

*also by Oliver Sacks*

MIGRAINE

AWAKENINGS

A LEG TO STAND ON

OLIVER SACKS

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The MAN  
Who  
MISTOOK  
HIS WIFE  
for  
a HAT

*and other clinical tales*

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it could physically be none other, on several occasions grimaced or stuck out his tongue "just to make sure." By carefully studying his face in the mirror he slowly began to recognise it, but "not in a flash" as in the past—he relied on the hair and facial outline, and on two small moles on his left cheek.'

In general he could not recognise objects 'at a glance', but would have to seek out, and guess from, one or two features—occasionally his guesses were absurdly wrong. In particular, the authors note, there was difficulty with the *animate*.

On the other hand, simple schematic objects—scissors, watch, key, etc.—presented no difficulties. Macrae and Trolle also note that: 'His *topographical memory* was strange: the seeming paradox existed that he could find his way from home to hospital and around the hospital, but yet could not name streets *en route* [unlike Dr P., he also had some aphasia] or appear to visualize the topography.'

It was also evident that visual memories of people, even from long before the accident, were severely impaired—there was memory of conduct, or perhaps a mannerism, but not of visual appearance or face. Similarly, it appeared, when he was questioned closely, that he no longer had visual images in his *dreams*. Thus, as with Dr P., it was not just visual perception, but visual imagination and memory, the fundamental powers of visual representation, which were essentially damaged in this patient—at least those powers insofar as they pertained to the personal, the familiar, the concrete.

A final, humorous point. Where Dr P. might mistake his wife for a hat, Macrae's patient, also unable to recognise his wife, needed her to identify herself by a visual *marker*, by '... a conspicuous article of clothing, such as a large hat'.

## 2



## The Lost Mariner\*

You have to begin to lose your memory, if only in bits and pieces, to realise that memory is what makes our lives. Life without memory is no life at all . . . Our memory is our coherence, our reason, our feeling, even our action. Without it, we are nothing . . . (I can only wait for the final amnesia, the one that can erase an entire life, as it did my mother's . . .)

—Luis Buñuel

This moving and frightening segment in Buñuel's recently translated memoirs raises fundamental questions—clinical, practical, existential, philosophical: what sort of a life (if any), what sort of a world, what sort of a self, can be preserved in a man who has lost the greater part of his memory and, with this, his past, and his moorings in time?

It immediately made me think of a patient of mine in whom these questions are precisely exemplified: charming, intelligent, memoryless Jimmie G., who was admitted to our Home for the

\*After writing and publishing this history I embarked with Dr Elkhonon Goldberg—a pupil of Luria and editor of the original (Russian) edition of *The Neuropsychology of Memory*—on a close and systematic neuropsychological study of this patient. Dr Goldberg has presented some of the preliminary findings at conferences, and we hope in due course to publish a full account.

A deeply moving and extraordinary film about a patient with a profound amnesia (*Prisoner of Consciousness*), made by Dr Jonathan Miller, has just been shown in England (September 1986). A film has also been made (by Hilary Lawson) with a prosopagnosic patient (with many similarities to Dr P.). Such films are crucial to assist the imagination: 'What can be shown cannot be said.'

Aged near New York City early in 1975, with a cryptic transfer note saying, 'Helpless, demented, confused and disoriented.'

Jimmie was a fine-looking man, with a curly bush of grey hair, a healthy and handsome forty-nine-year-old. He was cheerful, friendly, and warm.

'Hiya, Doc!' he said. 'Nice morning! Do I take this chair here?' He was a genial soul, very ready to talk and to answer any questions I asked him. He told me his name and birth date, and the name of the little town in Connecticut where he was born. He described it in affectionate detail, even drew me a map. He spoke of the houses where his family had lived—he remembered their phone numbers still. He spoke of school and school days, the friends he'd had, and his special fondness for mathematics and science. He talked with enthusiasm of his days in the navy—he was seventeen, had just graduated from high school when he was drafted in 1943. With his good engineering mind he was a 'natural' for radio and electronics, and after a crash course in Texas found himself assistant radio operator on a submarine. He remembered the names of various submarines on which he had served, their missions, where they were stationed, the names of his shipmates. He remembered Morse code, and was still fluent in Morse tapping and touch-typing.

A full and interesting early life, remembered vividly, in detail, with affection. But there, for some reason, his reminiscences stopped. He recalled, and almost relived, his war days and service, the end of the war, and his thoughts for the future. He had come to love the navy, thought he might stay in it. But with the GI Bill, and support, he felt he might do best to go to college. His older brother was in accountancy school and engaged to a girl, a 'real beauty', from Oregon.

With recalling, reliving, Jimmie was full of animation; he did not seem to be speaking of the past but of the present, and I was very struck by the change of tense in his recollections as he passed from his school days to his days in the navy. He had been using the past tense, but now used the present—and (it seemed to me) not just the formal or fictitious present tense of recall, but the actual present tense of immediate experience.

A sudden, improbable suspicion seized me.

'What year is this, Mr G.?' I asked, concealing my perplexity under a casual manner.

'Forty-five, man. What do you mean?' He went on, 'We've won the war, FDR's dead, Truman's at the helm. There are great times ahead.'

'And you, Jimmie, how old would you be?'

Oddly, uncertainly, he hesitated a moment, as if engaged in calculation.

'Why, I guess I'm nineteen, Doc. I'll be twenty next birthday.'

Looking at the grey-haired man before me, I had an impulse for which I have never forgiven myself—it was, or would have been, the height of cruelty had there been any possibility of Jimmie's remembering it.

'Here,' I said, and thrust a mirror toward him. 'Look in the mirror and tell me what you see. Is that a nineteen-year-old looking out from the mirror?'

He suddenly turned ashen and gripped the sides of the chair. 'Jesus Christ,' he whispered. 'Christ, what's going on? What's happened to me? Is this a nightmare? Am I crazy? Is this a joke?'—and he became frantic, panicked.

'It's okay, Jimmie,' I said soothingly. 'It's just a mistake. Nothing to worry about. Hey!' I took him to the window. 'Isn't this a lovely spring day. See the kids there playing baseball?' He regained his colour and started to smile, and I stole away, taking the hateful mirror with me.

