A path of discovery - lessons with Anna

A potential beginning

Eureka – "I have found it" is an expression ascribed to Archimedes as he made the discovery, or arrived at the insight, that led to the final formulation of the Archimedean principle. The story goes that when Archimedes stepped into a bathtub full of water, he suddenly realized that the water that overflowed onto the floor was related directly to himself. As he then sat in the bath, he may even have reflected on the mobility and levity of his body and the sensation of experiencing himself in different ways relative to the law of gravitation.

It is not a coincidence that Feldenkrais pedagogy is a heuristic approach to learning, i.e. a teaching method whereby questions posed by the teacher stimulate the student to gain independent knowledge and insight.

The atmosphere of the initial meeting is often very special. This is also true of the first lesson, a conversation on an infinite number of levels. Before a trained Feldenkrais teacher can say, "This was a good lesson", the student should have noted a change, an insight, made a discovery, or obtained the answer to a question, however vaguely formulated. Sometimes this occurs during the lesson. It may well happen as the student rises from the bench, gathers impressions from the lesson and compares them with habits and with a sensation in the body prior to the lesson. Sometimes it happens much later and in a totally different context.

My first lesson with Anna was associated with just such an insight, a discovery. To this day, several years later, she can still remember the thought and experience that rendered her a voluntary prisoner in an endless process of development that is *awareness through movement*. The verbal question that I posed to Anna as she stood by the bench after the first lesson was: "Can you sense your skeleton?" I had asked her to stand in a variety of different positions. I had also asked her to stretch her arms above her head, which she was not accustomed to doing. A totally new question arose then in her. After years of physical therapy and other forms of treatment, no one had ever made her attentive of her skeleton, the most solid part of her entire self. My question made her speechless and introspective.

After a moment's silence she said that she could perceive her skeleton as a diagonal cross that intersected in her pelvis. She could distinctly follow the cross from her right arm down through to her left leg and foot, but could neither sense nor think her way along the diagonal from her left arm down to her paralyzed right leg. The latter was empty and non-existent, abruptly ending just beyond her hip. This was a rather shocking, extremely vivid and totally new experience for her. In her mind, the cross was flaming red.

It has later been confirmed that there are no sensory disorders in her paralyzed right leg. Anna's insight represents something entirely different, something that I relate to the concept of awareness. The leg that we saw, touched and talked about didn't exist – as an image or as a thought – for Anna that day. It was empty. "Lacuna – emptiness" is the expression that the neurologist Oliver Sacks uses to describe a similar phenomenon in his autobiography *A leg to stand on*. My work with Anna has been about filling the emptiness and giving it significance – and a lot more.

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Anna has had a hard time walking since 1979, when at the age of 40 she was afflicted with meningitis that nearly took her life. She was rapidly paralyzed from head to toe. Even her eyes were motionless, staring in two different directions. She was kept alive with the help of a respirator. When the illness was no longer life threatening, her initial prognosis was to spend the rest of her life in a wheelchair. Patiently and persistently Anna began the struggle to return, to prove the invalidity of her dismal prognosis, to rise from the wheelchair and walk her way back to some social mobility and status – however unsteadily, on a partially paralyzed right leg and with the help of a cane. Physical therapy and rehabilitation were helpful. New neurological methods of treatment were tried and Anna was always prepared to give each new method her best.

When we met in April 1990, Anna had come to an impasse with regard to available methods of treatment. Physical therapy and muscle training no longer improved her condition, but simply maintained it, and maybe even impeded further development. People who come to lessons based upon the Feldenkrais Method often have one or more questions they want to have answered. Anna sought answers to some yet unformulated questions. She wondered if she had posed all the questions about her debility, and if not, could she get better. She was particularly concerned about her balance since she was still, despite years of physical therapy, extremely unstable on her feet. She showed the strong drive characteristic of a curious person who has difficulty taking no for an answer, accepting limits and giving up. She was also foresightful and wanted to learn how to avoid unfavourable aging. She expressed a fear that her reserves wouldn't suffice as she grew older, that she would lose her independence and freedom of movement. Pains in the hip, back and left shoulder and potential fractures were very realistic threats for her.

Back to the first lesson: what was the point of my question about her skeleton? During the first lesson I had cautiously attempted to touch and move her, assessed the degree of control she had over her movements and the extent to which these were differentiated. I came to the conclusion that she was extremely tense and that she was unaware of this fact. Her reactions indicated that she didn't have the vaguest idea about her true motor state. She was unaware that she was using her muscles much more than necessary. In Feldenkrais terms this means that her ability to make effective use of her skeleton's supporting and carrying function was inadequate. I judged this to be one of the primary reasons for her poor balance, more significant in this context than her paralyzed leg. The results of subsequent years of teaching have confirmed my initial hypothesis.

As a Feldenkrais teacher, I try to avoid regarding my students in terms of their medical diagnoses — despite my background in physical therapy. A diagnosis is only a superficial and incomplete description of what is injured or diseased and says very little about how a person functions and behaves. Anna's diagnosis, summarized by the physician responsible for her rehabilitation for many years, was "monopares dexter" (a paralysis of the limbs on her right side). It would take time before Anna could share my understanding of the incompleteness of such a diagnosis with regard to her functional disorders, and how this description of a neurological reality has been an impediment to her all these years. Her right leg has been viewed as the remnant damage of her paralysis and all attention has been focused on regaining control of it. No one has helped her in a logical

way to regard her leg as an integral part of her entire self. Apart from the Feldenkrais Method, no method has thus far been able to improve her total function by systematically improving her control of all other body parts and her entire self.

