seemed quite natural. Though I could think myself back into my body in the tunnel under Tulsa, it took some effort to sustain the illusion. For surely it was an illusion to suppose I was still in Oklahoma: I had lost all contact with that body.

It occurred to me then, with one of those rushes of revelation of which we should be suspicious, that I had stumbled upon an impressive demonstration of the immateriality of the soul based upon physicalist principles and premises. For as the last radio signal between Tulsa and Houston died away, had I not changed location from Tulsa to Houston at the speed of light? And had I not accomplished this without any increase in mass? What moved from A to B at such speed was surely myself, or at any rate my soul or mind—the massless center of my being and home of my consciousness. My *point of view* had lagged somewhat and behind, but I had already noted the indirect bearing of point of view on personal location. I could not see how a physicalist philosopher could quarrel with this except by taking the dire and counterintuitive route of banishing all talk of persons. Yet the notion of personhood was so well entrenched in everyone's world view, or so it seemed to me, that any denial would be as curiously unconvincing, as systematically disingenuous, as the Cartesian negation, "non sum."

The joy of philosophical discovery thus tided me over some very bad minutes or perhaps hours as the helplessness and hopelessness of my situation became more apparent to me. Waves of panic and even nausea swept over me, made all the more horrible by the absence of their normal body-dependent phenomenology. No adrenaline rush of tingles in the arms, no pounding heart, no premonitory salivation. I did feel a dread-sinking feeling in my bowels at one point, and this tricked me momentarily into the false hope that I was undergoing a reversal of the process that landed me in this fix—a gradual undisembodiment. But the isolation and

uniqueness of that twinge soon convinced me that it was simply the first of a plague of phantom body hallucinations that I, like any other amputee would be all too likely to suffer.

My mood then was chaotic. On the one hand, I was fired up with elation of my philosophical discovery and was wracking my brain (one of the few familiar things I could still do), trying to figure out how to communicate my discovery to the journals; while on the other, I was bitter, lonely, and filled with dread and uncertainty. Fortunately, this did not last long, for my technical support team sedated me into a dreamlike sleep from which I awoke, hearing with magnificent fidelity the familiar opening strains of my favorite Brahms piano trio. So that was why I had wanted a list of my favorite recordings! It did not take me long to realize that I was hearing the music without ears. The output from the stereo stylus was being fed through some fancy rectification circuit directly into my auditory nerve. I was maintaining Brahms, an unforgettable experience for any stereo buff. At the end of the record it did not surprise me to hear the reassuring voice of the project director speaking into a microphone that was now my prosthetic ear. He confirmed in analysis of what had gone wrong and assured me that steps were being taken to re-embody me. He did not elaborate, and after a few more recordings, I found myself drifting off to sleep. My sleep lasted, I later learned, for the better part of a year, and when I awoke, it was to find myself fully restored to my senses. When I looked into the mirror though, I was a bit startled to see an unfamiliar face. Bearded and a little heavier, bearing no doubt a family resemblance to my former face, and with the same look of spritely intelligence and resolute character, but definitely a new face. Further self-explorations of an intimate nature led me no doubt that this was a new body, and the project director confirmed my conclusions. He did not volunteer any information on the past history of my new body and I decided (wisely, I think in retrospect) not to press. As many philosophers unfamiliar with my ordeal have more recently speculated, the acquisition of a new body leaves one's *person* intact. After a period of adjustment to a new voice, new muscular strengths and weaknesses, and so forth, one's *personality* is by and large also preserved. More dramatic changes in personality have been routinely observed in people who have undergone extensive plastic surgery, to say nothing of sex-change operations, and I think no one contests the survival of the person in such cases. In any event I soon accommodated to my new body to the point of being unable to recover any of its novelties to my consciousness or even memory. The view in the mirror soon became utterly familiar. That view, by the way, still revealed antennae, and so I was in

my modest professor's salary. Still more vertiginous and distasteful, though, was the idea of knowing *that much* about another person, while he had the very same goods on me. How could we ever face each other? My colleagues in the lab argued that I was ignoring the bright side of the matter. Weren't there many things I wanted to do but, being only one person, had been unable to do? Now one Dennett could stay at home and be the professor and family man, while the other could strike out on a life of travel and adventure—missing the family of course, but happy in the knowledge that the other Dennett was keeping the home fires burning. I could be faithful and adulterous at the same time. I could even cuckold myself—to say nothing of other more lurid possibilities my colleagues were all too ready to force upon my overtaxed imagination. But my ordeal in Oklahoma (or was it Houston?) had made me less adventurous, and I shrank from this opportunity that was being offered (though of course I was never quite sure it was being offered to *me* in the first place).