Two minutes later I re-entered the room. Jimmie was still standing by the window, gazing with pleasure at the kids playing baseball below. He wheeled around as I opened the door, and his face assumed a cheery expression.

'Hiya, Doc!' he said. 'Nice morning! You want to talk to me—do I take this chair here?' There was no sign of recognition on his frank, open face.

'Haven't we met before, Mr G.?' I asked casually.

'No, I can't say we have. Quite a beard you got there. I wouldn't forget you, Doc!'

'Why do you call me "Doc"?''

'Well, you are a doc, ain't you?'

'Yes, but if you haven't met me, how do you know what I am?'

'You *talk* like a doc. I can *see* you're a doc.'

'Well, you're right, I am. I'm the neurologist here.'

'Neurologist? Hey, there's something wrong with my nerves? And "here"—where's "here"? What is this place anyhow?'

'I was just going to ask you—where do you think you are?'

'I see these beds, and these patients everywhere. Looks like a sort of hospital to me. But hell, what would I be doing in a hospital—and with all these old people, years older than me. I feel good, I'm strong as a bull. Maybe I *work* here . . . Do I work? What's my job? . . . No, you're shaking your head, I see in your eyes I don't work here. If I don't work here, I've been *put* here. Am I a patient, am I sick and don't know it, Doc? It's crazy, it's scary . . . Is it some sort of joke?'

'You don't know what the matter is? You really don't know? You remember telling me about your childhood, growing up in Connecticut, working as a radio operator on submarines? And how your brother is engaged to a girl from Oregon?'

'Hey, you're right. But I didn't tell you that, I never met you before in my life. You must have read all about me in my chart.'

'Okay,' I said. 'I'll tell you a story. A man went to his doctor complaining of memory lapses. The doctor asked him some routine questions, and then said, "These lapses. What about them?" "What lapses?" the patient replied.'

'So that's my problem,' Jimmie laughed. 'I kinda thought it was. I do find myself forgetting things, once in a while—things that have just happened. The past is clear, though.'

'Will you allow me to examine you, to run over some tests?'

'Sure,' he said genially. 'Whatever you want.'

On intelligence testing he showed excellent ability. He was quick-witted, observant, and logical, and had no difficulty solving complex problems and puzzles—no difficulty, that is, if they could be done quickly. If much time was required, he forgot what he was doing. He was quick and good at tic-tac-toe and checkers, and cunning and aggressive—he easily beat me. But he got lost at chess—the moves were too slow.

Homing in on his memory, I found an extreme and extraordinary loss of recent memory—so that whatever was said or shown to him was apt to be forgotten in a few seconds' time. Thus I laid out my watch, my tie, and my glasses on the desk, covered them, and asked him to remember these. Then, after a minute's chat, I asked him what I had put under the cover. He remembered none of them—or indeed that I had even asked him to remember. I repeated the test, this time getting him to write down the names of the three objects; again he forgot, and when I showed him the paper with his writing on it he was astounded, and said he had no recollection of writing anything down, though he acknowledged that it was his own writing, and then got a faint 'echo' of the fact that he had written them down.

He sometimes retained faint memories, some dim echo or sense of familiarity. Thus five minutes after I had played tic-tac-toe with him, he recollected that 'some doctor' had played this with him 'a while back'—whether the 'while back' was minutes or months ago he had no idea. He then paused and said, 'It could have been you?' When I said it was me, he seemed amused. This faint amusement and indifference were very characteristic, as were the involved cogitations to which he was driven by being so disoriented and lost in time. When I asked Jimmie the time of the year, he would immediately look around for some clue—I was careful to remove the calendar from my desk—and would work out the time of year, roughly, by looking through the window.

It was not, apparently, that he failed to register in memory, but that the memory traces were fugitive in the extreme, and were apt to be effaced within a minute, often less, especially if there were distracting or competing stimuli, while his intellectual and perceptual powers were preserved, and highly superior.

Jimmie's scientific knowledge was that of a bright high school graduate with a penchant for mathematics and science. He was superb at arithmetical (and also algebraic) calculations, but only if they could be done with lightning speed. If there were many steps, too much time, involved, he would forget where he was, and even the question. He knew the elements, compared them,

and drew the periodic table—but omitted the transuranic elements.

'Is that complete?' I asked when he'd finished.

'It's complete and up-to-date, sir, as far as I know.'

'You wouldn't know any elements beyond uranium?'

'You kidding? There's ninety-two elements, and uranium's the last.'

I paused and flipped through a *National Geographic* on the table. 'Tell me the planets,' I said, 'and something about them.' Unhesitatingly, confidently, he gave me the planets—their names, their discovery, their distance from the sun, their estimated mass, character, and gravity.

'What is this?' I asked, showing him a photo in the magazine I was holding.

'It's the moon,' he replied.

'No, it's not,' I answered. 'It's a picture of the earth taken from the moon.'

'Doc, you're kidding! Someone would've had to get a camera up there!'

'Naturally.'

'Hell! You're joking—how the hell would you do that?'

Unless he was a consummate actor, a fraud simulating an astonishment he did not feel, this was an utterly convincing demonstration that he was still in the past. His words, his feelings, his innocent wonder, his struggle to make sense of what he saw, were precisely those of an intelligent young man in the forties faced with the future, with what had not yet happened, and what was scarcely imaginable. 'This more than anything else,' I wrote in my notes, 'persuades me that his cut-off around 1945 is genuine . . . What I showed him, and told him, produced the authentic amazement which it would have done in an intelligent young man of the pre-Sputnik era.'

I found another photo in the magazine and pushed it over to him.

'That's an aircraft carrier,' he said. 'Real ultramodern design. I never saw one quite like that.'

'What's it called?' I asked.

He glanced down, looked baffled, and said, 'The *Nimitz*!'

'Something the matter?'

'The hell there is!' he replied hotly. 'I know 'em all by name, and I *don't know* a *Nimitz* . . . Of course there's an Admiral *Nimitz*, but I never heard they named a carrier after him.'

Angrily he threw the magazine down.