Then and now

When I first met Anna in the waiting room I noticed how unsteady she was as she rose from the chair. She wobbled spastically up to my bench, supported by a cane in her left hand. I had an impulse to give her a hand, but resisted — the precariousness of her balance was very obvious.

I began our first lesson by asking Anna to lie down on her back on my low bench. Everything that is important during a lesson happens around the wide upholstered bench, about the height of a chair seat. Since communication occurs as the student is lying down, he or she isn't preoccupied by having to balance on the soles of one's feet or on one's sitting bones. This freedom leaves space for new thinking. In the beginning, many students find the bench hard, but the encounter between a hard bench and a soft body is, in itself, a source of invaluable information.

I regard the bench – which is replaced occasionally by a chair, a table, a wall to lean on or a floor mat – as a laboratory for the language of movement. It is here where interpretation, potential control and the effect of this control – one of the brain's many dialects – become conscious.

As Anna lay on her back I noted that it wasn't possible to extend her right leg. Her hip was contracted, rigid to the touch and bent slightly inward. Even her knee was bent stiff and her foot was flexed and turned inward. Her big toe pointed straight up and the tendon that stretches it formed a distinct ridge in her sock. How difficult it must be to have a foot that doesn't always fit into one's shoes, an unwieldy foot that refuses to adapt to the shape of elegant shoes and has to be constrained in clumsy tie shoes. She lay with her back arched and shoulders bent forward. Her neck was straight and stiff. Her pelvis and chest appeared to be one. She lay the same way she walked and stood – bent and twisted, spastic. This was particularly true of her right side and especially of her right leg, but actually it was true of the entire trunk of her body. Of course I didn't ask her to try to straighten out her body, since that would have meant asking her to do something that she couldn't do. Instead I just tried – then as now – to ask her to do things that I believe she can do. This is the case both when I instruct her orally and when I instruct her by handling her without words.

This approach is not unique for Anna, but applicable to every student, regardless of the questions they pose. It involves one of the basic principles of the Feldenkrais Method. All these years I have explicitly avoided asking her to do anything that she might experience as a correction of her posture or gait. Instead I have waited patiently until she has changed on her own. She has arrived at these personal insights and continues to do so. Lessons begin now by her saying: "You know, now I can..." or "Since I was here last time I've been thinking..." or "How would you explain this sensation?" The lesson is then devoted to answering questions via movement and increased awareness. This approach offers food for thought from an educational perspective. Moshe Feldenkrais is

often quoted as saying: "What you have truly learned is what you have discovered on your own." Over the years Anna has developed into a very inventive and reflecting student.
Back to our first meeting. Even though Anna said that she had come for her right leg, I began to slowly lift and twist all of her. I lifted her arms, moved her left foot, tried to move her pelvis and her shoulder blades. Having noted how difficult it was for her to lie flat on her back, I wanted to understand just how strongly contracted her abdomen was. The ability to lie flat on one's back is not innate but something we learn. It takes approximately a half a year to learn and it is an ability that many people lose, due either to life style or to injury. Anna had clearly forgotten something she had once learned. I placed several pads under her head in order to adjust its angle to the exact position where she felt that her head was supported. When I carefully lifted her head I could feel how she held it stiff as a board all the way down to her tailbone. Any free mobility of the head that is associated with good balance was imperceptible. It would take many, many lessons before she even began to notice how tightly contracted her spine was. That it could also be referred to as ' tense' or 'spastic' is more a question of semantics. All I had to do was touch her right leg, and her foot in particular, for the spasticity to increase and for her leg to contract like a caterpillar that had been poked at. Sometimes, however, her reaction was the exact opposite: her leg became rigid, extended and unbendable. Her leg alternated between two extremes without any semblance of transition. In terms of comfort and relief, her position on my bench in the beginning can hardly be regarded as restful. I tried several positions during the lessons, but for Anna to lie on her right or her left side was not a good alternative to lying on her back and to lie on her stomach was totally out of the question.

Just recently, 15 years after the onset of the illness, Anna came to a lesson, put aside her cane and stood with her feet wide apart and very securely in front of me. She stretched both her arms straight up into the air, high above her head, with a swayback and said: "Look, my arms are the same length now. The tension is gone around the lower ribs on my right side. I hardly realized that I was tense there, but now that it's so different I notice it. Now I understand why I couldn't stretch my arms equally and why one always felt shorter. By the way, the pain in my left shoulder is gone too." She let her arms fall to her side and stood symmetrically with an uplifted chest. Had I not known which side had been paralyzed, I wouldn't have been able to see it in this motionless state. The same is true when she is lying on the bench, on her back or on her stomach. The difference between her spastic right side and her left side is almost no longer visible. Her resting position, regardless of the position, is so completely different from the way it was the first day we met.

Her motor control of her entire body has changed and improved and continues to do so. She is beginning to soften up and become suppler. She doesn't bend her leg inward as much as she did before and doesn't walk so pigeon-toed. She walks considerably more erect than before and she uses her right hip in a new and dynamic way. Her pelvic movements have changed in relationship to this, and she doesn't have to contract her right side so much to lift her leg. This has meant that her buttocks muscles have been activated and developed. Now she can sit, without any great effort, with her knees separated. She likes her reflection in shop windows more now that it is no longer so crooked and bent.