There was another prospect even more disagreeable: that the spare, Hubert or Yorick as the case might be, would be detached from any input from Fortinbras and just left detached. Then, as in the other case, there would be two Dennetts, or at least two claimants to my name and possessions, one embodied in Fortinbras, and the other sadly, miserably disembodied. Both selfishness and altruism bade me take steps to prevent this from happening. So I asked that measures be taken to ensure that no one could ever tamper with the transmitter connections or the master switch without my (our? no, *my*) knowledge and consent. Since I had no desire to spend my life guarding the equipment in Houston, it was mutually decided that all the electronic connections in the lab would be carefully locked. Both those that controlled the life-support system for Yorick and those that controlled the power supply for Hubert would be guarded with fail-safe devices, and I would take the only master switch, outfitted for radio remote control, with me wherever I went. I carry it strapped around my waist and—wait a moment—*here it is*. Every few months I reconnoiter the situation by switching channels. I do this only in the presence of friends, of course, for if the other channel were, heaven forbid, either dead or otherwise occupied, there would have to be somebody who had my interests at heart to switch it back, to bring me back from the void. For while I could feel, see, hear, and otherwise sense whatever befell my body, subsequent to such a switch, I'd be unable to control it. By the way, the two positions on the switch are intentionally unmarked, so I never have the faintest idea whether I am switching from Hubert to Yorick or vice versa. (Some of you may think that in this case I really don't know *who* I am, let alone

Where Am I?

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where I am. But such reflections no longer make much of a dent on the essential Dennetness, on my own sense of who I am. If it is true that one sense I don't know who I am then that's another one of your philosophical truths of underwhelming significance.)

In any case, every time I've flipped the switch so far, nothing happened. *So let's give it a try...*

"THANK GOD! I THOUGHT YOU'D NEVER FLIP THE SWITCH! You can't imagine how horrible it's been these last two weeks—but now you know, it's your turn in purgatory. How I've longed for this moment! You see, about two weeks ago—excuse me, ladies and gentlemen, but I've got to explain this to my... um, brother, I guess you could say, but he's just told you the facts, so you'll understand—about two weeks ago our two brains drifted just a bit out of synch. I don't know whether *my* brain is now Hubert or Yorick, any more than you do, but in any case, the two brains drifted apart, and of course once the project started, it snowballed, for I was in a slightly different receptive state. In the input we both received, a difference that was soon magnified. In time at all the illusion that I was in control of my body—our body—was completely dissipated. There was nothing I could do—no way to call **YOU DIDN'T EVEN KNOW I EXISTED!** It's been like being carried around in a cage, or better, like being possessed—hearing my own voice say things I didn't mean to say, watching in frustration as my own hands performed deeds I hadn't intended. You'd scratch our itches, but not the way I would have, and you kept me awake, with your tossing and turning. I've been totally exhausted, on the verge of a nervous breakdown, carried around helplessly by your frantic round of activities, sustained only by the knowledge that some day you'd throw the switch.

"Now it's your turn, but at least you'll have the comfort of knowing I know you're in there. Like an expectant mother, I'm eating—or at a rate tasting, smelling, seeing—for *two* now, and I'll try to make it easy for you. Don't worry. Just as soon as this colloquium is over, you and I will fly to Houston, and we'll see what can be done to get one of us another body. You can have a female body—your body could be any color you like. But let's think it over. I tell you what—to be fair, if we both want a body, I promise I'll let the project director flip a coin to settle which of us gets to keep it and which then gets to choose a new body. That should guarantee justice, shouldn't it? In any case, I'll take care of you, I promise. These people are my witnesses.

"Ladies and gentlemen, this talk we have just heard is not exactly a perfectly true. And now if you'll excuse me, I think I'd—we'd—better get down."

my modest professor's salary. Still more vertiginous and distasteful, though, was the idea of knowing *that much* about another person, while he had the very same goods on me. How could we ever face each other? My colleagues in the lab argued that I was ignoring the bright side of the matter. Weren't there many things I wanted to do but, being only one person, had been unable to do? Now one Dennett could stay at home and be the professor and family man, while the other could strike out on a life of travel and adventure—missing the family of course, but happy in the knowledge that the other Dennett was keeping the home fires burning. I could be faithful and adulterous at the same time. I could even cuckold myself—to say nothing of other more lurid possibilities my colleagues were all too ready to force upon my overtaxed imagination. But my ordeal in Oklahoma (or was it Houston?) had made me less adventurous, and I shrank from this opportunity that was being offered (though of course I was never quite sure it was being offered to *me* in the first place).