He was becoming fatigued, and somewhat irritable and anxious, under the continuing pressure of anomaly and contradiction, and their fearful implications, to which he could not be entirely oblivious. I had already, unthinkingly, pushed him into panic, and felt it was time to end our session. We wandered over to the window again, and looked down at the sunlit baseball diamond; as he looked his face relaxed, he forgot the *Nimitz*, the satellite photo, the other horrors and hints, and became absorbed in the game below. Then, as a savoury smell drifted up from the dining room, he smacked his lips, said 'Lunch!', smiled, and took his leave.

And I myself was wrung with emotion—it was heartbreaking, it was absurd, it was deeply perplexing, to think of his life lost in limbo, dissolving.

'He is, as it were,' I wrote in my notes, 'isolated in a single moment of being, with a moat or lacuna of forgetting all round him . . . He is man without a past (or future), stuck in a constantly changing, meaningless moment.' And then, more prosaically, 'The remainder of the neurological examination is entirely normal. Impression: probably Korsakov's syndrome, due to alcoholic degeneration of the mammillary bodies.' My note was a strange mixture of facts and observations, carefully noted and itemised, with irrepressible meditations on what such problems might 'mean', in regard to who and what and where this poor man was—whether, indeed, one could speak of an 'existence', given so absolute a privation of memory or continuity.

I kept wondering, in this and later notes—unscientifically—about 'a lost soul', and how one might establish some continuity, some roots, for he was a man without roots, or rooted only in the remote past.

'Only connect'—but how could he connect, and how could we help him to connect? What was life without connection? 'I may

venture to affirm,' Hume wrote, 'that we are nothing but a bundle or collection of different sensations, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement.' In some sense, he had been reduced to a 'Humean' being—I could not help thinking how fascinated Hume would have been at seeing in Jimmie his own philosophical 'chimaera' incarnate, a gruesome reduction of a man to mere disconnected, incoherent flux and change.

Perhaps I could find advice or help in the medical literature—a literature which, for some reason, was largely Russian, from Korsakov's original thesis (Moscow, 1887) about such cases of memory loss, which are still called 'Korsakov's syndrome', to Luria's *Neuropsychology of Memory* (which appeared in translation only a year after I first saw Jimmie). Korsakov wrote in 1887:

Memory of recent events is disturbed almost exclusively; recent impressions apparently disappear soonest, whereas impressions of long ago are recalled properly, so that the patient's ingenuity, his sharpness of wit, and his resourcefulness remain largely unaffected.

To Korsakov's brilliant but spare observations, almost a century of further research has been added—the richest and deepest, by far, being Luria's. And in Luria's account science became poetry, and the pathos of radical lostness was evoked. 'Gross disturbances of the organization of impressions of events and their sequence in time can always be observed in such patients,' he wrote. 'In consequence, they lose their integral experience of time and begin to live in a world of isolated impressions.' Further, as Luria noted, the eradication of impressions (and their disorder) might spread backward in time—in the most serious cases—even to relatively distant events.'

Most of Luria's patients, as described in this book, had massive and serious cerebral tumours, which had the same effects as Korsakov's syndrome, but later spread and were often fatal. Luria included no cases of 'simple' Korsakov's syndrome, based on the self-limiting destruction that Korsakov described—neuron destruction, produced by alcohol, in the tiny but crucial mammillary

bodies, the rest of the brain being perfectly preserved. And so there was no long-term follow-up of Luria's cases.

I had at first been deeply puzzled, and dubious, even suspicious, about the apparently sharp cut-off in 1945, a point, a date, which was also symbolically so sharp. I wrote in a subsequent note:

There is a great blank. We do not know what happened then—or subsequently . . . We must fill in these 'missing' years—from his brother, or the navy, or hospitals he has been to . . . Could it be that he sustained some massive trauma at this time, some massive cerebral or emotional trauma in combat, in the war, and that *this* may have affected him ever since? . . . was the war his 'high point', the last time he was really alive, and existence since one long anti-climax?\*

We did various tests on him (EEG, brain scans), and found no evidence of massive brain damage, although atrophy of the tiny mammillary bodies would not show up on such tests. We received reports from the navy indicating that he had remained in the navy until 1965, and that he was perfectly competent at that time.

Then we turned up a short nasty report from Bellevue Hospital, dated 1971, saying that he was 'totally disoriented . . . with an advanced organic brain-syndrome, due to alcohol' (cirrhosis had also developed by this time). From Bellevue he was sent to a wretched dump in the Village, a so-called 'nursing home' whence he was rescued—lousy, starving—by our Home in 1975.

We located his brother, whom Jimmie always spoke of as being in accountancy school and engaged to a girl from Oregon. In fact

\*In his fascinating oral history *The Good War* (1985) Studs Terkel transcribes countless stories of men and women, especially fighting men, who felt World War II was intensely real—by far the most real and significant time of their lives—everything since as pallid in comparison. Such men tend to dwell on the war and to relive its battles, comradeship, moral certainties and intensity. But this dwelling on the past and relative hebetude towards the present—this emotional dulling of current feeling and memory—is nothing like Jimmie's organic amnesia. I recently had occasion to discuss the question with Terkel: 'I've met thousands of men,' he told me, 'who feel they've just been "marking time" since '45—but I never met anyone for whom time terminated, like your amnesiac Jimmie.'

he had married the girl from Oregon, had become a father and grandfather, and been a practising accountant for thirty years.

Where we had hoped for an abundance of information and feeling from his brother, we received a courteous but somewhat meagre letter. It was obvious from reading this—especially reading between the lines—that the brothers had scarcely seen each other since 1943, and gone separate ways, partly through the vicissitudes of location and profession, and partly through deep (though not estranging) differences of temperament. Jimmie, it seemed, had never ‘settled down’, was ‘happy-go-lucky’, and ‘always a drinker’. The navy, his brother felt, provided a structure, a life, and the real problems started when he left it, in 1965. Without his habitual structure and anchor Jimmie had ceased to work, ‘gone to pieces,’ and started to drink heavily. There had been some memory impairment, of the Korsakov type, in the middle and especially the late Sixties, but not so severe that Jimmie couldn’t ‘cope’ in his nonchalant fashion. But his drinking grew heavier in 1970.