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The path has been long, with lots of lessons and lots of sidetracking. As I attempt to recapitulate the path and my strategy, in light of Anna's and my own development, several fundamental points can be delineated. While a list of the basic elements of a teaching and learning situation that extends over a long period of time could well be read and understood as the description of a linear process, such is not the case here. Communication occurs simultaneously on several different levels and with various parts of the body. Change occurs gradually, although the reactions to it can be abrupt and transitory. The method is characterized by a view that resembles the hierarchical system and function of the brain, in the sense that what is happening takes place on several different levels *and* is also affected by the brain's unlimited ability to associate.

As a Feldenkrais teacher, it is my concern that the specific theme of the lesson is brought out while underlying themes are stimulated more discreetly. "All parts of the body are so connected" is a common comment of a student to a lesson, as a touch of the toe is registered in one's neck. I can, both in my thoughts and with my hands, twist and turn my students to view them from various angles, perspectives, on several levels and in different dimensions. To allow, then, a certain differentiation or clarification to rest a while is interesting from a didactical point of view. When I return to the same part or concept after several lessons it may have matured for the student in the process, enabling it to be more understandable and controllable.

The points below should not be read as an ordered list, but more as a summary of the various themes that lessons with Anna have touched upon over the years:

- The ability to lie on her stomach in a variety of positions
- Increased control of the paralyzed right leg
- Increased control of the right hip
- Specific control of the spasticity of the right foot
- Generally increased control over the degree of muscle contraction, primarily in the trunk
- Continuous development of and increased control over the pelvis in relationship to the chest
- Insight into the necessity of controlling the head and neck in relationship to the chest, shoulder blades and arms

Getting back on one's stomach

It is considered inappropriate to place newborns on their stomach, since this can negatively affect their breathing. Parents are thus advised to wait until the child is able to turn over on its own. This always happens sooner or later, assuming that illness or injury has not seriously hampered the child's development. During a particularly feverish time of motor development, the little human being experiments with countless ways of moving from one position to the other. If all goes well, there is no difference between right and left. When the child has mastered a movement, it is immediately taken for granted. We have long known that this is an integral part of the process of maturation and learning required to fully master gravity and take on a flexible *Homo erectus* attitude.

What has happened then to people who have lost the ability to lie on their stomach or just to simply get out of the position? Have they lost at the same time some of their basic control of and adaptation to gravity? Do they have difficulty moving in general? Do they become unsteady and are

they affected by a variety of pain syndromes? "Yes" said Moshe Feldenkrais emphatically and he developed a complex learning system to help people to relearn the elegance that nature had built into our nervous system and that deals largely with our ability to rotate on our own skeletal axes. To rotate or turn from a prone, seated or standing position while walking, jumping or somersaulting, is something that the human being can do better than any other living being – even if many perpetual sitters may have forgotten the dynamics of their own colthood.

When we met it had been a long time since Anna had been on her stomach. She hadn't been lying face down since she became ill. Lack of practice, spasticity and stiff joints had hindered her. This is one of the first thoughts I had when I saw her clumsy movements on my bench. If one is very spastic it is difficult to lie on one's stomach, and thus it was a pedagogic challenge to get her to experience a sense of security, harmony and freedom from tension while lying down.

If you have an immobile hip that is bent stiff, lying on your stomach doesn't feel comfortable. Thus relearning how to lie on one's stomach, with the head turned to the left or to the right, revitalizes the prerequisites for numerous movements, and hence numerous human functions. From a didactic point of view, the ability to lie calmly and securely on one's stomach is a milestone. But – to lie on one's stomach can also be viewed as an interlude, a temporary pose, a transitional position prior to rolling over, a conversion and change of direction in several senses.

There are infinite ways to lie on your stomach, depending upon how your head is positioned, how your shoulders and hips are turned and whether or not you are lying symmetrically. Where you place your hands and feet also influences the options. The easier it is to move from one position to another, the more positions you can assume without difficulty (and not just on your stomach!), the better control you have over the various parts of your body and the easier it is to distinguish and find yourself.

That's where we began the first lessons. In the beginning Anna could only lie for a brief moment with her cheek turned to the bench as even this was unpleasant and painful. Muscular tension developed an enormous force that pressed down on her head and shoulders. Her limbs and chest were stiff to the touch. I worked slowly and methodically with her, part by part. To begin with, I followed, among others, the basic lessons described by my teacher, Yochanan Rywerant, in his book *The Feldenkrais* Method*: Teaching by* Handling*.* I varied and continue to this day to do variations on these lessons, alternating freely between "functional integration" and "awareness through movement". As a teacher I find that these concepts complement one another their effect varies depending upon the theme of the lesson. Some lessons are completely silent, focused deeply on sensing and creating control, while others are more conversational, like when I ask Anna to move in a particular way and she responds in her own way. To locate support contra movement and then to allow this finding to be integrated with the overriding message "here is your skeleton – use it" is ever present in each mode of learning.

Anna's entire right side was significantly more contracted and stiff, and consequently shorter, than her left side. This indirectly exposed her pelvis and hip to uneven pressure and pain.

