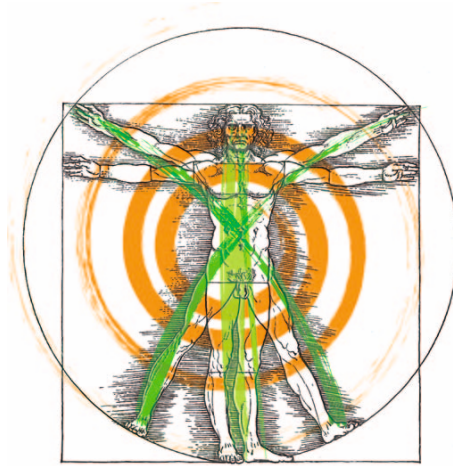


Helga Bost



Discovering the Unexpected

**How people with spinal cord injury (SCI)
can learn to sense themselves and move
again using the Feldenkrais® Method**

Five video-documented case examples

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Reading sample

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3.2 The start of Feldenkrais work with Michael

About 2½ years after his accident, in August 1991, Michael stood on my doorstep for the first time.

He had come alone in his own car. He had two walking aids (crutches) and was wearing two full-length walking braces that were held in place by pins in the soles of his shoes. Reaching up to his thighs, the braces had locks to secure his ankles as well as his knees. The right knee lock was already open at this time, allowing the right knee to bend. However, he didn't have sufficient control of this yet. The open knee lock in his right brace protected his knee from hyperextending when his right foot hit the ground when walking.

I created a picture for myself of his ability to move and sense himself. Michael seemed able to sense my compressive touch on his left thigh: **"That feels tingly". So that told him where my hands were. From his knee downward she could sense some kind of touch, but couldn't tell where. When I moved his foot into flexion he had no sensation of this.**

Michael had a well-trained trunk. However, when lying on his back he could hardly lift his head. That would be the theme of the coming FI and group sessions. Using his hands to move and check the position of his legs in space, he was able to bend his legs and put his feet flat on the table. From here he was able to tilt his legs a little to the right and left without his hands, but this still looked rather shaky.

From now on Michael came twice a week, on Friday for his FI session and on Monday evening for the public group. In terms of content I matched the two sessions to each other when possible. During the first weeks I mostly worked from the head end, addressing the uninjured parts of his body.

Even in these early days I would start a lesson by relieving the tension in his arms and shoulders and getting his chest mobile. We remained faithful to this approach throughout the years. The tone in Michael's body was to be as neutral as possible in order to facilitate comparison in the movement experiments that followed.

During these first weeks I would then continue the lesson by working on the theme of "connections from the top downward": lengthening the arms to reach the thorax, lengthening at first homolaterally and later on also diagonally. These movements clearly reached the pelvis. Toward the end of the session, on pushing from the feet upward through the skeleton, I would find a clear transmission of force from the feet to the head. After the lesson, Michael would notice when sitting that his upper body was more relaxed or that he felt longer on his right side than on his left.

3.2.1 The pattern of standing: first visible initiation of movement

October 25, 1991

In my documentation of the seventh FI lesson I read: “very interesting”. It was a lesson in side-lying in which I presented Michael with many movement options involving the pelvis and shoulder. At the end of the lesson he was lying on his back again. My intention was to prepare him for integrating his experience of the many movements we had gone through. His system was supposed to be able to utilize these new experiences, enabling him to stand and walk safely right away.

Had I been working with a client without spinal cord injury, I would have applied a light push from their feet upward through the body in order to see how they would process this nonverbal suggestion of standing, i.e. whether they could let the impulse pass freely through to the head. But Michael had no sensation in his feet. On that day I decided to present him with this suggestion of standing from the top downward, as in a shoulder or head stand. I placed my hands on either side of his seventh cervical vertebra, where I was in good contact with his skeleton and felt confident. From here I pushed lightly downward towards his feet.

Something very unexpected happened right before my eyes. Michael responded to my suggestion with a large movement below the site of his spinal cord injury, initially without any sensation of his own movement. I had never before witnessed such a reaction in healthy persons.

This initiation of movement can be clearly seen in the film recording of November 6, 1991. His legs turn inward, his feet pointing forward toward the ceiling. There is an increase in muscle tone from his legs through his pelvis all the way up to his chest. I could clearly see how Michael's whole body was preparing itself for standing.

In healthy people this phenomenon of movement initiation remains invisible because it is controlled and inhibited (see Chapter 3.3: “Inhibition of initiated movement”). By contrast, in Michael's case large movements could be seen below the site of injury.

