

Chapter 1

The reality of Mrs B

Mrs B was a 63 year-old, well-groomed, noble person with a strong character – and a psychiatrist with a long professional experience. She had grown up in Poland and moved to Switzerland as a young doctor, where she married a state official. Now, she walked slowly down the ward, holding a cane and chatting with patients. The ward was the Division for Neurorehabilitation at the University Hospital of Geneva, a familiar environment for a psychiatrist, and Mrs B appeared to feel at ease – except that she considered it inappropriate that a student was following her all the time and that the nurses seemed to keep a constant eye on her.

She was used to having discussions; many people asked her questions these days. At first sight, this discussion, too, appeared quite unremarkable:

‘Would you please explain what you call your ‘malady’?’

Mrs B tried to make it simple: ‘My malady – that was a rupture of a vessel in my left leg.’

‘Do you still work?’

‘Yes, I do.’

‘Where do you work?’

Mrs B, with no hesitation: ‘Presently, I have a position at the outpatient clinic in Geneva.’

‘In what sector, what speciality?’

‘In physiotherapy.’

‘You are a specialist in physiotherapy?’

Mrs B, slightly annoyed and briefly hesitating: ‘I am not a specialist in physiotherapy, I am a psychiatrist.’ And then, after a deep breath: ‘Right now, there was a position available down there, and when I finished working in psychiatry, I went there to work in physiotherapy.’

‘Okay ... You said you had visitors this morning?’

‘Yes, my mother and my brother.’

‘They came this morning?’

‘Yes.’

‘What’s on your programme for today?’

Mrs B did her best to explain: ‘Tonight, I will give a reception at my home.’

‘And who will be there?’

‘There will be my colleagues, my family from Poland, and the physiotherapists who care for me.’

‘How old are you?’

Mrs B, with her reading glasses slowly gliding down her nose: ‘40 years’, and then, with an amused giggle: ‘That is – a bit more ... almost 50!’

‘And do you know what you will do this afternoon and tonight?’

‘Yes. I will go home now and prepare the reception. Then, my family and friends will arrive towards 6 p.m.’

Admittedly, an unremarkable interview. Unless one knows that Mrs B was not in our Neurorehabilitation Division to practice psychiatry; she was hospitalized because she had suffered a devastating haemorrhage from a vessel in her head. She was now severely amnesic, unable to retain any significant information in memory. With this in mind, let us again go over the interview:

‘My malady – that was a rupture of a vessel in my left leg.’

Mrs B had had repeat hip surgery during the last 19 years, but now, the vessels in her left leg were perfectly fine. The idea of the rupture of a vessel was obviously correct; except that this time, it was a vessel in her head.

Presently, I have a position at the outpatient clinic in Geneva.... I am not a specialist in physiotherapy – I am a psychiatrist.... Right now, there was a position available down there, and when I finished working in psychiatry, I went there to work in physiotherapy.

Mrs B had indeed been a psychiatrist until her early retirement 15 years ago, but she had never held a position as a psychiatrist at our hospital. Of course, she had never worked as a physical therapist; but she had had many therapy sessions after her hip surgery 15 years ago.

‘Have you had visitors this morning?’ – ‘Yes, my mother and my brother.’

She often received visits from her husband and her children, but she had had no visits that morning, when she underwent therapies, and she had definitely not had a visit from her mother or brother this morning; they had died 13 and 15 years ago.

‘How old are you?’ – ‘40 years.... That is – a bit more ... almost 50!’

Mrs B was 63 years old.

‘Tonight, I will give a reception at my home.... There will be my colleagues, my family from Poland, and the physiotherapists who care for me.’

Of course, nobody expected Mrs B to give a reception tonight, now that she was hospitalized. But, as the wife of a state official, she had given many receptions until 15 years ago, including a reception for Polish officials.

Mrs B was not lying, at least not intentionally. She believed what she said. She was greatly concerned about tonight’s reception and repeatedly left the unit in order to prepare for it. But her story was not true, either, at least not now. Her story was fabricated, bringing together bits and pieces of her past into a new tale, a fable – she was confabulating!

Her life changed during a vacation three months previously when, out of the blue, she was hit by the most intense headache ever experienced, rapidly followed by loss of consciousness – a typical subarachnoid haemorrhage, a bleeding into the pain-sensitive space between the skull and the brain. A CT-scan revealed the cause, the most frequent one: a ruptured aneurysm, that is, a quasi-explosion of an abnormal, thin-layered bulge from the wall of an artery. In the case of Mrs B, it had affected the vessel most frequently involved: the anterior communicating artery, a delicate vessel at the base of the skull which connects two main arteries at the inner side of the brain and irrigates a small but critical area of the brain, the basal forebrain. Rupture of an aneurysm in this area often destroys surrounding tissue: the cortex at the base of the brain (just above and behind the eyes), which is called the orbitofrontal cortex, plus the basal forebrain (Figure 4.3c). If the bleeding is very severe, blood may enter the liquid-filled ventricles within the brain, as was the case with Mrs B. The accumulation of fluid then additionally compresses the brain from the inside.