Around Christmas of that year, his brother understood, he had suddenly ‘blown his top’ and become deliriously excited and confused, and it was at this point he had been taken into Bellevue. During the next month, the excitement and delirium died down, but he was left with deep and bizarre memory lapses, or ‘deficits,’ to use the medical jargon. His brother had visited him at this time—they had not met for twenty years—and, to his horror, Jimmie not only failed to recognise him, but said, ‘Stop joking! You’re old enough to be my father. My brother’s a young man, just going through accountancy school.’

When I received this information, I was more perplexed still: why did Jimmie not remember his later years in the navy, why did he not recall and organise his memories until 1970? I had not heard then that such patients might have a retrograde amnesia (see Postscript). ‘I wonder, increasingly,’ I wrote at this time, ‘whether there is not an element of hysterical or fugal amnesia—whether he is not in flight from something too awful to recall’, and I suggested he be seen by our psychiatrist. Her report was searching and detailed—the examination had included a sodium amytal test, calculated to ‘release’ any memories which might be repressed.

She also attempted to hypnotize Jimmie, in the hope of eliciting memories repressed by hysteria—this tends to work well in cases of hysterical amnesia. But it failed because Jimmie could not be hypnotized, not because of any ‘resistance,’ but because of his extreme amnesia, which caused him to lose track of what the hypnotist was saying. (Dr M. Homonoff, who worked on the amnesia ward at the Boston Veterans Administration hospital, tells me of similar experiences—and of his feeling that this is absolutely characteristic of patients with Korsakov’s, as opposed to patients with hysterical amnesia.)

‘I have no feeling or evidence,’ the psychiatrist wrote, ‘of any hysterical or “put-on” deficit. He lacks both the means and the motive to make a façade. His memory deficits are organic and permanent and incorrigible, though it is puzzling they should go back so long.’ Since, she felt, he was ‘unconcerned . . . manifested no special anxiety . . . constituted no management problem,’ there was nothing she could offer, or any therapeutic ‘entrance’ or ‘lever’ she could see.

At this point, persuaded that this was, indeed, ‘pure’ Korsakov’s, uncomplicated by other factors, emotional or organic, I wrote to Luria and asked his opinion. He spoke in his reply of his patient Bel,\* whose amnesia had retroactively eradicated ten years. He said he saw no reason why such a retrograde amnesia should not thrust backward decades, or almost a whole lifetime. ‘I can only wait for the final amnesia,’ Buñuel writes, ‘the one that can erase an entire life.’ But Jimmie’s amnesia, for whatever reason, had erased memory and time back to 1945—roughly—and then stopped. Occasionally, he would recall something much later, but the recall was fragmentary and dislocated in time. Once, seeing the word ‘satellite’ in a newspaper headline, he said offhandedly that he’d been involved in a project of satellite tracking while on the ship *Chesapeake Bay*, a memory fragment coming from the early or mid-Sixties. But, for all practical purposes, his cut-off point was during the mid- (or late) Forties, and anything subsequently re-

\*See A.R. Luria, *The Neuropsychology of Memory* (1976), pp. 250–2.

tried was fragmentary, unconnected. This was the case in 1975, and it is still the case now, nine years later.

What could we do? What should we do? 'There are no prescriptions,' Luria wrote, 'in a case like this. Do whatever your ingenuity and your heart suggest. There is little or no hope of any recovery in his memory. But a man does not consist of memory alone. He has feeling, will, sensibilities, moral being—matters of which neuropsychology cannot speak. And it is here, beyond the realm of an impersonal psychology, that you may find ways to touch him, and change him. And the circumstances of your work especially allow this, for you work in a Home, which is like a little world, quite different from the clinics and institutions where I work. Neuropsychologically, there is little or nothing you can do; but in the realm of the Individual, there may be much you can do.'

Luria mentioned his patient Kur as manifesting a rare self-awareness, in which hopelessness was mixed with an odd equanimity. 'I have no memory of the present,' Kur would say. 'I do not know what I have just done or from where I have just come . . . I can recall my past very well, but I have no memory of my present.' When asked whether he had ever seen the person testing him, he said, 'I cannot say yes or no, I can neither affirm nor deny that I have seen you.' This was sometimes the case with Jimmie; and, like Kur, who stayed many months in the same hospital, Jimmie began to form 'a sense of familiarity'; he slowly learned his way around the home—the whereabouts of the dining room, his own room, the elevators, the stairs, and in some sense recognised some of the staff, although he confused them, and perhaps had to do so, with people from the past. He soon became fond of the nursing sister in the Home; he recognised her voice, her footfalls, immediately, but would always say that she had been a fellow pupil at his high school, and was greatly surprised when I addressed her as 'Sister'.

'Geel!' he exclaimed, 'the damnedest things happen. I'd never have guessed you'd become a religious, Sister!'

Since he's been at our Home—that is, since early 1975—Jimmie has never been able to identify anyone in it consistently. The

only person he truly recognises is his brother, whenever he visits from Oregon. These meetings are deeply emotional and moving to observe—the only truly emotional meetings Jimmie has. He loves his brother, he recognises him, but he cannot understand why he looks so old: 'Guess some people age fast,' he says. Actually his brother looks much younger than his age, and has the sort of face and build that change little with the years. These are true meetings, Jimmie's only connection of past and present, yet they do nothing to provide any sense of history or continuity. If anything they emphasise—at least to his brother, and to others who see them together—that Jimmie still lives, is fossilised, in the past.

All of us, at first, had high hopes of helping Jimmie—he was so personable, so likable, so quick and intelligent, it was difficult to believe that he might be beyond help. But none of us had ever encountered, even imagined, such a power of amnesia, the possibility of a pit into which everything, every experience, every event, would fathomlessly drop, a bottomless memory-hole that would engulf the whole world.

I suggested, when I first saw him, that he should keep a diary, and be encouraged to keep notes every day of his experiences, his feelings, thoughts, memories, reflections. These attempts were foiled, at first, by his continually losing the diary: it had to be attached to him—somehow. But this too failed to work: he dutifully kept a brief daily notebook but could not recognise his earlier entries in it. He does recognise his own writing, and style, and is always astounded to find that he wrote something the day before.