The longer the lessons proceeded, the more Anna began to sense just how much she efforted. Rather soon she was able to note how her abdominal tension seemed to hinder her. The hard and unyielding tension in her abdomen, chest and hip muscles made it difficult for her to lie flat. Her throat and neck muscles resisted. It was important to explain the consequences of trying to strengthen muscles that she had such poor control of, and how this increased the muscle contraction in her back with enormous stiffness as a result.

This anti-message was difficult to assimilate. I was relating to her in a way that was contradictory to conventional practice of physical therapy – but I let her body convince her. Gradually she could, as our work proceeded, sense the logic of what I was trying to explain. On her regular visits to the gym she no longer exercised her abdominal, chest and back muscles, but rather used the equipment there to guide and compare different movements, especially the differences between her right and left side.

The lessons progressed and Anna was soon able to lie without discomfort on her stomach, supporting herself on her elbows like a sphinx. She let the small of her back — the totally unmanageable — rest in a supple swayback, with her head bent backwards and her eyes looking straight ahead or at the ceiling. This meant that even her right hip could be stretched out, no longer the contracted bend she had when she first came.

The catch question for nearly every chair sitter is where the hip joint is located. Where in our image of ourselves do we sense that this joint, with its infinite options for movement, is actually situated? We play with small children by asking them to point to their mouth, nose or ears. Very few adults can, however, point to their hip joint. The most common guess points to the iliac crest, the edge of one's underwear or the outside of one's thigh. That our erect existence is highly dependent upon our control of two joints located low and deep in the middle of each side of the pelvis is something we rarely think about. Many are unaware of an extra strain around the hip, but for Anna it was more than that — in the beginning her hip felt as though it were locked in place.

A responsive movement is often easiest to initiate by offering the system a very clear message of support and relief. When positioned on one's side there is a potential perspective that is surprisingly seldom experienced. It can be achieved by alternately relieving the muscles that rotate and draw the hip inward and the muscles that oppose this. As these relief signals respond to one another, an either-or effect is achieved that results in very free hip mobility. So when Anna could finally discern a rotation around her hip joint it was a real déjà-vu sensation. It was a milestone that a hip that had been so stiff and spastic for 11 years had begun to rotate and let go.

Anna's feeling of emptiness began to be replaced by her own very clear sense of right and wrong. She has always expressed a distinct sense of the difference between right and wrong. "This is the way it should be, the way I do it on my left side, but the right side is wrong." As her thoughts bounce back and forth, intensively comparing the differences, her left side becomes a "feed**-**forward", a vision of what she is seeking. As we proceed with the lessons, it becomes easier and easier to break the spasticity and

look for the new — new thoughts, new concepts, new contexts — a deeper dimension.

For long time spasticity control was tested and researched with the help of abduction splints. The limbs were pressed apart in order to master a contraction pattern. Anna had, of course, tried using splints and despite the fact that she had them at home for several years, she was still unable to actively move or even to actively let go of her hip when she came to me. Ever since we managed to systematically define the concept of her hip for her and, through very many combination of movements, succeeded in rotating her ball and socket hip joint, it is no longer especially difficult for her to separate her knees. Under favourable conditions she can even control this unwieldy action. She has also taken the initiative to practice sitting on a tailor's stool.

What is missing in the various forms of therapy that Anna had previously tried, as I understand it, is knowledge about how human beings learn and change. It is only when you talk about and demonstrate anatomy that it is relevant to talk about muscles. A normal human being activates movement and muscles through a thought to act, regardless of what a particular muscle or rigid and stereotypical position is called. If I press Anna's legs apart until her muscles let go, she hasn't integrated a new insight and thus hasn't altered her internal organization. She must accept and integrate this movement as a way of actively doing something. The difference between enduring pain and stretching, as opposed to learning in an organic way, is thus the difference that makes a difference.

The artificial floor

In a laboratory in the USA, Professor Kandel's[1] research team has taught aplysia snails to refrain from the defense mechanism of pulling in their gills when they are poked at. On my Feldenkrais bench in Solna, Sweden, Anna has learned how to refrain from bending her spastic toes. The former is an example of advanced basic research to study how the nerve system learns on a cellular level; the latter is a clear example of organic learning by human beings.

Viewed from a snail's perspective, the use of an artificial floor for learning is not so remarkable. It's just a simple, ingenious method developed by Moshe Feldenkrais to produce information by focusing on and making use of subtle touch. For Anna, the purpose of the information is to improve the effectiveness of her control of a nearly reflexive contraction phenomenon. This information, coupled with the re-discovery of basic reactions to achieve skeletal support via her foot, can reduce unnecessary muscular activity.

In the beginning, Anna's entire concentration and focus during our lessons was preoccupied with the hyperactivity and overreaction of her right foot to any and all stimuli. Nowadays she keeps an attentive inner eye on her right foot and leg and everything that affects them. During our lessons, any greater "interference and noise" – the inaudible noise associated with unnecessary muscle activity – is no longer common. In the event that noise does occur, she is capable of getting it rather quickly under control; a more refined inner dialogue is being developed. I know

[1] Professor Kandel shared a medical Nobel Prize in 2000 for this discovery.

that this is true for her in all other contexts, in life outside of our lessons as well.