Mrs B was lucky to have rapid neurosurgical care. A fine tube was introduced into the ventricular system to release pressure, and two days later, the aneurysm was fixed with a coil put in place by means of a catheter introduced in the groin and pushed all the way up to the aneurysm of the tiny vessel below the brain.

Mrs B slowly regained consciousness. For four weeks, she remained apathetic, hardly saying a word or initiating an act. After five weeks, she was transferred to our neurorehabilitation unit. Within two weeks, she became active and started to talk. After an initial confusional phase with disorganized behaviour, incoherent speech and inversion of her day and night rhythm, attention improved and her behaviour became increasingly consistent.

Now, three months after the haemorrhage, Mrs B caught the eye of the outsider only by her considerate demeanour, her careful gait and possibly her heavy make-up, which she corrected every time she returned to her bedroom. She had a façade of grande dame, perfectly disguising her devastating memory disorder.

Unfortunately, her recovery complicated things enormously, and our team, used to such situations, soon became aware of it. Although discussions about daily events made it clear that Mrs B did not retain any significant information in memory – she immediately forgot therapy sessions and the identity of collaborators – she did not appear to be aware of her confused memory. When asked about her memory, she acknowledged having a bad memory and seemed to be concerned about this, but she could not indicate any specific situation of failure. She became depressed, and required treatment, without being able to indicate a reason. In no case would she consider the possibility

that her ideas were inappropriate, that she was not a psychiatrist on our ward, and that she did not have to give a reception in the evening. The confabulations themselves were not the problem. The real problem was the conviction behind the confabulations, the degree of truthfulness they attained in her thinking. Mrs B acted according to ideas, which were taken from her remote past, but which were dangerously inappropriate guides for present behaviour.

There was no problem with her conviction that she was a staff physician in our clinic. It simply meant that the neuropsychologist could not start a therapy session before reporting last night's emergency admissions. Or Mrs B might suddenly leave a therapy session stating that she had to look after an emergency admission to the clinic. She would then leave the room, walk aimlessly around the unit and desperately search for the patients she had to take care of. To her family, it meant that she might all of a sudden rise from the chair in the cafeteria and leave them with the idea that she had to resume work. To me, it meant that she would occasionally stop me in the hallway to express her satisfaction with her work in our unit and apply for the prolongation of her contract as a psychiatrist. Normally, I would assure her that her job was not in danger. When I responded that I was not her superior but her doctor, and that she was a patient, she would insist: 'No, no, I know that you are professor Schnider, my boss' (my name happens to be very similar to the name of a psychiatrist who had been her superior in the past).

Much more dangerous were the confabulations that made her leave the unit every once in a while, with no warning. If she was caught before leaving the building, she reacted vigorously and insisted that she had finished work and had to return home to prepare a reception. So, supervision by a student was organized who accompanied Mrs B during the day. Although he was briefed about the intensity of Mrs B's beliefs, he was considerably shocked when she started to beat him with her cane, simply because he did not let her go into the hospital's kitchen. She, by contrast, was convinced that this was the place where she had to prepare tonight's menu. Similarly, her husband was stunned when Mrs B slapped him during a brief visit to their home: finding the fridge almost empty, she suspected him of removing the food that she had already shopped for tonight's reception.

The situation grew dangerous when Mrs B failed to be picked up before she left the hospital on her own. In other confabulating patients, such a disappearance might not be dangerous; they return home or go to their workplace. Mrs B, however, also had deficient attention – she could not concentrate on several things at a time – and a visit to town together with the occupational therapist had shown that she would not pay attention to traffic lights. When Mrs B left the hospital, she was at real risk of running into trouble.

In marked difference to this profound confusion about her present situation, her accounts of her remote past were consistent and correct. She correctly recalled memories from her childhood, her life in Poland, school and professional life, her arrival in Switzerland, and her family life up to her 40s. She always recognized old friends of the family and her children, now 30 and 35 years old. When asked about them, she would refer to them as if they were still children with whom she intended to go to the cinema or the zoo. She correctly recalled the names of her grandchildren, six and eight years old, but then talked about adventures with them that she had in fact lived with her own children 20 years ago.