Astounded—and indifferent—for he was a man who, in effect, had no 'day before'. His entries remained unconnected and unconnecting and had no power to provide any sense of time or continuity. Moreover, they were trivial—'Eggs for breakfast', 'Watched ballgame on TV'—and never touched the depths. But were there depths in this unmemoried man, depths of an abiding feeling and thinking, or had he been reduced to a sort of Humean drivel, a mere succession of unrelated impressions and events?

Jimmie both was and wasn't aware of this deep, tragic loss in himself, loss of himself. (If a man has lost a leg or an eye, he knows he has lost a leg or an eye; but if he has lost a self—

himself—he cannot know it, because he is no longer there to know it.) Therefore I could not question him intellectually about such matters.

He had originally professed bewilderment at finding himself amid patients, when, as he said, he himself didn't feel ill. But what, we wondered, did he feel? He was strongly built and fit, he had a sort of animal strength and energy, but also a strange inertia, passivity, and (as everyone remarked) 'unconcern'; he gave all of us an overwhelming sense of 'something missing,' although this, if he realised it, was itself accepted with an odd 'unconcern.' One day I asked him not about his memory, or past, but about the simplest and most elemental feelings of all:

"How do you feel?"

'How do I feel,' he repeated, and scratched his head. 'I cannot say I feel ill. But I cannot say I feel well. I cannot say I feel anything at all.'

'Are you miserable?' I continued.

'Can't say I am.'

'Do you enjoy life?'

'I can't say I do . . .'

I hesitated, fearing that I was going too far, that I might be stripping a man down to some hidden, unacknowledgeable, unbearable despair.

'You don't enjoy life,' I repeated, hesitating somewhat. 'How then do you feel about life?'

'I can't say that I feel anything at all.'

'You feel alive though?'

'Feel alive? Not really. I haven't felt alive for a very long time.'

His face wore a look of infinite sadness and resignation.

Later, having noted his aptitude for, and pleasure in, quick games and puzzles, and their power to 'hold' him, at least while they lasted, and to allow, for a while, a sense of companionship and competition—he had not complained of loneliness, but he looked so alone; he never expressed sadness, but he looked so sad—I suggested he be brought into our recreation programs at the Home. This worked better—better than the diary. He would become keenly and briefly involved in games, but soon they ceased

to offer any challenge: he solved all the puzzles, and could solve them easily; and he was far better and sharper than anyone else at games. And as he found this out, he grew fretful and restless again, and wandered the corridors, uneasy and bored and with a sense of indignity—games and puzzles were for children, a diversion. Clearly, passionately, he wanted something to do: he wanted to do, to be, to feel—and could not; he wanted sense, he wanted purpose—in Freud's words, 'Work and Love'.

Could he do 'ordinary' work? He had 'gone to pieces', his brother said, when he ceased to work in 1965. He had two striking skills—Morse code and touch-typing. We could not use Morse, unless we invented a use; but good typing we could use, if he could recover his old skills—and this would be real work, not just a game. Jimmie soon did recover his old skill and came to type very quickly—he could not do it slowly—and found in this some of the challenge and satisfaction of a job. But still this was superficial tapping and typing; it was trivial, it did not reach to the depths. And what he typed, he typed mechanically—he could not hold the thought—the short sentences following one another in a meaningless order.

One tended to speak of him, instinctively, as a spiritual casualty—a 'lost soul': was it possible that he had really been 'de-souled' by a disease? 'Do you think he *has* a soul?' I once asked the Sisters. They were outraged by my question, but could see why I asked it. 'Watch Jimmie in chapel,' they said, 'and judge for yourself.'

I did, and I was moved, profoundly moved and impressed, because I saw here an intensity and steadiness of attention and concentration that I had never seen before in him or conceived him capable of. I watched him kneel and take the Sacrament on his tongue, and could not doubt the fullness and totality of Communion, the perfect alignment of his spirit with the spirit of the Mass. Fully, intensely, quietly, in the quietude of absolute concentration and attention, he entered and partook of the Holy Communion. He was wholly held, absorbed, by a feeling. There was no forgetting, no Korsakov's then, nor did it seem possible or imaginable that there should be; for he was no longer at the mercy

of a faulty and fallible mechanism—that of meaningless sequences and memory traces—but was absorbed in an act, an act of his whole being, which carried feeling and meaning in an organic continuity and unity, a continuity and unity so seamless it could not permit any break.

Clearly Jimmie found himself, found continuity and reality, in the absoluteness of spiritual attention and act. The Sisters were right—he did find his soul here. And so was Luria, whose words now came back to me: 'A man does not consist of memory alone. He has feeling, will, sensibility, moral being . . . It is here . . . you may touch him, and see a profound change.' Memory, mental activity, mind alone, could not hold him; but moral attention and action could hold him completely.

But perhaps 'moral' was too narrow a word—for the aesthetic and dramatic were equally involved. Seeing Jim in the chapel opened my eyes to other realms where the soul is called on, and held, and stilled, in attention and communion. The same depth of absorption and attention was to be seen in relation to music and art: he had no difficulty, I noticed, 'following' music or simple dramas, for every moment in music and art refers to, contains other moments. He liked gardening, and had taken over some of the work in our garden. At first he greeted the garden each day as new, but for some reason this had become more familiar to him than the inside of the Home. He almost never got lost or disoriented in the garden now; he patterned it, I think, on loved and remembered gardens from his youth in Connecticut.

Jimmie, who was so lost in extensional 'spatial' time, was perfectly organised in Bergsonian 'intentional' time; what was fugitive and unsustainable, as formal structure, was perfectly stable, perfectly held, as art or will. Moreover, there was something that endured and survived. If Jimmie was briefly 'held' by a task or puzzle, a game or calculation, held in the purely mental challenge of these things, he would fall apart as soon as they were done, into the abyss of his nothingness, his amnesia. But if he was held in emotional and spiritual attention—in the contemplation of nature or art, in listening to music, in taking part in the Mass in chapel—the attention, its 'mood', its quietude, would persist for a while, and the

would be in him a pensiveness and peace we rarely, if ever, saw during the rest of his life at the Home.

