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INTRODUCTION

Ulla Schläfke and Roger Russell

Dear Colleagues,

When we initiated the first European *Feldenkrais* Conference, we wanted to provide a forum to bring the European *Feldenkrais* community together and contribute to a process of communication and integration. Judging by the response to our invitation, which exceeded our most optimistic expectations, the conference was a success. We now conclude our labors by making this report available to the international community and the public. This document is an attempt to present some of the flavor and excitement that we all experienced in the 5 days that we were together in June 1995 in Heidelberg.

First of all we want to inform. Many people were not present. This report can give them an idea of what happened in Heidelberg. Even those who were present were not able to attend all of the events. The program was so extensive that each participant had to choose what to attend, which meant passing up many interesting workshops. We hope that these short articles give each reader an impression of what was offered. However, we want to do more than inform. We want to tempt those who were not there, tempt them in such a way that the next European Conference will be a must on their calendars. We also hope that many of the articles will create curiosity, in those who read them, about a new angle, a new application, or a new field; curiosity to explore something about the *Feldenkrais Method* and its applications that has been left out of their thinking. We want to challenge everyone to look at their habits of thinking about this method, and to find pleasure in some of the viewpoints and ideas that might be strange to them.

When we began to plan the conference, we wanted to present the broad scope of this method and its applications. Therefore, we sought a wide variety of presentations and many of the most experienced teachers we have in Europe. Although there are certainly some areas of interest that each reader will find missing, we feel that we were successful in giving an overview of the breadth and richness of the *Feldenkrais Method* and the many fields in which it has found a place in Europe. We have not attempted to provide an exact report of the numerous events. Instead, we wanted to provide the reader with a short review of each workshop and lecture. Some of the reports are written by the workshop leaders and some are written by participants in the conference who offered their time and energy to write the reports. We did not print the entire text of the lecture by Dr. Varela, since it would have been about 20 pages in length. Instead, we have provided a summary written by Ilana Newell. We welcome you to this event, now in written form, and wish you a pleasurable journey.

The (Short!) Story of the First European *Feldenkrais* Conference

The exact origins of the idea for conference are now lost in our memories. We can't say exactly when the inspiration first formed in our minds, but we do know how it happened. Several years ago, François Combeau suggested that the European community meet in Paris for a conference. This was the first time we considered the possibility. However, it seemed that the community was too young at the time to realize his dream. In 1992, the first large conference of the American Guild was organized in Berkeley. The inspiring program and the excitement that the success of that conference generated moved us to think that it might be possible to create a similar program in Europe. This led to our first conversations with a small group of people who agreed with us. They provided, over the next three years, a source of support and cooperation that enabled us to take that first step off the edge and

begin the enormous task of turning that idea into a reality. Our first program committee were ourselves, Gareth Newell, Edward Dwelle, and Chava Shelhav. Our thanks to them for their early support and suggestions.

Through conversations within this group, we began to formulate the first outline for the conference. The theme “The *Feldenkrais Method* as an Educational Process” was born. We agreed that if we were to be responsible for the organization, the conference would need to be in Heidelberg. This was also attractive for the simple fact that Heidelberg is a pleasure to visit. It is a beautiful small city, centrally located in Europe and easy to reach by both train and plane. In October 1993 we had the pleasure of working with Gareth Newell in Paris, and plans for the conference became more concrete. To tell the truth, we were also beginning to get cold feet. The enormous amount of work involved in making the conference happen began to become clear, just at the time we were beginning our first training in Heidelberg.

The IFF gave us our next boost several months later, at the time of the IFF meeting in Tel Aviv. Plans were being made for their next meeting, and the German Gilde suggested that the 1995 IFF meeting should be in Heidelberg just before the conference. We had already reserved the Stadthalle in Heidelberg in anticipation of these plans, but we were so involved in our training that the conference planning had not progressed much. We needed to decide to go ahead or call it off. Several telephone calls to trainers and assistants at the end of May 1994 confirmed our intuition that the time was ripe for such an event in Europe. Everyone supported the idea, and without exception, they all agreed to make presentations at the conference. Within a few days, we had more than 15 people who had joined the program. The IFF made plans for Heidelberg in 1995, and we were on the way!

However, as we began to look at the dimensions of the task that lay before us, and the budget that would have to be covered, we began to doubt that we had the resources in energy, money and time to get the job done in a way that lived up to the standards that we set for ourselves. Again, Gareth was at our side with support and ideas. Through the cooperation of the Guilds around Europe and overseas, we made an informal survey of the interest in this project by asking people to send in a pre-registration form. We set a limit and a deadline. On the basis of the preliminary budget, we thought that we would need at least 220 participants to break even. We decided that if we received 220 pre-registrations by November 1994, we would continue. We held our breath and waited. We received 225 pre-registrations and the final go decision was made. In the end, the conference was luckily much larger and our initial budget proved to be unrealistically low.

By this time, Carl Ginsburg had agreed to make the keynote address, the Heidelberg *Feldenkrais* Gilde regional group had joined us in our organization, more than 30 people had agreed to lead workshops and discussion groups, and many of the plans were taking shape in considerable detail. Carl then had the inspiration to send Francisco Varela, via fax, a draft of his keynote address. Just as we were finishing up the program, we got word that we would have the great pleasure of having Dr. Varela join us for a special guest lecture. With some hurried rearrangements of the program (while the New Years fireworks were popping outside our window), we got the program to the Guilds and training organizations around Europe, which very generously mailed them to their members. Again we held our breath. Would enough people register?

The rest is now history. Yes indeed, our idea to present a real blockbuster of a program, one that made people say, “Hey, I can’t afford to miss this one!”, worked out. We spent the next 6 months in a blurred stream of uninterrupted work. Luckily, we had Gareth, with advice and support from England; and a super team who planned the details down to the last imaginable contingency and carried out the tasks with such élan and professionalism that the participants said they hardly

noticed that there was work being done during the conference itself! And of course, when it came time to make their presentations, the colleagues who gave workshops came through with flying colors, as you will read in the rest of this report.

The statistics: More than 450 participants attended from 13 nations. 31 workshops were given, as well as two inspiring lectures. Practitioners from across Europe met to discuss special fields of interest. Innumerable meetings occurred between old friends, and new friendships were formed. Morning ATM lessons were given in four languages. Tapes of workshops missed were available at the bookstore. An entertaining show, good food and a lively party added to the positive atmosphere, and then..... a shocking loss! When we returned from the party at 2:00 a.m., a fax from Victor was waiting in the office with the news that Gaby Yaron had died the night before in Boston. We felt that same violent shock go through the group the next day, as we made this sad announcement. Deeply moved, we closed the conference by forming a huge circle in the ballroom with more than 400 people holding hands; remembering our experience of one of our most inspiring and respected teachers. Even as she left us, Gaby Yaron drew us together. The title of the panel discussion for the last day was "Closing the Circle". In another way, the circle of community closed for us as we said farewell to a wonderful teacher, and at the same time, a remarkable event.

* * *

We want to recognize each person who contributed time, energy and inspiration for the success of this event:

The workshop leaders, who deserve a very special and heartfelt thanks from all of the participants; without their generous and creative contributions, the conference would not have been possible.

Carl Ginsburg and Francisco Varela for their memorable lectures.

Garet Newell, who went the whole distance with us, and was always available for feedback and support.

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Carl Ginsburg

IS THERE A SCIENCE OF THE *FELDENKRAIS* MAGIC?

KEYNOTE ADDRESS

We are in a work, a profession, that crosses two worlds, two domains. One domain is the phenomenological, the realm of our experience as it is, before we interpret it, make ideas about it, make meaning of it, or explain it. Here we rely on our ability to be present, to take in the whole, to respond, and act in the moment through our senses. We work without words in our heads, without making intermediate cognitions of what we know in our sensing and acting. We eschew diagnosis and analysis. We open our attention to take in what is before us in the moment. In this domain we make magic. We have wonderful new experiences of ourselves. So do our clients. There is a funny thing about our magic. It allows us to guide ourselves and our clients to increased self knowledge, what we call awareness, and to shifts in patterns of moving and doing. We call that learning “education”.

The learning we speak of is in the realm of experience, in shifts in the structure of our consciousness. We don't give this to anyone. It happens for each person who is willing to enter the process, who is willing to explore inner sensation and feeling. The learning happens equally in the realm of observed behavior. Now we cross to another domain, the realm of external observation.