Could it be that Michael's sensory nerves, responsible for feeling and sensation, had sustained greater damage than his motor nerves? This might explain how it was possible for this large movement pattern to be initiated before Michael was able to sense it.

However, the inner course of the movement was so clear, and its force so strong, that Michael learnt to sense it in the same lesson.

After a few of these gentle downward pushes, given from close to the seventh cervical vertebra, Michael asked “Is something happening down there?” **He could feel a cold tingle, a shiver from within.** In the course of the same lesson, as I continued my pushes, always slightly varying

the place of contact of my hands, he could feel how **"SOMETHING" inside him was pulling upwards towards his kneecaps and his ankles were flexing. After two further pushes he could sense the muscles of his pelvis responding. He could feel muscle tone building in his buttocks.**

What was happening, in effect, was what I had wanted to show Michael: he was preparing himself for standing. I could see the initiation of movement, and Michael was learning to sense it. **In the same lesson he began to recognize and then to utilize the lines of movement associated with coming into upright standing. He stood more stable and was able to organize his walk with greater ease than he had been before.**

This was very surprising for me, as I had never seen anything of the like. All the same, I was confident that it was OK. It was happening in response to the information I wished to convey through touch.

After the experiences of these sessions it was clear to both of us that a very special process of joint learning had begun.

I bought myself a camera in order to fully document this process from now on.

November 6, 1991



Video Michael 03

3.2.1.1

The big surprise – the pattern of standing reappears.

3.2.1.1 From standing to the pattern of walking

On November 6, 1991 I was documenting our work on video. To our great surprise, the pattern of standing we had first seen on October 25, 1991 reappeared.

I began the session by repeating with Michael the sequence of movement initiation described above. And indeed, I was able to initiate the large pattern of standing in the same way as on the first occasion.

Michael was still lying on his back. I was then curious about what would happen if I pushed only on one side from next to the seventh cervical vertebra downward in the direction of his feet. What I now saw was the leg on the same side organize itself for standing. It turned inward, drawing itself toward the midline while flexing the foot as if to take his weight and enable him to stand safely.

Only then did the other leg begin to bend at the knee, drawing itself upright in a sideways movement like a frog's leg. When I let go with my hand both legs returned to their initial position.

I saw a flurry of excitement in Michael's system and so first waited for everything to quieten down.

Very slowly – with intermittent pauses – I presented the same information to Michael alternately, pushing once on the left and once on the right side. When I remained for a while with my hand on one side of his seventh cervical vertebra, his system completed the frog-like movement of his leg, using a powerful contraction of his adductor magnus muscle to raise his knee and bring his foot into a standing position.

As I continued to alternate left and right, I could clearly see **the pattern of walking now being initiated in Michael. And he was beginning to sense the inner lines of force associated with this movement.**

I was very surprised. Michael's system was converting the impulse I was giving him with my hands into visible movement. It was the enactment of the exact idea I was trying to convey to him. I had never seen anything like this before.

Would Michael now be able to perform this movement at his own will? I decided to continue verbally. I now asked him to actively perform **the movement he had experienced internally on his own**, without any prompting from my hands. With his right side he succeeded in organizing this flexing movement without having to look. He pulled up his right leg sideways a little, froglike, and then pulled his knee upright until his foot was flat.

He couldn't do this with his left side yet. But he found a solution: lifting his head in order to see his left leg, he succeeded in organizing a few flexing movements on this side as well. Then he laid his head back down again. Next, sooner than expected, he managed to bend his left leg and pull it up to standing without even looking. Moving it sideways again in frog style, he then slowly brought his leg back to lying with good control.

"The conscious control is overriding ... The overworked centers fatigue, and the inhibited ones suffer from dystrophy, and the whole spatial body image is distorted. The body sensation is found unreliable and is compensated for by an increased use of the eyes to supplement and correct the faulty muscular account of the body state in space."

Moshé Feldenkrais (1985) p. 89 – 90

Reflecion 1

Michael's body image was beginning to redevelop. At first, during the initiation process, his movements were still rather jerky, but he had only just begun to actively experiment with his right side when they became steadier and smoother.

He was not yet able to do this with his left side. He made a few attempts, but they did not yet result in the desired movement. Evidently, he needed his eyes for control. And then, before I was even able to ask him, he smoothly pulled his left leg up sideways and brought his foot flat.