I have known Jimmie now for nine years—and neuropsychologically, he has not changed in the least. He still has the severest, most devastating Korsakov's, cannot remember isolated items for more than a few seconds, and has a dense amnesia going back to 1945. But humanly, spiritually, he is at times a different man altogether—no longer fluttering, restless, bored, and lost, but deeply attentive to the beauty and soul of the world, rich in all the Kierkegaardian categories—and aesthetic, the moral, the religious, the dramatic. I had wondered, when I first met him, if he was not condemned to a sort of 'Humean' froth, a meaningless fluttering on the surface of life, and whether there was any way of transcending the incoherence of his Humean disease. Empirical science told me there was not—but empirical science, empiricism, takes no account of the soul, no account of what constitutes and determines personal being. Perhaps there is a philosophical as well as a clinical lesson here: that in Korsakov's, or dementia, or other catastrophic conditions, however great the organic damage and Humean devastation, there remains the undiminished possibility of reintegration, by communion, by touching the human spirit: and that what is preserved in what seems at first a hopeless state of total personal devastation.

### *Postscript*

It is now that retrograde amnesia, to some degree, is very common, and is almost universal, in cases of Korsakov's. The classical Korsakov's is a profound and permanent, but 'pure', devastation of memory caused by alcoholic destruction of the mammillary bodies—even among very heavy drinkers. One may, of course, see Korsakov's syndrome with other pathologies, as in Luria's patients with tumours. A particularly fascinating case of an acute (and apparently fully transient) Korsakov's syndrome has been well described very recently in the so-called Transient Global Amnesia (TGA) which may occur with migraines, head injuries or impaired blood flow to the brain. Here, for a few minutes or hours, a severe and

singular amnesia may occur, even though the patient may continue to drive a car, or, perhaps, to carry on medical or editorial duties, in a mechanical way. But under this fluency lies a profound amnesia—every sentence uttered being forgotten as soon as it is said, everything forgotten within a few minutes of being seen, though long-established memories and routines may be perfectly preserved. (Some remarkable videotapes of patients *during* TGAs have recently [1986] been made by Dr John Hodges, of Oxford.)

Further, there may be a profound retrograde amnesia in such cases. My colleague Dr. Leon Protass tells me of a case seen by him recently, in which a highly intelligent man was unable for some hours to remember his wife or children, to remember that he had a wife or children. In effect, he lost thirty years of his life—though, fortunately, for only a few hours. Recovery from such attacks is prompt and complete—yet they are, in a sense, the most horrifying of ‘little strokes’ in their power absolutely to annul or obliterate decades of richly lived, richly achieving, richly memoried life. The horror, typically, is only felt by others—the patient, unaware, amnesiac for his amnesia, may continue what he is doing, quite unconcerned, and only discover later that he lost not only a day (as is common with ordinary alcoholic ‘blackouts’), but half a lifetime, and never knew it. The fact that one can lose the greater part of a lifetime has peculiar, uncanny horror.

In adulthood, life, higher life, may be brought to a premature end by strokes, senility, brain injuries, etc., but there usually remains the consciousness of life lived, of one’s past. This is usually felt as a sort of compensation: ‘At least I lived fully, tasting life to the full, before I was brain-injured, stricken, etc.’ This sense of ‘the life lived before’, which may be either a consolation or a torment, is precisely what is taken away in retrograde amnesia. The ‘final amnesia, the one that can erase an entire life’ that Buñuel speaks of may occur, perhaps, in a terminal dementia, but not, in my experience, suddenly, in consequence of a stroke. But there is a different, yet comparable, sort of amnesia, which can occur suddenly—different in that it is not ‘global’ but ‘modality-specific’.

Thus, in one patient under my care, a sudden thrombosis in

the posterior circulation of the brain caused the immediate death of the visual parts of the brain. Forthwith this patient became completely blind—but did not know it. He looked blind—but he made no complaints. Questioning and testing showed, beyond doubt, that not only was he centrally or ‘cortically’ blind, but he had lost all visual images and memories, lost them totally—yet had no sense of any loss. Indeed, he had lost the very idea of seeing—and was not only unable to describe anything visually, but bewildered when I used words such as ‘seeing’ and ‘light.’ He had become, in essence, a non-visual being. His entire lifetime of seeing, of visuality, had, in effect, been stolen. His whole visual life had, indeed, been erased—and erased permanently in the instant of his stroke. Such a visual amnesia, and (so to speak) blindness to the blindness, amnesia for the amnesia, is in effect a ‘total’ Korsakov’s, confined to visuality.

A still more limited, but none the less total, amnesia may be displayed with regard to particular forms of perception, as in the last chapter, ‘The Man Who Mistook His Wife for a Hat’. There there was an absolute ‘prosopagnosia’, or agnosia for faces. This patient was not only unable to recognise faces, but unable to imagine or remember any faces—he had indeed lost the very idea of a ‘face’, as my more afflicted patient had lost the very ideas of ‘seeing’ or ‘light.’ Such syndromes were described by Anton in the 1890s. But the implication of these syndromes—Korsakov’s and Anton’s—what they entail and must entail for the world, the lives, the identities of affected patients, has been scarcely touched on even to this day.

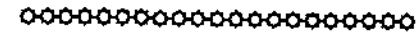
In Jimmie’s case, we had sometimes wondered how he might respond if taken back to his home town—in effect, to his pre-amnesia days—but the little town in Connecticut had become a booming city with the years. Later I did have occasion to find out what might happen in such circumstances, though this was with another patient with Korsakov’s, Stephen R., who had become acutely ill in 1980 and whose retrograde amnesia went back only two years or so. With this patient, who also had severe seizures, spasticity and other problems necessitating in-patient care, rare weekend visits to his home revealed

a poignant situation. In hospital he could recognise nobody and nothing, and was in an almost ceaseless frenzy of disorientation. But when his wife took him home, to his house which was in effect a 'time-capsule' of his pre-amnesia days, he felt instantly at home. He recognised everything, tapped the barometer, checked the thermostat, took his favourite armchair, as he used to do. He spoke of neighbours, shops, the local pub, a nearby cinema, as they had been in the mid-Seventies. He was distressed and puzzled if the smallest changes were made in the house. ('You changed the curtains today!' he once expostulated to his wife. 'How come? So suddenly? They were green this morning.' But they had not been green since 1978.) He recognised most of the neighbouring houses and shops—they had changed little between 1978 and 1983—but was bewildered by the 'replacement' of the cinema ('How could they tear it down and put up a supermarket overnight?'). He recognised friends and neighbours—but found them oddly older than he expected ('Old so-and-so! He's really showing his age. Never noticed it before. How come everyone's showing their age today?'). But the real poignancy, the horror, would occur when his wife brought him back—brought him, in a fantastic and unaccountable manner (so he felt), to a strange home he had never seen, full of strangers, and then left him. 'What are you doing?' he would scream, terrified and confused. 'What in the hell is this place? What the hell's going on?' These scenes were almost unbearable to watch, and must have seemed like madness, or nightmare, to the patient. Mercifully perhaps he would forget them within a couple of minutes.