Inner exploration has not traditionally been in the realm of what we call science. Yet we cross into that world of external knowledge also. A new pattern of self mobilization, a new way of doing, is experienced as more reliable, easier, more effective. Experience as such, and the old trouble a person has is replaced and forgotten. We can observe this in the external behavior of the person. We can ask: how is it possible that our nervous system operates in this way? We can ask: what is happening in the nervous system during a *Feldenkrais* lesson? What changes when we learn in this way? We can ask: is there a science of the magic?

Here is an interesting dilemma for us. We know in our experience that our process works, that we can learn new patterns, shift our attention, improve our sensitivity, develop our awareness. We know we can guide others to a similar result. Yet when we are accosted by someone who asks, “Where is the scientific proof?,” we are left with our mouths hanging open. People operating in a scientific frame of reference have a problem in accepting what we do. Of course, we know that if they try out the process openly, they too will experience results similar to what we

experience. One difficulty is that terms of the proof are in a different domain. In our domain, one feels the differences, experiences life in a new way. We are empirical, looking for what brings about a process, not a specified result. What we do, though, doesn't go easily into a laboratory. However, if a medical doctor asks for proof, what he wants is a cause and effect relation between a procedure we would apply and the solution to a patient's problem. He wants to take a laboratory approach, be able to design a carefully controlled experiment. What we do is too vague for him. How is learning related to what he wants? Somehow, we cannot reduce what we do to simple, understandable mechanisms. On the other hand, does anyone need proof that human beings are capable of learning new organizations of themselves? But then, a scientist would want to know how this relates to the wonderful results we report from our experience of lessons. In the end, everything we do in showing our work is effective for this or that can all be dismissed as anecdotal.

There is yet another difficulty for scientists, and that has to do with the question of the reliability and significance of the domain of experience. The phenomenological realm makes most scientists uncomfortable. They know that you can't trust experience alone to decide questions of fact. You need procedures to overcome the frailty of human subjectivity. What is subjective is frequently illusory. What do we do with this? This question will become the major focus of this talk.

First, let us look at the science in our method as Feldenkrais himself developed the process of what we do.. On this score, Feldenkrais actually did a major piece of practical scientific work. He asked some big questions for which, in his day, there were unclear answers. What is the optimal organization of a human being for acting in the world and in gravity? How should the musculature be used? How should the skeleton function? What is the easiest path to such self organization, and what steps make the process possible? We know what many of the answers to these questions were in Feldenkrais' view, and have experienced the results in our lessons. Nevertheless, let us look briefly at what he did.

First of all, he applied his knowledge of physics to an understanding of Judo. This methodology led him to understand what was optimal in human organization and enabled him to demystify the abilities of people who practiced Judo and other martial arts. As an accomplished Judoka, he was later able to explore his own movement and awareness, which allowed him to begin working with others. Here, he found what sort of contact facilitated a person's change, what sort of internal attitude on his part made the communication more immediate and effective. And he experimented continually, trying a new way of moving a person in each lesson he gave over a period of time, to gauge the effect on many persons. As he

developed a way of working with individuals, another challenge was to explore how people could learn and develop awareness in groups. Here was the genesis of movement lessons, and he had to find out how to do this better. To this end, Feldenkrais used his classes as a vehicle for experimentation. He would record a lesson, try it out with a class, revise and refine his wording, and observe the effect with another group. Over a period of time, he came more and more to realize that when people focused on the goal instead of the process, the kind of learning he was after did not happen. This knowledge led also to revisions of the lessons. In other words, every process we use was subject to experimentation.

This kind of science had a practical outcome. It was careful and methodical. Nevertheless, it could not be taken into the laboratory. It violated another boundary: that between the external observation and the phenomenological, the internal experience. Feldenkrais was experimenting with his internal states and observing the effect on his clients in terms of their internal states. But he knew of the shifts in his clients' internal states in his observations of the changes in the organization of their actions. For him, there was no distinctions between the realms, between mind and body. I hope to show that this boundary never should have been erected in the human sciences. It creates blinders where we need light. Feldenkrais made tremendous progress without it.

Let us cross back now to the phenomenological world, or our work. This aspect can never be discarded, for the fact is that nothing we can find from science is worth anything to us if it remains as a verbal formulation. We may be able to say where the pelvis should be in relation to the head and trunk for a person's action to be easy and efficient. Such an idea is useless to us, however, until we know where our head and pelvis are in internal space; and we can use the power of the pelvis to stand up, do a judo throw, or connect with another person skeleton to skeleton. Equally, we need to know in action what it is to guide another person into this sort of learning.

Thus I say now - there is only one topic of our work - science or no science - and that is the expansion of the field of conscious experience in daily living - what we mean when we say AWARENESS. Everything else is subservient to this. It means that a science that ignores or discards the phenomenological realm is of no use or service to our method and cause.

So what is it we need from science? Is there a science of the *Feldenkrais* magic? Surely, as I have shown, Feldenkrais based his work on empirical scientific procedures, and he also scoured the literature in many fields of science for corroborating evidence. But even eleven years ago when Feldenkrais died, there were only very rough answers to such questions as: what is happening in the nervous system

during a *Feldenkrais* lesson? Classic neurology, the investigation of nerve signals and connections, important as such knowledge may be, had nothing to say to us. Nor did a cognitive science based on a computational model of thinking.

Here are some observations from our work that are confounding to the classic sciences:

The neuromuscular system can reorganize in response to simulating an entire function or action. An example is the lesson Feldenkrais did in San Francisco on July 23, 1975. His young subject, the daughter of one of the students in the training, walked with one foot turned in and the heel pulled away from the floor as a result of cerebral palsy. Simulating the action of standing by evoking the entire standing function while the girl lay on her back (Feldenkrais used the application of a board to stimulate the surface of the foot and pressing to connect through the skeleton), the girl discovered afterwards that she could walk with her heel on the ground and her foot pointed forward.

Bringing conscious attention to the movement of one eye changes the tones of the musculature on the side of the body corresponding to that eye, even though both eyes move equally.

By attending to one side of oneself and effecting a reorganization of that side in action, one can reorganize the other side through imagining the feeling of the movement as if it were the same as the reorganized side.

In touching another person, the effectiveness of that touching is dependent upon the state of your own organization.

Let us see that there are difficulties within experimental science itself. Here is a particular difficulty in cognitive neuroscience. We experience ourselves as unified persons. Our experience itself appears as unified perceptions. But the neuroscientists who have explored what is happening in the nerve cells in relation to what we experience do not find any unity or unifying processes. Let us take vision, for example. Whatever impinges on the retina of our eyes excites cells in the retina. These cells in turn excite cells in one of the nuclei in the brain which distributes excitation to cells in many different areas. Some cells respond to edges, others to color, others to what is horizontal, and others to what is vertical. None of this corresponds to what we experience. We don't see edges and color. We see an entire space and unified objects in that space.

Now, when the first experiments were done correlating the activity of neurons with features such as color, it was postulated that somewhere the various processing cells must project to some place where it all comes together again. Or at least there must be some cells that respond to

features so that we see a recognizable something, a face we know or an object; a grandmother cell, if you will, that lights up when you recognize your grandmother. In thirty years and more of research, no such cells have been found; there is no place where it all comes together. In fact, the most popular view among cognitive and neurological researchers these days is that the brain is a collection of separate processing modules.

What we have as Francisco Varela, our invited speaker to this conference, has said, is a disjunction between experience and the external description, what it is you come up with when you look at the mechanism of the brain.

For some scientists, the easiest way out of the difficulty is to discount experience entirely. What we call conscious experience is merely epiphenomenal and has no influence or importance in the working of the nervous system. The evidence of the *Feldenkrais Method* alone makes this pretty hard to swallow. Another alternative is to postulate a dualism in which a nonmaterial entity, the mind, does the integrating. The famous neuroscientist, John C. Eccles, takes such a view and says that “the unity of conscious experience is provided by the self-conscious mind and not by the neuronal machinery. . .” Daniel Dennett says that the unity of experiences is an illusion. Gerald Edelman calls the inability of neuroscience to deal with the problem of perception, a scandal.

Carl Ginsburg: Photo by Corrie Joswig

But the problem is not just the unity of experience; it is also the unity of behavior. Nicholai Bernstein’s observations, made many years ago in the Soviet Union, are particularly to the point. Bernstein is now being credited as the father of movement science. The power of his observing and his originality of interpretation are astounding in retrospect. Here are some quotes: “A muscle never enters into a complete movement as an isolated element.” “A movement never responds to detailed changes in each small part..” Bernstein, by the way, spoke of *Functional Integration* (published in English in 1967) before Feldenkrais must have used the term.