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In any case, every time I've flipped the switch so far, nothing happened. *So let's give it a try.*

"THANK GOD! I THOUGHT YOU'D NEVER FLIP THE SWITCH! You can't imagine how horrible it's been these last two weeks—but now you know; it's your turn in purgatory. How I've longed for that moment! You see, about two weeks ago—excuse me, ladies and gentlemen, but I've got to explain this to my . . . um, brother, I guess you could say, but he's just told you the facts, so you'll understand—about two weeks ago our two brains drifted just a bit out of synch. I don't know whether *my* brain is now Hubert or Yorick, any more than you do, but in any case, the two brains drifted apart, and of course once the process started, it snowballed, for I was in a slightly different receptive state. In the input we both received, a difference that was soon magnified. In time at all the illusion that I was in control of my body—our body—was completely dissipated. There was nothing I could do—no way to call *you* DIDN'T EVEN KNOW I EXISTED! It's been like being carried around in a cage, or better, like being possessed—hearing my own *say* things I didn't mean to say, watching in frustration as my own *hands* performed deeds I hadn't intended. You'd scratch our itches, but not in a way I would have, and you kept me awake, with your tossing and turning. I've been totally exhausted, on the verge of a nervous breakdown, carried around helplessly by your frantic round of activities, sustained only by a knowledge that some day you'd throw the switch.

"Now it's your turn, but at least you'll have the comfort of knowing I know you're in there. Like an expectant mother, I'm eating—or at a rate tasting, smelling, seeing—for *two* now, and I'll try to make it easy for you. Don't worry, just as soon as this colloquium is over, you and I will fly to Houston, and we'll see what can be done to get one of us another body. You can have a female body—your body could be any color you like. But let's think it over. I tell you what—to be fair, if we both want a body, I promise I'll let the project director flip a coin to settle which *us* gets to keep it and which then gets to choose a new body. That should guarantee justice, shouldn't it? In any case, I'll take care of you, I promise. These people are my witnesses.

"Ladies and gentlemen, this talk we have just heard is not exactly a talk I would have given, but I assure you that everything he said is perfectly true. And now if you'll excuse me, I think I'd—we'd—better get down."

Reflections

The story you have just read not only isn't true (in case you wondered) but couldn't be true. The technological feats described are impossible now, and some may remain forever outside our ability, but that is not what matters to us. What matters is whether there is something in principle impossible—something incoherent—about the whole tale. When philosophical fantasies become too outlandish—involving time machines, say, or duplicate universes or infinitely powerful deceiving demons—we may wisely decline to conclude *anything* from them. Our conviction that we understand the issues involved may be unreliable, an illusion produced by the vividness of the fantasy.

In this case the surgery and microradios described are far beyond the present or even clearly envisaged future state of the art, but that is surely "innocent" science fiction. It is less clear that the introduction of Hubert, the computer duplicate of Yorick, Dennett's brain, is within bounds. (As fantasy-mongers we can make up the rules as we go along, of course, but on pain of telling a tale of no theoretical interest.) Hubert is supposed to run in *perfect synchronicity* with Yorick for years on end without the benefit of any interactive, corrective links between them. This would not just be a great technological triumph; it would verge on the miraculous. It is not just that in order for a computer to come close to matching a human brain in speed of handling millions of channels of parallel input and output it would have to have a fundamental structure entirely unlike that of existing computers. Even if we had such a brainlike computer, its sheer size and complexity would make the prospect of *independent* synchronic behavior virtually impossible. Without the synchronized and identical processing in both systems, an essential feature of the story would have to be abandoned. Why? Because the premise that there is only one person with two brains (one a spare) depends on it. Consider what Ronald de Sousa has to say about a similar case:

When Dr. Jekyll changes into Mr. Hyde, that is a strange and mysterious thing. Are they two people taking turns in one body? But here is something stranger: Dr. Juggle and Dr. Boggle too, take turns in one body. *But they are as*

Reflections

21

like as identical twins! You balk: why then say that they have changed into each other? Well, why not: if Dr. Jekyll can change into a man as different as Hyde, surely it must be all the *easier* for Juggle to change into Boggle, who is exactly like him.

We need conflict or strong difference to shake our natural assumption that to one body there corresponds at most one agent.

—from "Rational Homunculus"

Since several of the most remarkable features of "Where Am I" hinge on the supposition of independent synchronic processing in Yorick and Hubert, it is important to note that this supposition is truly outrageous—in the same league as the supposition that somewhere there is another planet just like Earth, with an atom-for-atom duplicate of you and all your friends and surroundings,* or the supposition that the universe is only five days old (it only seems to be much older because when God made it five days ago, He made lots of instant "memory"-laden adult libraries full of apparently ancient books, mountains full of brand-new fossils, and so forth).

The possibility of a prosthetic brain like Hubert, then, is only possible in principle, though less marvelous bits of artificial nerve system may be just around the corner. Various crude artificial TV eyes for the blind are already in existence; some of these send input directly to portions of the visual cortex of the brain, but others avoid such a tuoso surgery by transmitting their information through other external sense organs—such as the tactile receptors in the fingertips or even an array of tingling points spread across the subject's forehead, abdomen, or back.

The prospects for such nonsurgical mind extensions are explored in the next selection, a sequel to "Where Am I?" by Duke University philosopher David Sanford.

D. C.

*As in Hilary Putnam's famous "Twin Earth" thought experiment. See "Further Reading"