Such patients, fossilised in the past, can only be at home, oriented, in the past. Time, for them, has come to a stop. I hear Stephen R. screaming with terror and confusion when he returns—screaming for a past which no longer exists. But what can we do? Can we create a time-capsule, a fiction? Never have I known a patient so confronted, so tormented, by anachronism, unless it was the 'Rose R.' of *Awakenings* (see 'Incontinent Nostalgia', Chapter Sixteen).

Jimmie has reached a sort of calm; William (Chapter Twelve) continually confabulates; but Stephen has a gaping time-wound, an agony that will never heal.

## 3



## The Disembodied Lady

The aspects of things that are most important for us are hidden because of their simplicity and familiarity. (One is unable to notice something because it is always before one's eyes.) The real foundations of his enquiry do not strike a man at all.

—Wittgenstein

What Wittgenstein writes here, of epistemology, might apply to aspects of one's physiology and psychology—especially in regard to what Sherrington once called 'our secret sense, our sixth sense'—that continuous but unconscious sensory flow from the movable parts of our body (muscles, tendons, joints), by which their position and tone and motion are continually monitored and adjusted, but in a way which is hidden from us because it is automatic and unconscious.

Our other senses—the five senses—are open and obvious; but this—our hidden sense—had to be discovered, as it was, by Sherrington, in the 1890s. He named it 'proprioception', to distinguish it from 'exteroception' and 'interoception', and, additionally, because of its indispensability for our sense of *ourselves*; for it is only by courtesy of proprioception, so to speak, that we feel our bodies as proper to us, as our 'property', as our own. (Sherrington 1906, 1940.)

What is more important for us, at an elemental level, than the control, the owning and operation, of our own physical selves? And yet it is so automatic, so familiar, we never give it a thought.

Jonathan Miller produced a beautiful television series, *The Body*

sensory neuropathies. The worst affected have body-image disturbances like Christina. Most of them are health faddists, or are on a megavitamin craze, and have been taking enormous quantities of vitamin B<sub>6</sub> (pyridoxine). Thus there are now some hundreds of 'disembodied' men and women—though most, unlike Christina, can hope to get better as soon as they stop poisoning themselves with pyridoxine.



## The Man Who Fell out of Bed

When I was a medical student many years ago, one of the nurses called me in considerable perplexity, and gave me this singular story on the phone: that they had a new patient—a young man—just admitted that morning. He had seemed very nice, very normal, all day—indeed, until a few minutes before, when he awoke from a snooze. He then seemed excited and strange—not himself in the least. He had somehow contrived to fall out of bed, and was now sitting on the floor, carrying on and vociferating, and refusing to go back to bed. Could I come, please, and sort out what was happening?

When I arrived I found the patient lying on the floor by his bed and staring at one leg. His expression contained anger, alarm, bewilderment and amusement—bewilderment most of all, with a hint of consternation. I asked him if he would go back to bed, or if he needed help, but he seemed upset by these suggestions and shook his head. I squatted down beside him, and took the history on the floor. He had come in, that morning, for some tests, he said. He had no complaints, but the neurologists, feeling that he had a 'lazy' left leg—that was the very word they had used—thought he should come in. He had felt fine all day, and fallen asleep towards evening. When he woke up he felt fine too, until he moved in the bed. Then he found, as he put it, 'someone's leg' in the bed—a severed human leg, a horrible thing! He was stunned, at first, with amazement and disgust—he had never experienced, never imagined, such an incredible thing. He felt the

leg gingerly. It seemed perfectly formed, but 'peculiar' and cold. At this point he had a brainwave. He now realised what had happened: *it was all a joke!* A rather monstrous and improper, but a very original, joke! It was New Year's Eve, and everyone was celebrating. Half the staff were drunk; quips and crackers were flying; a carnival scene. Obviously one of the nurses with a macabre sense of humour had stolen into the Dissecting Room and nabbed a leg, and then slipped it under his bedclothes as a joke while he was still fast asleep. He was much relieved at the explanation; but feeling that a joke was a joke, and that this one was a bit much, he threw the damn thing out of the bed. But—and at this point his conversational manner deserted him, and he suddenly trembled and became ashen-pale—*when he threw it out of bed, he somehow came after it—and now it was attached to him.*

'Look at it!' he cried, with revulsion on his face. 'Have you ever seen such a creepy, horrible thing? I thought a cadaver was just dead. But this is uncanny! And somehow—it's ghastly—it seems stuck to me!' He seized it with both hands, with extraordinary violence, and tried to tear it off his body, and, failing, punched it in an access of rage.

'Easy!' I said. 'Be calm! Take it easy! I wouldn't punch that leg like that.'

'And why not?' he asked, irritably, belligerently.

'Because it's *your* leg,' I answered. 'Don't you know your own leg?'

He gazed at me with a look compounded of stupefaction, incredulity, terror and amusement, not unmixed with a jocular sort of suspicion, 'Ah Doc!' he said. 'You're fooling me! You're in cahoots with that nurse—you shouldn't kid patients like this!'

'I'm not kidding,' I said. 'That's your own leg.'

He saw from my face that I was perfectly serious—and a look of utter terror came over him. 'You say it's my leg, Doc? Wouldn't you say that a man should know his own leg?'

'Absolutely,' I answered. 'He *should* know his own leg. I can't imagine him *not* knowing his own leg. Maybe *you're* the one who's been kidding all along?'