We have now laid out the ground of our difficulty. The question is: are there traditions among scientists to help us? The answer fortunately is: yes. We must, however, go out of the mainstream of thinking. What is most exciting is that in the last few years we have experimental evidence to substantiate the alternative views. The experimental evidence has been hard to find.

Let me divert a little bit to try and explain why. Part of the difficulty is the nature of the scientific method in the laboratory. The laboratory method is to try to keep as many variables controlled as possible. You want to be able to isolate one variable if possible. Thus, experiments are done with animals sometimes immobilized or otherwise restricted in movement. Settings are as far from natural as possible. Animals are often under anesthesia. An animal, for example, might be passively shown target stimuli while recordings are made of nerve cell impulses. Much experimentation with human subjects was and is also done with the experimental subject passive rather than active. It turns out what you see in the brain is completely different if the animal or person is active. This was not known until experiments could be performed this way. But so much research was done without looking to the question of whether the research subject was passive or active, that much of the information gained isn’t relevant to understanding how the nervous system is operating in a living, active situation. It was just assumed that what was found in the laboratory situation could be transferred over to actual life situations.

One cannot ignore the results of experimentation. On the other hand, specific experiments can be misleading without a coherent context in which to place the results. In addition, important data may be missed, discarded, or not recognized as having significance. The major difficulty has been, is, and probably will be for a long time to come, the problem of creating a conceptual framework. A lot of Feldenkrais’ successes were based upon the fact that he had a more useful conceptual framework. So were the

successes of some of the pioneers of alternative approaches that we now celebrate. Bernstein, who we have already mentioned, became aware of the structural complexity of every so-called conditioned reflex, and became fascinated with the study of movements as integral formations. He found that the organization of movement was not based on specific muscles, nor upon metric relations, but upon the topological properties of space. Thus the observation that one's handwriting is the same whether made with the wrist and hand or the arm and shoulder.

Pioneer K.U. Smith found that the learning experiments of the behaviorist psychologists were useless in developing methods to get human beings to develop new skills. He, like another pioneer, J.J. Gibson, developed an alternative view because he had to solve practical learning problems in order to help train servicemen in World War II. Smith found ways to apply the ideas from a new science, cybernetics, to learning tracking skills. Gibson's problem was different; he had to find ways to study visual perception in relation to flying airplanes. Gibson was one of the few psychologists of his time who did not reject phenomenology. He used it in the design of his research and thinking, which led him to an "ecological" theory of perception in which he emphasized the active processes of the perceiver in relation to a world of "affordances" for perception.

Well, a lot has moved forward in academic and scientific circles in the last few years. It could be looked at as downright revolutionary. It is based, however, on the work of many pioneering scientists who were not satisfied with the received views of those who had academic prominence. What has changed in recent years is the amount of research material supporting alternative understandings, and the gradual adoption of a really different conceptual framework. Let's look again at what we know as *Feldenkrais* teachers that needs accounting for from a scientific perspective.

First and foremost, we know that our somatic system has both stability and extraordinary plasticity as revealed by our lessons. This plasticity is evoked, not by teaching specific and detailed skills, but by creating conditions in which new patterns can emerge. There is a parallel to the developing and growing child. Here, too, patterns emerge and are adopted as these patterns serve the child's intentions toward the world. The child's patterns have indeed a quasi stability, but are succeeded by newer and better patterns.

In other words, this kind of learning involves some kind of self organizing within the nervous system, and thus within the muscular and skeletal systems. How is this happening? What must the nervous system, in fact our entire system, be like in terms of its organization for patterns to emerge? It is action that is organized, but at the same time, perception and the skill of using the senses in the service of

organized action. Remember clearly: we are not teachers, but our pupils learn. This means our pupils are creating order and pattern in response to our lessons. Varela has pointed out that the nervous system will do this with anything happening in its domain. Feldenkrais called the nervous system the greatest anti-entropy device in existence.

A third question is: where are the patterns? How are they forming in the nervous system? Is there a mechanism? Unified actions must cross specific areas of modular activity. They cannot be "programs". They are also time bound.

These are some of our questions. Whatever we understand about the nervous system needs to account for what we know. It must also give an accounting for the phenomenology of human experience. To do this, a systematic and accurate description of the phenomenological realm is essential. Hopefully, Dr. Varela will be able to speak to this issue during his talk. I will also defer to Dr. Varela to give many more details about the scientific issues. He will describe some research approaches that open up a way of solving many of dilemmas we have posed. His talk, "Large Scale Integration in the Nervous System and Embodied Experience," will directly address our questions.

Now we must give some sort of outline in answer to our questions. There are many roots to a new thinking in different areas of science. I have already mentioned Bernstein, Gibson, and K.U. Smith. Karl Pribram, who was very familiar with Bernstein's work, made many prophetic speculations about the nervous system in relation to perception and action thirty years ago. One in particular that I believe now has come to fruition in Varela's research is that there is a system of connection and organization in the nervous system that does not depend upon nerve transmission. I will return to this in a moment. First, let us note where there has been major progress.

We must begin with the study of distributive processes in networks. To get to learning, change, fitting oneself to the constraints of the moment, the plasticity we talked about, a system cannot be linear and hard wired. We cannot use fixed algorithms, fixed categories. In a distributive network, we can have seemingly random processes that result in the formation of patterns of connection in the network in response to whatever constraints are put in. The brain can be thought of as an extremely complex network of this kind. The pioneering papers on neural networks were published, starting in 1943, by Warren McCulloch and Walter Pitts. This separated the problem of understanding the integrative behavior of the nervous system from the biological details of how nerve cells behave. It also provided a formalization of brain processes and helped lead the way to artificial intelligence. Humberto Maturana and Jerome Lettvin joined forces with

McCulloch and Pitts in the 1950s, and through a series of investigations of a frog's visual system, produced a pioneering paper, "What the Frog's Eye Tells the Frog's Brain." What they found was that "it is not the light intensity itself but rather the pattern of local variation of intensity that is the exciting factor." The frog's brain is responding to contrast, convexity (whether a surface is curved), moving edges and dimmings related to movement or rapid darkening. "The eye speaks to the brain in a language already highly organized and interpreted." In other words: the frog either sticks out the tongue and catches a fly, or jumps in the pond to evade the looming large animal approaching. Such behavior is coherent to a frog's life. Perception and action are inseparable and connected in a network.

Maturana went on to work on color vision, and discovered that he had to shift the discussion even further to make it biologically appropriate. The idea that the network maps the external world did not work when trying to understand the network. The terms were different. "... it required us to close the nervous system and treat the report of the color experience as if it represented the state of the nervous system as a whole." This was radical. I am only giving a sketch here, but Maturana developed what I believe is the first complete formulation of a systems biology from this work. From here, Varela, Maturana's student and later his partner, went on to develop his book, *Principles of Biological Autonomy*. Here, he paralleled the organization of the immune system and the nervous system. I bring this up because around the same period of history, Gerald Edelman, who had won a Nobel Prize for his work on the clonal selection theory of the immune system, was developing the Theory of Neuronal Group Selection to understand how the network could produce cognition and experience. Unlike the direction scientists interested in parallel distributive processing were taking, Edelman insisted, as Maturana and Varela have, that we must find out how a nervous system works in a biological system. We can not deal with life as if we could formalize everything.

We are embodied, living entities. I am here speaking to you. I use my mouth, tongue, voice box and breathing, and form words and sentences in English. These are structural invariants, attractors, that I learned through my development. They are communicating to you, which is my intention. You take them in and understand them as your history dictates. You have also gone through a development and learning which, while not identical, parallels mine. It is in the act of doing this

interaction with each other that the words become symbolic. My making of them is a somatic action which also includes my standing and facing you, how I hold my head, my shoulders, how I use my voice tone, my facial expressions. I am actively using my balance. Nothing in what I do here is isolated. Nor is what you do isolated from your state of breathing and attention, how you hear or do not hear my words, how what I say sets off your own conversation with yourself, how you are sitting, and so forth. We are all experiencing something most of the time we are awake, and part of the time we are sleeping. How much richness there is depends on our developed awareness. Much of what goes on we take for granted.