In order to directly affect her foot, I asked Anna to lie on her back. I placed a soft support under her neck and under each ankle, just below her Achilles tendons. Her feet hung out off the edge of the bench. I ensured that she was comfortable and had support for her head. I then took a plate and began to gently touch the toes of her left foot with the hard and slightly cold surface of the rectangular plate. The touch was light as a feather, first of her baby toe, then of her next toe, and gradually involved all her toes including her big toe. I gave them support, using the plate to induce them to follow my small movements in various directions. I alternated between allowing the plate to touch her skin and then releasing the contact. My hands had to be light to the touch and attentive, registering every pull in the tendons on the upper side of her foot.

The idea of beginning with a part of the body that has better control, and yet is similar to the part that one wishes to impart with new information, is characteristic of the Feldenkrais Method. In this way I offer the entire system a foretaste and the calming reassurance that stimulate one's curiosity. "My touch is nothing to fear or worry about" is the underlying message. At the same time I know that every student's brain automatically begins to compare right and left, similarities and differences.

Rather soon I was able to note the way her toes were drawn to the plate, how her toe joints became flexible and pliant. I let them bend and stretch. When her entire forefoot followed my slow movements without greater difficulty, I could make use of the anatomical potential in the twist of her arch as well as the multi-dimensional movements of her ankle. It is important to be careful not to force her foot to do anything, but rather to get the active tendons around her ankle to soften. I discovered that her left foot was spastic too, as her foot became warmer and suppler and her entire left side reacted all the way up to her face and eye. I began then to apply the same procedure to her right foot. Anna's big toe on her right foot seemed to lead a life of its own. The extensor tendon that lifts her big toe rose at the slightest stimulus and her entire foot twisted then upward and inward. This usual reaction w soon changed to another: instead of stretching out, tense and spastic, her foot bent down toward the plate and latched on like a snail. As I slowly repeated the procedure we had gone through with her left foot, her right foot behaved in a way that surprised her. I could gradually get her reactions to let up. Her foot was no longer stiff and clumsy and I could sense an increased flexibility. I can easily imagine how a foot clings to the uneven surface of a rock when one walks barefoot.

Anna was very surprised by her first lesson with the "artificial floor". After all these years she had expected her usual, strongly spastic reaction, but felt instead how her foot hung over the ankle support, relaxed, despite the pressure in all directions from the plate. I ended by giving her foot a blow that resonated from her heel up through her skeleton to the crown of her head. The message was: "Anna, you are a heel walker!" She reacted by accepting, without spasms. This was yet another important insight – how her foot was able to accept support the way it should without cramping! I concluded the lesson by asking Anna, as she lay on my bench with her knees bent, to use her feet to support and lift her pelvis. The "pelvic lift" is a common physical exercise, but it had been a

long time since Anna had used both of her feet with equal pressure and support and the same degree and quality of movement. When she finally stood up, her foot was still completely flat on the floor and she suddenly sensed a balance that she hadn't felt for a long, long time. Her entire right side was considerably less tense than usual and even less tense than her left side! Her brain was so confused that her big toe gripped the floor as she began to walk. This was exactly the opposite of what she usually did. For the first time we had established a decisive difference that makes a difference in her foot.

Everything that has happened since then is infinite refinement of the same theme. That day, all of Anna's senses told her that her right foot could feel a floor. The entire sole of her foot could be used to activate primitive patterns to solicit support via her skeleton. Anna was tired and giddy when she drove home that day.

The first true confirmation that our work was affecting a definitive change in her came after this lesson with the artificial floor. A friend whom she hadn't seen in over two years noticed how she suddenly walked more steadily down the slope to the lake near her country home. After having latched onto my plate, her system has become much more receptive to this uneven terrain.

This is learning in the Feldenkrais way. An experience is etched into one's memory and used naturally in a variety of entirely different contexts. I don't have to tell Anna to use her skeleton for support. Her system is so motivated and directed toward change to the normal that what is new is automatically integrated and made use of. This is the way a child learns and this is the way an injured nervous system is repaired.

Ever since Anna experienced her first insight she has thought about an inner visualization of herself and, above all, of her empty right leg. When I touched her left foot she could easily obtain a clear image of the structure of her foot, but as soon as I touched her right foot it was like switching off the light. I have been able to note the same phenomenon with other students who come because of some pain: no clear image – no adequate control. A lot of research has been done in this field. For example, people who have suffered a stroke that has resulted in the loss of feeling in their hand, have more difficulty reviving their manual dexterity. It is interesting that in Anna's case regular neurological tests indicate that all feeling is intact. She appears to have some sort of amnesia (memory loss) associated with apraxia (an inability to act) which is not organic in the classical sense, but in a functional sense.

The unformulated questions – increased awareness

There are an infinite number of methods used to refine the quality of human life. A great number of these methods direct attention toward breathing. This is also the case with the Feldenkrais Method. It is not unique in this respect. If I want to communicate new thoughts and awareness to my students, breathing is an obvious means of direct communication.

Moshe Feldenkrais' anarchistic idea about breathing is that it should not, any more than anything else, be governed, but rather supported. Any obstacles to free breathing should, however, be removed methodically and consistently. This is achieved by skeletal support or through the

integration of all movements that are directly or indirectly associated with breathing. When unnecessary obstacles are removed, breathing becomes expansive and takes up the space it needs, assuming that it is not blocked by a constricted windpipe, a tense abdomen, a stiff back or a self-image of immobile ribs.Breathing is, of course, functionally self-regulating.