'I swear to God, cross my heart, I haven't . . . A man *should* know his own body, what's his and what's not—but this leg, this *thing*'—another shudder of distaste—'doesn't feel right, doesn't feel real—and it doesn't *look* part of me.'

'What *does* it look like?' I asked in bewilderment, being, by this time, as bewildered as he was.

'What does it look like?' He repeated my words slowly. 'I'll tell you what it looks like. *It looks like nothing on earth.* How can a thing like that belong to me? I don't know *where* a thing like that belongs . . .' His voice trailed off. He looked terrified and shocked.

'Listen,' I said. 'I don't think you're well. Please allow us to return you to bed. But I want to ask you one final question. If this—this thing—is *not* your left leg' (he had called it a 'counterfeit' at one point in our talk, and expressed his amazement that someone had gone to such lengths to 'manufacture' a 'facsimile') 'then where is your own left leg?'

Once more he became pale—so pale that I thought he was going to faint. 'I don't know, he said. 'I have no idea. It's disappeared. It's gone. It's nowhere to be found . . .'

### Postscript

Since this account was published (in *A Leg to Stand On*, 1984), I received a letter from the eminent neurologist Dr Michael Kremer, who wrote:

I was asked to see a puzzling patient on the cardiology ward. He had atrial fibrillation and had thrown off a large embolus giving him a left hemiplegia, and I was asked to see him because he constantly fell out of bed at night for which the cardiologists could find no reason.

When I asked him what happened at night he said quite openly that when he woke in the night he always found that there was a dead, cold, hairy leg in bed with him which he could not understand but could not tolerate and he, therefore,

with his good arm and leg pushed it out of bed and naturally, of course, the rest of him followed.

He was such an excellent example of this complete loss of awareness of his hemiplegic limb but, interestingly enough, I could not get him to tell me whether his own leg on that side was in bed with him because he was so caught up with the unpleasant foreign leg that was there.

## 5



## Hands

Madeleine J. was admitted to St. Benedict's Hospital near New York City in 1980, her sixtieth year, a congenitally blind woman with cerebral palsy, who had been looked after by her family at home throughout her life. Given this history, and her pathetic condition—with spasticity and athetosis, i.e., involuntary movements of both hands, to which was added a failure of the eyes to develop—I expected to find her both retarded and regressed.

She was neither. Quite the contrary: she spoke freely, indeed eloquently (her speech, mercifully, was scarcely affected by spasticity), revealing herself to be a high-spirited woman of exceptional intelligence and literacy.

'You've read a tremendous amount,' I said. 'You must be really at home with Braille.'

'No, I'm not,' she said. 'All my reading has been done for me—by talking-books or other people. I can't read Braille, not a single word. I can't do *anything* with my hands—they are completely useless.'

She held them up, derisively. 'Useless godforsaken lumps of dough—they don't even feel part of me.'

I found this very startling. The hands are not usually affected by cerebral palsy—at least, not essentially affected: they may be somewhat spastic, or weak, or deformed, but are generally of considerable use (unlike the legs, which may be completely paralysed—in that variant called Little's disease, or cerebral diplegia).

Miss J.'s hands were *mildly* spastic and athetotic, but her sensory capacities—as I now rapidly determined—were completely intact: she immediately and correctly identified light touch, pain, tem-



through a circle, until it comes into view. She finds this signally successful if she cannot find her coffee or dessert. If her portions seem too small, she will swivel to the right, keeping her eyes to the right, until the previously missed half now comes into view; she will eat this, or rather half of this, and feel less hungry than before. But if she is still hungry, or if she thinks on the matter, and realises that she may have perceived only half of the missing half, she will make a second rotation till the remaining quarter comes into view, and, in turn, bisect this yet again. This usually suffices—after all, she has now eaten seven-eighths of the portion—but she may, if she is feeling particularly hungry or obsessive, make a third turn, and secure another sixteenth of her portion (leaving, of course, the remaining sixteenth, the left sixteenth, on her plate). 'It's absurd,' she says. 'I feel like Zeno's arrow—I never get there. It may look funny, but under the circumstances what else can I do?'

It would seem far simpler for her to rotate the plate than rotate herself. She agrees, and has tried this—or at least tried to try it. But it is oddly difficult, it does not come naturally, whereas whizzing round in her chair does, because her looking, her attention, her spontaneous movements and impulses, are all now exclusively and instinctively to the right.

Especially distressing to her was the derision which greeted her when she appeared only half made-up, the left side of her face absurdly void of lipstick and rouge. 'I look in the mirror,' she said, 'and do all I see.' Would it be possible, we wondered, for her to have a 'mirror' such that she would see the left side of her face on the right? That is, as someone else, facing her, would see her. We tried a video system, with camera and monitor facing her, and the results were startling, and bizarre. For now, using the video screen as a 'mirror', she did see the left side of her face to her right, an experience confounding even to a normal person (as anyone knows who has tried to shave using a video screen), and doubly confounding, uncanny, for her, because the left side of her face and body, which she now saw, had no feeling, no existence, for her, in consequence of her stroke. 'Take it away!' she cried, in distress

and bewilderment, so we did not explore the matter further. This is a pity because, as R. L. Gregory also wonders, there might be much promise in such forms of video feedback for such patients with hemi-inattention and left hemi-field extinction. The matter is so physically, indeed metaphysically, confusing that only experiment can decide.

### *Postscript*

Computers and computer games (not available in 1976, when I saw Mrs S.) may also be invaluable to patients with unilateral neglect in monitoring the 'missing' half, or teaching them to do this themselves; I have recently (1986) made a short film of this.

I could not make reference, in the original edition of this book, to a very important book which came out almost simultaneously: *Principles of Behavioral Neurology* (Philadelphia: 1985), edited by M. Marsel Mesulam. I cannot forbear quoting Mesulam's eloquent formulation of 'neglect':

When the neglect is severe, the patient may behave almost as if one half of the universe had abruptly ceased to exist in any meaningful form. . . . Patients with unilateral neglect behave not only as if nothing were actually happening in the left hemisphere, but also as if nothing of any importance could be expected to occur there.