A true science of human beings needs to take this all in, and not isolate itself to the abstract and the formal. Only in recent years have some researchers and theorists approached this kind of understanding. Edward Reed, who calls himself a movement scientist, and has worked with Gibson and later with Edelman, makes this kind of approach. I will recommend to you to read some of his articles on a theory of action. I also highly recommend *A Dynamic Systems Approach to the Development of Cognition and Action* by two developmental psychologists, Esther Thelen and Linda Smith. These authors, in addition to describing their research on child development, develop a truly cogent and biologically coherent account of child development based upon Bernstein, Edelman, J.J. and E. J. Gibson, chaos theory, and the idea that the organizations of ourselves that we take for structures "emerge from relations, not from design." These authors give one of the best accounts of Edelman's theory, and cover in detail Merzenich's research on brain plasticity, and Wolf Singer's work on time-locked dynamic processes in the visual cortex.

This later work may be the key to something startlingly new that can lead to a solution to the problem we started with: that our experience of ourselves as a cognitive subject doesn't mesh with what researchers find in investigating nerve signals in the brain. Singer discovered that, when a cat saw a single stimulus figure, this triggered synchronous bursts of oscillations in neuronal groups in spatially separate parts of the visual cortex. Varela, in his laboratory in Paris, has now found a way to observe such synchronous oscillations in widely different parts of the nervous system; a kind of vertical organization that seems to unify intention, action and perception. We are extremely fortunate to have him here at the conference, and he will speak on Saturday evening.

Let me end by saying that all this recent scientific work, which seems to corroborate and fit with what we have discovered through our method, is exciting and encouraging. It should excite us and encourage us to continue what we are doing. Perhaps it will help us articulate better what we can observe and communicate to others. But let us not be seduced by ideas. We need to continue our practical ways of exploring and developing. We need to stay with the phenomenological human realm. Let us continue the development of our awareness and keep noticing the elusive obvious. In the end, hopefully, we can begin a dialogue with the scientists who have, in their own way, come closer to our view.

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Francisco J. Varela

Reported by Ilana Nevill

LARGE SCALE INTEGRATION IN THE NERVOUS SYSTEM AND EMBODIED EXPERIENCE

SPECIAL GUEST LECTURE

Carl Ginsburg prepared the ground well for this talk in his keynote address, "Is There a Science of the *Feldenkrais* Magic?" at the beginning of the conference.

Carl discussed our dilemma as *Feldenkrais* practitioners: We, as well as our students and clients, know in our *experience* how effective this work is; we know that "body and mind are one". But we are unable to supply "scientific proof" for this, at least not by way of the standard controlled experiment where, ideally, all variables are kept equal except for the one to be tested. Carl touched on a number of developments in modern science that have begun to address the phenomenological realm of lived human experience and consciousness, considered as purely 'subjective' and therefore of no immediate relevance in the strictly 'objective' traditional approaches, such as Behaviorism. That relatively new research, including the work of the Chilean biologist and neuroscientist, Francisco Varela, corroborates what Moshe Feldenkrais discovered through systematic experimentation with movement and awareness, first within his own experiential field and later by teaching and observing others individually and in groups. Varela actually met Moshe in the 70's, a time when the biologist was still a marginal 'heretic' in neuroscience.

Varela began his lecture by saying that he had accepted the invitation to speak at the *Feldenkrais* Conference because he sees a significant degree of convergence and resonance between his *scientific* and our *practical* work. The point of contact is *human experience*, how people embody their minds in daily life. He wanted to give us an insight into Cognitive Science and the tremendous evolution it has undergone during the last twenty years. Cognitive Science was established as a discipline after the war, bringing together various traditional fields concerned with study of the mind, to which the newly formed field of Artificial Intelligence was added. Twenty years ago, Varela's own ideas about mind and cognition were quite different from those held by most of his colleagues. But over the past two decades, what used to be minority views have become much more prominent. Today, there are thus two opposing styles of work: the old, still widespread, approach and a new direction, which contrast with each other in their guiding metaphors and leading ideas.

After the war, the *computationalist view* predominated. Here, a clear-cut distinction is made between inside and outside. The mind is thought to be in the head (*'embrained'*), while the brain is likened to a *computer*, an *information system*, processing a certain amount of 'input' from the outside world and eventually producing a specific 'output' in the form of behavior.

Knowing is understood as an internal representation of what is perceived or can be extracted from the outside, while the internal processing of such information is understood to be happening "in the best Western tradition (mathematics and logic), namely 'symbolically'. The computationalist approach is therefore also known as the *representationalist view*. Later in his talk, Varela added that this model deals with inexperienceable entities. Thus, the mind is something disembodied yet somehow present in the system. The computer called Hal in the spaceship of Stanley Kubrick's film "2001" is a "perfect incarnation of the idea that mind is some kind of pattern that eventually creates a self. Very difficult to imagine how!..."

The alternative *embodied point of view*, to which Varela adheres, is now growing in strength. Here, the mind is seen to be *'embodied'*. This means that perception and action, sensory and motor processes, are inseparably linked as the living organism interacts with its environment. The distinction between inside and outside is "erased by the fact that the fundamental point is how the body is handling, moving, perceptually acting, and therefore *what* you do and *how* you perceive and understand are inseparable". This is also called the *enactive point of view* because the cognitive system is seen to be shaping the world in which it finds itself, "bringing forth its world by action."

From the 'embodied' point of view the key problem is: "How do you integrate all the other specialized processes and regions of the brain and the fact that the brain is literally rooted in the rest of the body in a dramatically rich way?" As an example, Varela mentioned the intimate interconnection between nervous and lymphatic systems: minute nerve terminals innervate each lymph organ; all the cells of the nervous system are surrounded by fluid so that "your brain is literally bathed in the rest of the body's balance". Therefore, even gases can act as neurotransmitters as they are diffused through the body. The understanding of 'motor-sensory' action in this model goes beyond muscles and nerves. It includes all the spheres of the body where there is a root for a bi-directional neural process.

Using the function of vision as an example, Varela sketched two diagrams in order to demonstrate the shift from the traditional view and its idea of stage by stage local information processing to what he called *large scale or long range integration*.

A) Conventionally viewed, in terms of the inner-outer model, vision involves aspects of the world being

picked up by the retina, nerve impulses being transmitted by the optic nerve to the thalamus (a kind of first relay station in the brain), and then on to the visual cortex in the occipital lobe and other specific areas for so-called "higher processing."

B) The second diagram made clear that the shift of paradigm is literally to be seen if one looks at the same process from a slightly changed perspective, taking the entire set of embodiment into account. The one-way routes from the outside to the cortex are replaced by a network of bi-directional connections, or sensory-motor loops, linking all the parts involved in vision in an ongoing, two-way, large scale interaction. Thus, the very action of the retina is part of a sensory-motor loop. In this model, visual 'input' has been replaced by the concept of visual 'coupling'; what is picked up outside is modulated to a greater or lesser extent by processes inside the system and vice versa. The most astonishing research result within the framework of the *embodied* model: each neuron in the thalamus receives more electrical influences from within the brain than from the eye.

Studies focusing on the processes involved in understanding, knowing, and cognition required a similar shift in the interpretation of the brain, which can be summed up in the statement, "As a fundamental true rule there is no uni-directional action in the brain; everything is bi-directional".

Initially, research mainly involved simple living organisms and animals, particularly trained monkeys with electrodes implanted in their brains. A small Californian snail (called *Aphysia*), whose organism basically constitutes a pool of sensory and motor neurons, became especially important to neuroscientists. Slow and easy to work with, it helped validate the idea that sensory-motor integration of coupling is the one thing all living creatures with a 'brain' have in common. They all understand and come to be in the world by the same fundamental logic: *if there is no movement, there is no brain*.

By injecting dye material into the snail, the creature's entire nervous system could be observed by optical means while it was moving about, encountering edges, responding by a change of direction, etc. The experiment showed that the body surface with which the snail encountered the world (two of its sense and motor organs are called siphon and gill) is the surface of sensory-motor coupling. The dye began to glow and colors changed wherever neurons were active. Transient patterns of simultaneous neural activity in many cells appeared and disappeared, proving clearly that "the whole bowl of spaghetti" was involved with all its bi-directional connections. That is to say, there are no 'lines of transmission' as posited by the computationalist logic. Instead, whole cell-assemblies momentarily come together in *large-scale interaction*. Using a mathematical term, such

instances of transient *cell-resonance* are called RELAXATION RESONANCE or RELAXATION RESPONSE.