Breathing always changes during the course of a good lesson. The quality of breathing movements is a critical source of information about Anna. Her breathing tells me if she is accepting or just tolerating what is happening. If I want to impart a profound change in her I must work with and for profound acceptance, highly attentive to her response on several levels. The subtle difference between acceptance and tolerance is the most difficult aspect of the entire teaching situation. Acceptance requires the teacher's complete presence and is always on the student's conditions. The expression of acceptance via breathing cannot be disguised; it is tangible and immediate. It is not just a verbal concept, nor is it social or cultural. Acceptance is more, and when it is there it is mutually very concrete and physical. When I guide Anna to recapture the mobility between her pelvis and chest, when I help her to sense the inherent resiliency of her ribs or the heave of her breastbone via the freedom and control of her neck and shoulders, her entire breathing pattern is affected indirectly.

Burnt child dreads the fire–a variation on the trauma reflex

Anna had a terrible stroke of bad luck. She scorched the top of her right foot with hot applesauce, resulting in a serious third-degree burn. Everything turned upside-down and we had to discontinue our lessons for a long time. We didn't resume lessons until she had returned from a long trip abroad and the injury was completely healed, at least superficially. The first lesson after the injury was like beginning from the beginning. Her control of her right leg had regressed (relapsed to a previous state of development). She had to concentrate enormously just to let me touch her right foot. I noted how she and her entire leg had a very strong pattern of defense. I asked her to lie on her right-hand side. In this position I could let her know (mostly without words) that I wasn't going to touch her newly injured right leg. This was an important message to convey, so that even the thought of my touch would not be threatening.

Thus I slowly began to touch all of her using her right hip as an axle of mobility, i.e. so that movements in her right leg were indirect while her weight rested on the bench. I noticed how she reduced the tension in her entire body and how the spasticity in the muscles of her right leg let up. As the lesson proceeded I asked her to lie on her left side instead. From this position I began to manipulate her right leg. I twisted her relative to her upper and lower body and helped her to loosen up her shoulders and neck – all the old, familiar procedures.

Then suddenly, for the first time ever, Anna said: "You know Eva, I was really frightened in the silence just then; I must have been terribly anxious about my leg and the burn. Now when the tension has let up I realize just how much I have been protecting my right leg." As we summarized the lesson, we both observed that it was possible once again to touch her foot without instigating a withdrawal reflex. All the rigidity and stiffness accumulated in her leg were now gone. In other words, I had helped Anna to integrate and master an enormous defense

manifested in her nervous system by the burn. After she had been burned, her muscles and leg still had, on the lowest spinal level, a reflex to withdraw. A simple reminder was enough to regain control of her foot. Afterwards we could resume our process where we left off prior to the interruption.

What happened during this lesson is not a unique experience for me as a teacher. On the contrary, it is a common reaction to this special form of teaching by handling. I often discover this sort of residual trauma reflex, leading to an incapacitating rigidity, after a trauma and in conjunction with chronic pain — when one can no longer distinguish between the chicken and the egg. I find sometimes, though not always, that the touch of a body part recalls the entire scenario of a traumatic event. It is a total experience whereby movements give rise to associations and memories, along with emotions.

In approaching my students via dialogue and communication based on a view of the human being as an indivisible whole I find it inevitable that they are able to reawaken the individual trauma of every greater event in their life history. It is difficult to extenuate a trauma, such as a paralysis, that leaves such a profound impression. As a guide who is constantly moving at the border between what is obvious and what is impossible, I encounter hope and a nearly forbidden wish, despite many years of paralysis, to get better.

Although movements, or lack thereof, are a critical part of the Feldenkrais method, they do not lead their own mechanical and emotionless life independent of the psyche. Thus, on some level, there is a constant reminder of the event that triggered the paralysis.

Something lingered on in Anna, something that had been incompletely dealt with and unfinished. What was it? What sort of trauma is it to become totally paralyzed, practically lose one's life and yet succeed in returning to some degree of adequacy, to an independent life as a professional, a wife and a mother of three children? The more skillfully Anna could concentrate on being totally present during our lessons, and thereby control her spasticity, the deeper her thoughts turned inward. An enormous anger, fury, disappointment and even grief arouse in her by the experience that everything she did and tried to do with her right leg was wrong. She also began to experience again — or for the first time on a more conscious level — the various phases of what is referred to as the stages of grief.

Over a long period of time I had noticed how Anna's self image was becoming affected by her increased motor control. I also noted changes of behavior and attitude and not just in concrete changes of movement. In the beginning Anna spoke only about her paralyzed right leg, but when the small, subtle and profound changes in her control became noticeable, her entire way of thinking and viewing herself in a larger context gradually changed. This affected the thoughts and reflections that she felt had always been a part of her, both before and after the chaos that occurred in her brain and nervous system in conjunction with the illness. It is not surprising that she had more existential thoughts, not just those associated with her handicap, but those of a more broadly human and universal character.