In contrast to the correct accounts of the remote past, she appeared to be unaware of events from the last 15 to 20 years. She had not integrated the death of her parents and brother 9, 10, and 13 years ago, nor of her retirement 15 years ago. She was completely unfamiliar even with highly dramatic recent events, such as the terrorist attacks of 11 September 2001, 19 months before her cerebral haemorrhage. When asked about such events, she just indicated that she did not know. Also, when asked about invented events and facts using plausible names ('What happened in Mimushina, what's a water knube, who is Princess Lolita?') she would acknowledge ignorance rather than confabulate.

She recognized long-standing celebrities on photographs; if she did not recognize a celebrity, she would admit it rather than confabulate. When she was shown photographs of strangers that she had never seen, she would say so. This was completely different for portraits of clinic collaborators who she had seen regularly for weeks and months, but whom she failed to recognize by their name. When shown such photographs, she either denied familiarity or confabulated an identity in relation to her perceived reality at that moment. For example, she recognized the neuropsychologist's portrait as the one of her horse-riding school's stable-girl, and my portrait as the one of her riding teacher: that day, she was convinced that she had been horse riding in the morning (Schnider *et al.* 2005a).

The conviction that she had to go to work or to give a reception persisted for months. We wondered whether a change of environment would have an influence on the content of her confabulations. On different days, the neuropsychologist accompanied Mrs B to places that she had known for many years: her grocery store, the medical library at the university, or a public park where she had often been with her children 20 years ago. Mrs B recognized all places and correctly recounted personal events associated with them; these places, on their own, did not evoke confabulations. At the end of each visit, Mrs B was asked about her plans for the day. Her common response was, not surprisingly, that she would now return to her work at the clinic or to her home to

prepare tonight's reception. Only after the visit to the park, where they had talked about her children, did she respond that she would go to the movie with her children this afternoon; in her idea, her children were ten and twelve years old (in fact, they were 30 and 35 years old). It appeared that the discussion about past visits to the park with her children now induced a false idea of reality. Could the mere thinking about a past reality induce a false percept of the 'now'?

We tried to explore this phenomenon further. Mrs B's husband provided us with photographs depicting personal events: a dinner at a restaurant, a promenade by the lake, a visit to the cinema with her grandchildren, a visit to the opera, the grocer's, or an art exhibition. On ten different days, Mrs B was shown one photograph and asked to recall as many details as possible and to think about things that did or might have happened on the occasion. Our interest was not to know how many details she recalled, but to have her concentrate fully on the depicted situation and think intensively about it. After five minutes, the picture was put aside. Then, one minute later, the examiner asked her: 'By the way: where have you been today?' Amazingly, on nine out of ten test sessions, she named the event that had been discussed, as if it had really just occurred.

It thus appeared that, when Mrs B retained a vague memory, the gist of a discussion or of a thought, she would not spontaneously feel whether this memory referred to a mere thought or to a real event – she failed to monitor whether a thought had its source in true reality or in thinking.

This result was obtained about three months after the haemorrhage, when all tests indicated that Mrs B did not retain any information in memory beyond five to ten minutes. In this period, she was extremely amnesic. She was still very severely amnesic after six months with lowest scores in all memory tests, but discussions with her suggested that she now retained at least some bits of information from day to day. In this period, the procedure did not evoke confabulations anymore. We concluded that, when a person has some memory capacity, a five-minute discussion is no longer sufficient to implant a false reality in thought. Nonetheless, the observation suggests that the environment does influence the content of confabulations.

After she returned home, she needed the permanent assistance of a housemaid while her husband was at work. She confabulated less often but the topics remained fairly stable. She would frequently wake up in the morning and believe that she had to go to work; often, she prepared herself to leave the house. During the day, in company, she confabulated less but increasingly resented being under supervision. She continued to believe that she had to prepare receptions in the evenings and on several occasions surprised her husband with full menus prepared for several people.

After 17 months, a notable change occurred. Mrs B started to complain that her memory was bad and sought information when she was unsure about where she was or what she had to do. When questioned about her plans, she would rather acknowledge ignorance than produce a confabulation. She still occasionally asked her husband in the morning whether she had to go to work, but easily accepted a negative response. The idea that she had to give a reception completely disappeared. Daily supervision was reduced and Mrs B stayed alone at home during much of the day.

Mrs B's case is a particularly striking example of reality distortion in memory: she confabulated events that had not taken place, falsely recognized people, and confused current reality with elements from the past. Yet none of these malfunctions of memory appeared to be random. Every false idea had a plausible trace in her past. But the most striking aspect of her memory problem was the conviction she held in her inappropriate plans: She was absolutely convinced about her perceived reality and acted according to it. Nothing and nobody could make her change her mind about where she was and what she had to do.

What is it that motivates patients like Mrs B to make up false stories about their recent doings and to produce plans for the future that are completely incompatible with their current status? What is it that prevents them from acting and thinking in accord with true ongoing reality?