Varela employed a number of diagrams to illustrate how the size of cell-assemblies involved in this process can vary. For example, when a cat takes a step to press a lever, one third to 40% of its brain is involved in that action. In the case of the snail changing direction, this increases to nearly 100%.

He compared the *relaxation response* to a more sophisticated conversation at a cocktail party which goes backward and forward until understanding or agreement has been reached. "Out of all that chaotic back and forth, something shapes up as a coherent transient pattern which then disappears." In this way, the living system constantly creates moments of presence, action and perception. The *relaxation response*, which only takes a fraction of a second to achieve, constitutes moments of coherence corresponding to *chunks of time*. Behavior can thus be seen as coming in groups; and the idea that time is linear cannot be upheld any longer.

As an example, Varela demonstrated how turning around to look at Carl constituted one such cognitive present or relaxation response, while recognizing his face - instead of a turtle - constituted another, involving an even greater number of neurons. There is a mystery though: "How can the body-brain create those consistent functional aggregates that allow me to turn and foveate instead of falling down the stairs?" There simply is no higher command or attention center controlling all the neurons involved in the complexities of human behavior. Instead, there is true cooperation, a kind of democratic game between many different areas of the brain that have to do with vision, emotional tonality, memory, attention, sensation, etc.

Looking for a plausible answer, Varela and other colleagues found inspiration in Walter Freeman's work. Freeman had been saying for the last 20 years that there is one simple way self-selection of cell-assemblies can happen, namely in a *musical way*. Groups of neurons enter into *literal resonance* with each other, firing in fine-tuned synchronous patterns. For a fraction of a second, before a new relaxation response arises, this temporal synchrony creates "true coherence in long stretches of the brain and body". (This happens in the gamma band, involving rapid oscillation between 30 and 100 cycles per second.) It was found that these fine-tuned synchronous processes are self-enhancing, involving ever larger cell-assemblies, creating the conditions for the arising of new moment of cognitive presence ("The more we synchronize, the more we synchronize" - "The more together we are, the more temporal glue that binds us together").

Such insights constitute the beginnings of a mechanism capable of explaining how large-scale integration of all the components of a mental cognitive act can create the totality of unity experience and behavior. Over the past 5 years, a handful of research projects have been devoted to the study of lived human experience. The topic of human consciousness is therefore no longer taboo. To deal with it effectively, however, required adoption of a new style of research as a fresh challenge. The moment cognitive scientists ask such questions as, "How is the cognitive present constituted?", they are faced with the phenomenological issue of how we experience and live in time.

PHENOMENOLOGY

A few scientists began to regard first person accounts as valid and vital in the pursuit of this issue. They started to employ the methods developed by phenomenology, a discipline concerned with practical ways in which the structures of human experience can be submitted to methodical analysis and checked intersubjectively.

Varela briefly hinted at three other directions in cognitive science which all shy away from first hand experience, relying solely on third person accounts:

REDUCTIONISM can be summed up in a quote from biologist and Nobel Prize Winner Francis Crick's book *The Astonishing Hypothesis*: "You have to come to realize that you are just a whole pack of neurons."

FUNCTIONALISM accepts individual experience as valid, but believes that observation can only happen from the outside, with the scientist proceeding like an anthropologist looking at other cultures.

"MYSTERIANISM" attempts to find interesting arguments about why consciousness-mind, consciousness-brain interaction is an insoluble problem.

Varela stressed that his own work belongs in the tradition of Phenomenology. Like Husserl and Merleau-Ponty, the originators of Phenomenology and certain schools of Buddhism, he is convinced that "we owe an unpayable, eternal debt to experience, for that is where we find ourselves and where we start. Everything we do is based on experience. So better put the immediacy of our own experience at the very foundation of our research!" In other words, embodiment of mind cannot be understood unless the scientist makes reference to his or her own experiences.

The structure of human time is a particularly deep and difficult issue in Phenomenology. Relevant western studies, including Varela's research in Paris, confirm what many Buddhists have understood all along: that lived time is a combination of 'flow' and discreet aggregations of presence, chunkiness superimposed on continuity. There is no contradiction in the fact that we live in a stream of consciousness and also in discrete moments of experiences. Varela and his team are now in a position to begin to show how their research data, the external scientific account of 'cognitive present,' 'large-scale coherence of cell-assemblies', etc. is matched and illuminated by phenomenological subjective accounts, and vice versa.

Varela foresees two important transformations in the cognitive sciences: 1) more general acceptance of the 'embodied' point of view, i.e. the fact that cognition is about being in the world; perception-action is the central and basic grounding of all cognition, and the body sustains what happens in the mind. 2) a revival of the study of human experience which will require some revolutionary, potentially subversive steps: incorporation of the first person account into detailed scientific description; and training scientists in an unfamiliar style and method.

"Good science and disciplined accounts of human experience have to shake hands!"

Varela closed on an optimistic note: "I am convinced that a phenomenological training has to be introduced into the cognitive sciences. The kind of work you are doing is already moving in that direction..." and expressed his belief that the resonance he had initially talked about can become a powerful fact if, in future, we really push the frontiers of mind and embodied consciousness.

Francisco J. Varela holds a Ph.D. in Biology from Harvard University. He is currently Director of Research at the Centre National de Recherche Scientifique and Professor of Cognitive Science and Epistemology at the Ecole Polytechnique in Paris. Apart from numerous articles in the fields of sensory physiology, biological modeling, and immunology; he has written several books. The following titles give a good insight into Varela's ideas:

Co-authored with Humberto R. Maturana:

- The Tree of Knowledge: The Biological Root of Human Understanding (1987)

Co-authored with Evan Thompson and Eleanor Rosch:

- The Embodied Mind: Cognitive Science and Human Experience (1991)

Co-edited with Jeremy Hayward:

- Gentle Bridges: Conversations with the Dalai Lama on the Sciences of the Mind (1992) ■

Carl Ginsburg

Reported by Roger Russell

THE DIFFERENCE THAT MAKES THE DIFFERENCE

Gregory Bateson used this phrase to describe what he meant by information. When we are in contact with another person, as we are through our hands in *Functional Integration*, we are, or we believe we are, constantly communicating what we call information to the other person. What kind of difference is it that, as Carl Ginsburg promises, could be so informative? Is there some secret technique or knowledge that hasn't been taught which can make such a difference in our *Functional Integration* work? Carl's answer is: yes, but then again, no. Yes, there is something we can do, actually something very simple once it is clearly experienced, that does make a real difference in the effectiveness of *Functional Integration*. And no, it is not a secret, nor is it mysterious. We all talk about it, and Moshe certainly stated it explicitly many times, so much so that it may be one of the elusive obvious things in the *Feldenkrais Method*. It does seem to get lost or forgotten in the tendency to look for a new technique in the movement that we explore with the client in FI. However, this difference is not about what we are doing with the other

person. It is about doing something with ourselves: attending to how we organize ourselves in our balance and our use of our skeleton, musculature, breathing, eyes and intention as we work. This is something concrete that we can do and something we can monitor with our sensation which can effect a dramatic change in the quality of our lessons.

How does this work? First, by bringing our own balance and musculature into a better state, we experience a more sensitive and differentiated perception, both of ourselves and the other person.

Carl mentions Moshe's demonstration and discussion of rolling the head, given in Amherst in July 1981, where he points out that our own asymmetry can bias our sense of the person we are touching if we are not aware of ourselves. Second, the clarity of perception and the ease and quality of our movement allow us to communicate more effectively. We are not interfering with our intended message with parasitic intentions of which we are unaware. Third, our touch is perceived as secure and non invasive, allowing the other person to feel safe and free in the ongoing kinesthetic dialogue of the lesson. Fourth, we are communicating an open, flexible attention which has an almost magical effect. Our partner in the dialogue of the lesson is able to benefit by following us and making a shift in his own attention, sensation and action as Carl describes it in his Keynote Address.

How do we teach it? This has turned out to be a challenge for our community. We need to find a way to make this difference in our self-organization while working in FI so explicitly clear that we can find a comfortable way to integrate it into our daily work. This is the challenge that Carl took upon himself for this workshop. One of his admirable skills is to transform an idea into a concrete experience for those who are working with him. With this intention, he began the day with two *Awareness Through Movement* lessons. These lessons were intended to give the participants a sense of this difference in self-organization that will be recalled and monitored in the afternoon FI experiments. A short summary of the ATM lessons follows.