A path of discovery - lessons with Anna

I find it inevitable that Anna's thoughts move freely when, during a few brief minutes of a lesson, we are oblivious of time. It is impossible to determine the direction that her free associations will take, which memory space she will open on to. Although she had undergone physical treatment for 11 years, none of the methods that she had tried previously had succeeded in mobilizing her entire awareness in such a concrete way. A different listening touch, an unconstrained and secure atmosphere with its special sort of guidance, helps. When moved beyond words, it is possible to reach the unformulated.

Inner and outer journeys

Anna likes to travel. Since we first met she has been on a safari in Africa and literally climbed up the Great Wall of China to the consternation of the Chinese guide. This is the sign of a curious and brave woman, especially considering how difficult it is for her to walk, of openness to new experiences, to the unusual and unknown. Perhaps this is why her journey on my bench has become such a special experience, an inward journey into the endlessness of awareness. Even her daily outings in Stockholm offer unexpected experiences. For Anna, an ordinary walk across a town square can still be associated with unpleasantness and fear. It is not a question of agoraphobia in the usual sense of the word but of the deep-seated fear of falling, headfirst. It is the insecurity of being in the middle of an endless square without a wall or something to lean on. Should worse come to worst she can find herself stuck, paralyzed in the true sense of the word, with her right leg as stiff as a board. Suddenly, without any warning she can lose her balance, and fall flat on her face. The impact of a fall instigates a trauma on many levels. Socially it is associated with shame and physically with injury, even though she has managed thus far to avoid a fracture. Anna said that in the beginning she used to fall several times a week, sometimes several times a day, just as she was about to take hold of a solid support. Fortunately she falls more seldom nowadays. It is even unusual. She has begun to think that she will make it all the way to her destination. That she falls less frequently is a clear sign that her control has increased and continues to do so and that it is directly related to our work together.

After successful lessons adult students often rise from the bench with that radiant and intense look that is so characteristic of small children as they take their first steps. A steady stance and walking says so much about being a human. It deeply touches our awareness, our sense of self and our self-reliance. I never cease marveling this phenomenon.

Anna's paralysis means that every step is a conscious act. What for most people is automatic background activity is, for Anna, an act that requires her total concentration. The image of flying on autopilot or with instruments often appears in my mind. Before when Anna walks it is as though she is flying through a storm with instruments. Before, she had to plan every step she took in minute detail, every place she would visit, everything she would be going through. Now she walks (travels) more spontaneously and her ability to handle unexpected situations and obstacles as if by autopilot has improved very noticeably.

A necessary continuation

A path of discovery - lessons with Anna

Why have I chosen to describe just Anna's path? Why not one of all the other fantastic "travel accounts" that I have experienced over the years as a Feldenkrais teacher? There are so many that have involved changes that are as radical as Anna's. I chose to describe Anna's journey because it is always very special to work with people who are spastic or have injuries in the central nervous system, to be able to contribute to a process of development that shouldn't be possible. Physicians usually limit the potential for rehabilitation to two years after an injury and in this case I have described the reconquest of lost territory 15 years later. Why should one give up, stop searching, stop being an innovative thinker?

After having worked with rehabilitation for almost 30 years, the Feldenkrais method has made it so clear to me that you have to question the methods and approaches you use. There is hope for many more people. In "the Feldenkrais world" what Anna and I have experienced is, as I have said earlier, not unique. There are numerous accounts of how people who were severely injured have been helped to a better life by the Feldenkrais Method. It is no miracle that I have described, but simply a systematic way of teaching the nervous system to function again on its own terms.

I have induced Anna to listen, think and understand in a way that is new to her. What I have to say is what is central; the message is what is important. Spoken language has sound, written language has symbols and dreams have images. The language of movement is just another dialect that makes use of the nervous system's alphabet. That's why I don't perceive the Feldenkrais Method as a method of movement as such but rather as a conceptual method, whereby "movement" is my teaching tool, an instrument that I use to reach Anna's awareness and image of herself and to develop her way of functioning. There are reasons to assume that the systematic concept formation that is evoked by the Feldenkrais Method is recognized by the brain and that the brain doesn't relate differently to understanding, interpreting and learning from the dialect of movement than it does to other dialects.

I am fascinated by how it is sometimes enough to intimate a concept of movement in order for Anna to understand the movement and a series of connections be set in motion — and suddenly acceptance is there. Association is the closet friend of learning. When Anna begins to associate to familiar sensations of movement in her hip, for example, she can with less and less effort continues this thinking. She never has time to tell me about all the memories that are reawakened between our meetings and each such association confirms a new reality.

Lessons with Anna are a pathway of discovery. It is not a mechanical process, but a deep and intensive dialogue between our two nervous systems. I practice a skill and a profession and regard it to be my job to guide her through some of the veritable chaos that appeared in her nervous system when she was afflicted with meningitis. Though the chaos was provoked over a very short period of time it will probably take her entire lifetime to sort it out.

The measurable and the perceptible — some reflections

Several of my students come to my studio as a last resort. Most of them come after many years of various sorts of physical therapy and physical

examinations: medical, paramedical and alternative medical therapy, orthopedic, neurological and more modern x-ray examinations. Few of their problems can be explained with the help of these innumerable examinations and tests. It is not uncommon that the credibility of their accounts is questioned and they are more or less categorized as psychiatric cases. They feel that something is wrong, that something is not functioning properly with them, and so they seek help and meet a variety of experts who examine and test them. When we first meet, a stigma surrounds them like an invisible membrane until they can begin to trust that I understand what they themselves have known for a long time.