Lesson 1: Sitting on the floor with legs crossed, explore the space in front of you by reaching out with the hand and arm in various directions. Attend to the breathing, the eyes, the quality of the use of the arms, the pelvis on the floor and the sense of the length of the spine. This was

Carl Ginsburg: Photo by Corrie Joswig

followed by a series of explorations of moving the pelvis forward and back, left and right, and then in small circles while imagining yourself sitting on a ball. Later, the pelvis and abdomen were imagined as a ball that could roll in small circles on the floor.

Lesson 2: Sitting with the feet together and the knees open, rock forward and back with the hands on top of the pelvis. Continue the same movement with the hands on the lower ribs. Move the right lower ribs backward and turn to the right; repeat the movement turning to the left. Move both sides of the lower ribs backward again, this time moving the head and lower jaw forward. Take the right lower ribs backward, turn to the right and move the head and jaw forward and to the right. Repeat the same movement turning to the left. Again, sense the movement of the arms reaching forward in space and on the floor.

By directing our attention to the sense of the length of the spine, the clarity of the contact of the pelvis on the floor and the mobility of the neck and head, these lessons will help us to discover three criteria that can be used in FI to monitor our own organization. The quality of the movement of the arms is easier in this context of the grounding of the pelvis and the sense of the spine lengthening. We are able to bend forward in the hips without needing to change the erect organization of the spine or to interfere with the breathing.

After a short lunch break, I experienced one of the highlights of the conference: a "*Feldenkrais* Jam Session" of about ten trainers and assistant trainers who had made themselves available to serve as Carl's assistants for the afternoon's *Functional Integration* work. In this 45 minute session, we explored, with Carl and among ourselves, the

task of supervising small groups in FI while exchanging ideas and experiences with colleagues drawn together for this event. This is as good as it can get!

The entire afternoon was taken up by working in groups of three, each with someone supervising. We were instructed as follows: one person lies on his back on the table, another sits at his head to lift his head, and the third stands behind or next to him. Begin by observing only how the “teacher” is organizing himself in sitting while lifting the head of the person on the table. What kind of contact does he have with his pelvis on the chair? Does he use his hips to reach forward, or does he bend his back or shorten the spine? Is his chest free? his neck? How does he sense the weight and freedom of the head and neck he is touching? Can you develop a clear sense of the person’s pattern? The third person now follows the entire action with her hands, using her touch to gain a more differentiated sense of how the “teacher” is using himself. The person standing is also attending to her own way of touching.

Finally, the third person begins to use her touch to lead the “teacher” to become aware of and reorganize his movement using the criteria that were explored in the ATM lessons that morning. This included: (1) standing behind the “teacher” and pressing downward with both hands on the greater trochanters of both thighs. This can be done in a way that both can sense the quality of secure contact of the pelvis on the chair, letting the sitting person sense the pelvis as well grounded, and using this as a basis for the movements of the pelvis and back while lifting the head. (2) exploring the entire length of the spine, from the pelvis to the head, helping the sitting person to sense the organization of the spine and the musculature. (3) placing one hand on the back of the neck of the sitting person so that the freedom of movement and the tonus of the neck muscles can be monitored, while allowing the “teacher” to remain free in the neck and the eyes, which remain soft. The afternoon was spent giving the 70 participants of the workshop the opportunity to sense all three positions. The “teachers” were usually surprised to discover that with these simple ways of attending to their own organization, the heaviness of the head that they were lifting changed dramatically. The real surprise, however, was for those lying down. As the “teachers” improved their use of themselves, the “clients” found the hands holding their heads safer and softer and experienced themselves in a new way.

Carl finished the workshop by telling about his own experience with this surprise. He was in a workshop in Nebraska, USA with Marge Barstow, one of the most widely respected Alexander teachers in America. He was sitting at the *Feldenkrais* table lifting the head of a colleague, thinking, “Gee, he has a stiff neck!” None of the tricks in his FI repertoire seemed to have much effect. Marge Barstow came up behind Carl and touched his neck for just a few seconds, and Carl immediately felt that he could free

his neck and breathe more easily. Suddenly, the colleague’s neck became soft and moved easily. Afterward, Carl asked his colleague what it was that made the difference. His surprising answer was that at first, Carl’s hands felt hard and unsafe. He felt that he couldn’t give his head into Carl’s hands. Then Carl’s hands became soft and safe and he could let his head sink into this new pair of hands. Judging by the animated discussions of the participants, they had also discovered this difference for themselves! ■

Chava Shelhav

Reported by Hanja Rau with translation by Lore Schäfer

EVOLUTIONARY REVOLUTION

“Most of it was unpredictable,” Chava says, commenting on the development of her research and its results. She is reporting on the object of her investigations over the past ten years, and actually the subject that sparked her interest from the start. How do humans learn? In the context of this general question, what happens with children right from the beginnings of their lives? For her Ph.D. thesis, Chava created a research project at a German school for children with learning disabilities. In doing so, she was performing pioneer work in her search for methods of investigation which will be adequate for the *Feldenkrais Method* - methods which can capture movement, not only in pure physical measurement, but also in its quality and its functional capacity of fulfilling an intention. To establish a dynamic analysis plus a work plan, she has developed a graphic model that will be introduced when the thesis is published.

How does learning begin in early childhood? Movements which are first uncontrolled take the child to haphazard incidents while continually stimulating all of the

Chava Shelhav:
Photo by Corrie Joswig

senses. By way of positive and negative feedback, a personal pattern develops beyond phylogeny, and will be the foundation for life and all further action. This pattern will be repeated in its incompleteness: “the ways we find for ourselves are not always the most economic ones”. The incomplete organization of the person, which is based on unbalanced development, has an effect on all his functions. It prejudices not only his movement, but also his feelings, his learning, his decisions and his self image.

Chava believes that this is where the *Feldenkrais Method* comes in; it offers the chance to make up. This is accomplished through a new experience of the less developed functions, in reorganization and integration. The *Feldenkrais Method* allows the student to go back and discover the conditions that support development in the first year. The floor affords safe support, and free experimentation with the entire self is encouraged. Movement is an incentive and a means of learning which, in ATM and FI lessons, works best when oriented toward a specific function. By utilizing a flexible variety of both similar and contrasting repetitions, the person can perceive a wealth of possibilities, evoking an incentive to “know thyself” in movement as well as in emotional experience, and to develop the ability to “learn how to learn”. The work on the floor is a “mini life” with a chance to find increasing balance. Awareness is used during the lesson to help clarify sensation and action. Change may happen in the subconscious, bringing about visible change later.

Transforming these words into experience, Chava directs an ATM lesson to creep, crawl and walk in both homolateral and contralateral organization, forward and backward. Another lesson involves “pecking” which, according to Chava, is an ATM which is particularly useful for “learning to be in the world with awareness”. However, this lesson is often avoided by *Feldenkrais* teachers because it evokes so much interaction among the students. With a firm liveliness, she keeps the large group together and awake. She includes demonstrations with several participants, affording a stimulating contrast of experience and observation. Nothing is said about what the movement “should look like”, though the knowledge of the most effective and economical way is the background of the lesson. Chava appeals to our curiosity and our desire to know. The books she recommends are those which report on the development of children.

An insight into Chava’s work with children was available in the video documentation of the research project at the school. On the screen we could see, in each of the clear lessons, that the goal is the stimulation of basic functions, combined with social behavior and, of course, the pleasure of learning. To classify the changes that emerged, Chava has devised a test to evaluate the quality of the organization in bending forward, turning right and left, and balancing the body on one leg. Chava commented, “This

evaluation is important for the research, but not required for the practical work in the *Feldenkrais Method*. The method aims at improvement as such, and at the ‘domino effect’ on the entire well-being of the individual.” ■

Linda Tellington-Jones

Reported by Annemarie Suter with translation by Roger Russell

WHO DREAMED UP FELDENKRAIS FOR ANIMALS?

Linda Tellington-Jones was born in Canada and grew up with horses. She was unusually successful in all aspects of horsemanship and competitive riding, including a world record in 100 mile endurance riding. She has since received recognition for her work around the globe, and has worked with several Olympic teams.

Linda began her workshop by recounting some of the experiences that have influenced her work. Each of her grandfathers was blessed with a unique practical and intuitive sense for horse psychology, and each made a lasting impact on her life. One grandfather was very successful as a trainer for the race horses of the Czar of Russia. He told her the secret of his success: a very personal relationship with each of his horses. After the horse was cleaned before a race, he would explore every part of the horse’s body with his hands. In this way, he was able to sense which horses were feeling especially strong and could be counted on to win; or as he explained it, the horse “told him” that he was ready to win.

Linda was involved for many years in all aspects of horsemanship, including training, competition and conditioning. During this time, she learned to understand the personality and character of each individual horse. Her constant goal was to find a way to work with the horse to develop trust and harmony. When she attended the training with Moshe in San Francisco, she knew that she had finally found the decisive piece of the puzzle that she had been seeking for decades. She realized that Moshe’s ideas were as useful for horses as they were for people. She felt that what many riders call the character of the horse, especially the behavioral problems, were not unchangeable. With the use of some of Moshe’s methods, transposed for horses, emotional and physical problems could be modified.

She began to experiment with touching the horse and moving him in non-habitual ways, or ways in which the

horse could not move himself. Her intuition was soon confirmed. By changing the horse's habits of movement and behavior, the animal's personality could change in an astounding way, often very quickly and dramatically. During her experimentation she discovered that small, circular movements on the horse's body had powerful effects. Out of this realization came the development of the Tellington Touch; the touching of animals' skin using small circular motions. Bio-feedback studies showed that this "T Touch" brought about parallel changes in the brain waves of both the person and the animal. In this way, the Tellington Touch Equine Awareness Method (T.T.E.A.M.) grew into a complete training method for horses and other animals. Today it is practiced by over 100 practitioners in 10 countries.

One of the participants brought her German Shepherd dog to the workshop. That was enough for Linda to abandon her plans of showing a video of her work and give a live demonstration. Carefully, Linda began to explore the dog's entire body. Surprised at

first by the unexpected touch and the attention of the entire group, the dog ran to her owner. Through Linda's respectful manner, the dog began to realize that her reaction was well understood and began to develop rapport and trust. Full of curiosity, she returned to Linda in the middle of the room. Linda asked the dog to sit and began to touch her with circular movements, first on the ears, then the entire head, around the eyes and finally around the mouth, lips and gums of the dog.

According to Linda, working with the ears has an effect on digestion, respiration and reproduction as well as helping to develop a sense of security and trust. Touching around the mouth is especially appropriate for animals that are not in balance emotionally, either hyperactive or hysterical. After just a few minutes, the dog was lying quietly on her side. Her eyes showed that she was paying careful attention to what was happening. Linda then continued on

to the animal's back, pelvis, feet and tail; circling, pushing and pulling. When she was finished, Linda asked the dog to stand up, which she did immediately. We were surprised to watch as she began to sense what had changed. Not having had enough of a good thing, the dog lay back down on the other side, looking at Linda as if to say "The other side, please."

In the afternoon, Linda worked with two horses at a stable for therapeutic riding near Heidelberg. The first horse was retired early from competition because of injury and was being used as a school horse at the stable. The girl who worked with the horse every day described the gelding as dangerous, especially when being cleaned and saddled. He bit and kicked out at anyone who touched him. He carried his head and neck very high, his eyes were tight

with the eyelids tightly contracted, and his chin and body were very tense. His characteristic expression was one of distrust, threat and insecurity. With a light touch, Linda was able to determine that his entire body was very sensitive and probably painful.

Linda began to make light, circular

Linda Tellington-Jones: Photo by Corrie Joswig

movements on his entire head, including his ears, nostrils, eye area and forehead, then lips and mouth. All the while, she was encouraging the horse to drop his head and lengthen his neck. In herd animals, the posture of having the head up means preparation for fight or flight; the pulse increases and the muscles are tense in order to run. In TTEAM work, getting the horse to lower his head is an important element, since this interrupts the responses and changes the internal orientation of the animal. The result was quickly obvious with this horse. Within a few minutes, his posture and expression were completely different. He seemed a completely different horse! The two of us who were assisting Linda continued on to the gelding's legs. His deep breathing and relaxed chin indicated that he was enjoying this surprisingly pleasant touch. For the next hour, while Linda worked with the second horse, he stood in the corner of the arena, quietly letting his groom touch him overall.

With the second horse, Linda demonstrated the ground exercises that she developed for training and correcting problem horses. This gelding was being used as a therapy horse in the stable. His owner described him as lazy and insensitive to commands to get him to move forward at a fast pace. The first examination showed that he was tense around his back and neck, his back was sunken, and he held his neck and head high. His posture and balance were poor. He seemed to be an ideal candidate for the TTEAM exercises that lead the horse through a series of non-habitual movements that help him balance, as well as learn to concentrate and listen. In these exercises, both the horse and the handler learn to use their bodies with balance and precision. The horse learns to differentiate his movements and gains a sense of integration in the use of his body. Using a lead chain that is buckled over the nose and a dressage whip to give subtle signals, the handler can control the horse's movements with gentle ease.

Step by step, Linda led the horse through a series of obstacles, including a maze, being careful to make sure that the horse understood the task and could carry out what was asked of him. Within minutes, it was obvious that the horse had mastered the challenge and found a new sense of balance. He seemed to wake up before our eyes as he grew interested in doing something he had never done before, and with someone who obviously understood him. To crown the demonstration, Linda rode him in the arena without saddle or bridle, using only a ring around his neck. Because she utilized the same guidance and directions to signal him while on his back that she had used while working with him on the ground, he was able to understand her easily. His lively pace and attentive and interested posture made him look like a new horse. ■

Orientation: Learning is an
Intimate Personal Thing

Beate Gottwald-Trummer

Reported by Ilana Nevill

WHAT ABOUT THE EMOTIONS?

Most of us who had enrolled for Paul Rubin's workshop "What About the Emotions?" were probably disappointed that he could not come, but also very glad that Roger and Ulla acted on the well-tested *Feldenkrais* principle of "doing the same thing differently". They managed to get Beate Gottwald-Trummer, a German psychotherapist and *Feldenkrais* practitioner, to stand in for Paul at very short notice, so the workshop could take place. At the final evaluation, participants were unanimous: Beate had succeeded in satisfying expectations, helping people to clarify for themselves, through their own experience, at least some of the issues involved in the interrelatedness of sensation, emotion, movement, and touch that crop up in our work.

Beate quickly established rapport by saying a few words about her personal interest in the emotional dimension of ATM and FI. As a Gestalt therapist and practitioner in Bioenergetics, she was familiar with the realm of feelings, but taken by surprise when she herself was "plunged into a pool of emotions" three weeks into the Amherst Training. That personal response to the *Feldenkrais* experience led her to pursue the issue in more depth, studying with Ron Kurtz and other body-oriented psychotherapists.

The theoretical framework derived from that background was briefly sketched. From the very beginning of life, certain basic needs (for space, food, protection, boundaries, etc.) urge us to action, i.e. interaction with our environment. This interaction aims for an optimum of satisfaction in terms of pleasure, meaning, relatedness, etc., while attempting to avoid the undesirable (pain, frustration, hopelessness, alienation). Movement and feelings are closely related in all this striving, which adds up to character formation.

Like Wilhelm Reich and his followers, Moshe Feldenkrais was very aware that negative experience, i.e. failure to achieve satisfaction, is expressed in our habit of moving, preventing the person's optimal functioning as an autonomous human being or "potent self". He saw the emotional dimension: for instance when he taught the "Sucking" lesson at Amherst, he asked students to feel *how* they were lying "at their mother's breast"; but his focus was primarily on *function*.

In *Feldenkrais* exploration, we all experience more or less clearly that changes of muscle tonus by way of movement have an impact on our "emotional tonus", and many of us

soon begin to realize that emotions can be made accessible by listening to the body.

Beate's workshop was intended to take us beyond that general experience. In the first practical exercise, "Guided Memory", we were lying on the floor using the same inner attention as in *Feldenkrais*'s work, scanning ourselves as a *field of consciousness* while allowing the memory of a moment of strong emotion to arise; recreating in our mind the situation, time and place; observing images, thoughts and sensations; taking note of foreground and background, etc. Imagining a companion whom we could trust and talk to in that situation facilitated the process of giving permission to the unconscious to bring up material, allowing feelings to unfold and details to reveal themselves and their significance. The crucial question was: *What should that ideal companion be like and what do I expect of that person?*

The exchange of experience that followed, first with a partner, then in the whole group, highlighted some of the aspects of that imaginary person: quiet, non-judgmental presence, openness, relatedness combined with respect for boundaries, purposefully passive receptivity. The image of a radar screen patiently receiving whatever signal was being transmitted seemed to be a good metaphor. The relevance of all those observations was obvious. As one participant said, "The qualities of my ideal companion are those I wish to manifest as a *Feldenkrais* teacher and practitioner."