Years of experience help me. I can almost foresee the enormous relief my students will feel as they are confirmed by my unique method and by my special — for them — way of thinking. Likewise, my hands both sense and confirm what they have to say. In these moments their functional obstacles begin to be transformed into something that can be influenced and affected.

Over the years I have had many conversations with students who were bitter because they hadn't been taken seriously by the medical establishment. They had been ignored and neglected and, worst of all, improperly treated. I have struggled with the ethical issues associated with this, wondering whether or not it is my duty to report such cases to the public health service, wondering if my unique knowledge could help to weed out inappropriate methods of treatment. At the same time I feel right now that it is not worthwhile to report what we teachers with Feldenkrais background regard to be inappropriate, since public health authorities wouldn't understand any more than the practitioners under their jurisdiction. We simply have to wait and see. What I do instead is to encourage my students to rely upon and take responsibility for themselves, to do what they feel is good for them.
All advice, regimens and exercise are unfortunately neither reliable nor even "scientific". For me it is all so simple and obvious. What happens in conjunction with Feldenkrais teaching is so convincing for the student; it is something that is organically correct. The method works time and time again and can be repeated, which is characteristic of the scientific, but it demands a different kind of thoughtfulness.

A meeting between the accepted science of objectivity and Anna as she figures in my case description offers an obvious example of this. When Anna discovered that concrete things were happening to her she renewed her contact with the physician who had been responsible for her rehabilitation. A new hope was reawakening. What we did and what Anna's entire system sensed and senses was that her function and ability could be improved and further developed — despite all. She wanted to share this insight with the Neuro rehabilitation unit and she wanted financial support for her lessons. She knows that the method can help several in a similar situation.

The doctor's visit resulted in an electromyographic (EMG) examination of her muscles, an attempt to measure the significance of Anna's account. Is the supposition that what is measurable is also true? The examination meant that Anna had to sit in an uncomfortable position on the examination table while electrodes were attached to her calf and thigh muscles. At the same time she was asked to bend her foot up while the electrical activity was registered. She later described the experience as an

extremely unpleasant situation in which her leg was transformed into a pillar of spasticity and discomfort, a virtual live wire. In this situation her right foot registered a maximum pulse in the wrong direction. The test indicated no increase in the voluntary activity of the upward bend of her foot, the movement that is considered to be most injured. It is this upward movement that lifts the toes and the forefoot in step. Her lack of this upward bend has previously been treated with supports, splints and electrical stimulation.

A few days later, on my bench, Anna and I could easily confirm, measure and feel, an improvement in her voluntary control of the same foot.

What is the difference then between these two methods of examination and observation? How is it that what cannot be measured by EMG at the physiology laboratory is visible to the naked eye at my studio? Are we measuring the same thing? Are we directing the light in different directions and looking in different limited spots of light? Or does Feldenkrais thought light several lamps simultaneously in completely new directions?

In order to prepare Anna's nervous system to do something that presses the current limits of her ability I must, as an observer, create the best and optimal prerequisites. That is what I understand is done in a laboratory, in an *in vitro* environment. This was the way the electrophysicist Moshe Feldenkrais conducted research at Frédéric Joliot-Curie's physics laboratory in Paris, and it was from this perspective that the Feldenkrais Method was developed. When Anna went to the EMG examination she still had only small indications of the process and change. An attempt to detect without adequate sensitivity to the effects of testing conditions made the changes invisible. One may object that life is *in vivo* and if there is movement and control then this is detectable even in difficult test situations. To this I respond that since it is an artificial event to ask her to bend her foot up in a laboratory, I might just as well try to create the most favourable possible conditions. In life outside there are always other factors to take into consideration. Her system has another motivation and intention, for example, and her foot is working in a totally different context when Anna is at the town square, when she rises from a chair or when she bends over to tie her shoes. Her foot behaves differently all the time and in relationship to a specific situation.

Back to Anna's and my observation. Spastic nervous systems easily become limbic, which is to say that lower, more primitive "all or nothing" mechanisms take over where calm and respect should prevail. I also have to seriously consider the way gravitation influences the body part where the act of movement is to take place, but — and this is decisive — I do not just test the agonistic muscles and movements, i.e. the upward bend of the foot. I am likewise testing her active ability to suppress, inhibit and silence the domination of the antagonistic muscles that impede the movement. These are the muscles characterized by spasticity and those that react by strongly contracting.

As a teacher my main concern is this silence in the hyperactive foot. This is what must be noted and measured first; it may even be the change itself: a controlled, active silence with the help of higher brain activity. If there is a muscular interference, hearable in an EMG test, like a jet plane flying overhead, it can be difficult to hear a whisper and even more so to

develop a whisper into an audible voice. Before the cerebrum frees itself from the grip of the action of the antagonist, the upward bend of the foot can never become a thought and developed. It is not difficult for Anna to produce increased tension in her foot so that it becomes completely stiff and immobile if I ask her to do so, but what fascinates us both is that now she can even get her right foot to become totally limp.

This is the way Anna and all other students leave my studio, with the conviction that they have experienced something tangible and concrete however difficult it may be to grasp this in a normal conversation. They feel small, very exact changes in themselves, in their movements and in their thoughts. As an outsider I can, with my hands and my eyes, determine the difference that makes a difference.

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