The discussion thus began to include the role and task of the practitioner/therapist whose qualities were seen as having to reflect those of the ideal inner witness. Her or his open-minded neutral presence provides the most important precondition for the client's inner work involving reliving and reorganizing past experience. In that process, antidotes are also allowed to arise from the unconscious to satisfy repressed needs and heal deep hurts. When the client feels in danger of succumbing to overpowering emotions, the other who is available as a support may have to become more active for a while, providing "grounding", directing attention elsewhere, etc. Acting as a model for the inner observer, the outer witness thus becomes the "driver who determines where the horses are going, the destination of the journey, and who is going to travel in the coach". A. Pesse (Ron Kurt's teacher and author of "Experience in Action: A Psychomotor Psychology", NY 1973) speaks of the "pilot" who is in complete command of the complexities of the situation.

In a similar exercise done standing, feelings didn't seem to arise quite so easily as they did while lying down. For many, kinesthetic sensation, preoccupation with balance, etc., remained in the foreground. Some people expressed frustration, even anger, while others were amazed at how easy it was to stand freely, sensing the delicate interplay of

many muscles and tuning in to the emotional dimension as well.

The exercise after the lunch break focused on the significance of touch. Here the guiding question was: *How do different attitudes affect my touch?* Under Beate's guidance we explored that issue with a partner.

The people lying down and those who would eventually place one or both hands on the body in front of them were asked to extend their awareness over the entire field of consciousness, giving the whole and its parts equal attention. The passive partner was invited to sense specific areas that might call for special attention and put a hand there, first in the imagination and then in actual fact, and closely observe the mental-sensory-emotional impact. The same two-step process was then repeated with the active partner putting a hand on the same spot. Slowness and subtle two-way attention, watching one's own and the partner's responses, had to be maintained. Useful tips for the active partner were to give words to the hand: *What does my hand say to the person it touches?* The passive partner was invited to describe to himself the quality of the other person's hand and what was being communicated to the place where it rested.

Brief verbal contact was established by the passive partner making a spontaneous statement which the active partner simply repeated. It is not so easy to echo the same sentence back a second time or a third time with equal neutrality! Most of us also experienced very clearly, in both the active and passive roles, that when the 'practitioner' remains a supportive, receptive and neutral witness, it is actually the 'client' who is active. The work of functional reorganization, of emotional clarification and healing, happens inside.

Participants in the workshop were amazed about how much *can* happen with such unbiased touch, and felt great relief and gratitude for having been allowed to simply sense, feel and listen inside, instead of having to *do* all the time. One person's words during the final discussion must have resonated for many others: "For me it has been an important experience that needs can be acknowledged and emotions given space!" In her case, unexpected changes had taken place: the headache which she normally tends to suppress or ignore had simply vanished. ■

Gisela Rohmert & Johanna Rohmert-Landzettel

SOUNDING OUT THE *FELDENKRAIS METHOD*

The human larynx is the center of a variety of movements which developed throughout evolution, each serving a different function. According to which function is demanded, the movement goes from a simple, reflectory closing to a highly complex capacity of differentiation between muscles, ligaments and mucous membranes. This diversity of function in the organ of the voice and of respiration holds dangers of fatal disorders, which are not restricted to the larynx. The primary protective function of

the larynx affects the body and shapes it in a different way than its respiratory valve function does. In addition, the double valve function of the larynx, which responds to differences of pressure, also influences other motor functions. In the process of phonation, especially in singing, these functions can be transformed into a vibrating Gestalt. This can develop the body for singing and music-making in a way that no other experience can. The body diaphragms, i.e. the diaphragmatic chain, can coordinate rhythmically with the vibrating laryngeal diaphragm. A musical and instrumental flexibility of movement can be grounded on this vibrating system. This coordination takes place through the sound produced, which, in its composition, reflects the quality of the body system producing it.

Practical Examples of *Feldenkrais* Teaching Oriented Toward Sound:

Including sound parameters in his perception makes it possible for the musician to interpret musically the correlation between different movements. This can be done by transferring the dynamic principal of volume or pitch perception onto single parts of the body. For example, asking, while lying on the back, "Which foot seems to be louder?", or "Which knee seems to have a higher pitch?" Associating instrumental sounds with body parts makes the musician aware of the variety of sounds he could "be" if he listened to them. "Which instrument does the head of your pelvic space sound like? Is the sound you hear related to string, keyboard, percussive or wind instruments?" Furthermore, by adding high frequency sounds during an *Awareness Through Movement* lesson (through cymbals, violin or the human voice), one can experience a highly differentiated and effective movement. The neurological effect in the brain of an acoustic stimulus is more complex than that of verbal instructions in a lesson. ■

Iris Uderstädt & Liane Stephan

CONTACT IMPROVISATION - *FUNCTIONAL INTEGRATION*

Contact improvisation was developed in the beginning of the seventies by Steve Paxton and Nancy Stark-Smith. Martial arts, new dance, body-mind work, and research on human development influenced this form. Today it is practiced as a

Johanna Rohmert-Landzettel:
Photo by Irene Sieben

performing art and it is used in therapeutic frames as well as a movement system for disabled people called Danceability. Since we are both contact dancers and *Feldenkrais* teachers, we were glad to offer our ideas at the conference and to explore some of the ways these two educational methods can interact.

Our workshop had two main themes. The first theme was about learning how to support oneself in an effective and healthy manner while giving a lesson in *Functional Integration*; how to be connected to oneself and at the same time be in dialogue with the student. The second theme was about widening the range of possibilities of touch.

We started with an *Awareness Through Movement* lesson on soft balls which allowed the students to give weight to the floor and to soften the musculature. As the moving ball is giving constant feedback about the organization of the body, the participants felt very present after the lesson. The improvisation of rolling on the floor, with the ball moving from the center to the periphery and back, awakened the entire surface of the body for the partner work which followed.

Moving in pairs with the ball between them demanded from the participants a deeper attention and trust in order to give their weight to the ball, to the earth and to each other. In every moment, new information is given and the body-minds have to find new pathways to stay in contact. The atmosphere in the room shifted between a very quiet concentration and a lot of laughter and fun. Taking the

improvisation one step further, the partners were to move in direct body contact (without the ball) - a challenging task for most of the participants.

After a break with a video about the development of contact improvisation, "Fall After Newton", we continued with the second part: "hands-on and body-on work". We began by bringing our attention to our self-organization in *Functional Integration*. This involved exploring the relationship between our own center and the direction that we gave to our hands while touching our partner who was lying on the floor. This was followed by experimenting with different levels of touch: with the clothing, skin, muscles, bones, and organs being at various times the center of our attention. We tried this in two variations: (1) directing weight in a vertical line through the body toward the floor, without evoking movement, and (2) using diagonal pushing with a clear intention for a direction of the push as far as possible before receiving a new direction. This led into using other parts of the body to push on the partner. After some initial difficulties, the participants became more familiar and comfortable with this new possibility of moving their partners. They were surprised at how clearly they could give information with their back, belly or with a foot. We observed a lot of joyful "dances of rolling points of contact."

We had a very interesting discussion with the group at the end of the workshop. A lot of new tools, questions and answers came up - material for future workshops. A big thank you to Ulla and Roger for making this event happen! ■

Jeremy Krauss

HANDWRITING, STYLES AND TECHNIQUE - A WORKSHOP IN CREATIVITY

Moshe Feldenkrais was convinced that every single one of his students would develop his or her individual handwriting in *Functional Integration*. The workshop by Jeremy Krauss, an Amherst graduate from Tel Aviv, was a chance to uncover the “*multidimensional*” approach to one’s own capacities. With this aim in mind, he invited each participant to accompany him in the exploration of his own questions such as: How do I generate more ideas which are my own? What will you always do in an FI? What will you never do in an FI? What do you repeat the most? How many tempos do you have? How many parts of your body can you use while doing FI? Which parts of your body do you always use? Which parts of your body do you never use? How many feeling modes do you have in your work? What positions do you mostly work in? What positions do you never work in?

A short ATM involving the trajectory of force through the entire structure, initiated by small movements of the ankle, was sufficient to highlight enormous differences in how keen people are on experimenting, how eager they are to discover something new. This aspect of walking, explored in the supine position, was subsequently investigated in a free-style FI format, with question like: What makes my actions unique? Do I copy what I have learned, seen, felt to be right? Is this my style or simply a limitation? Crucial for Krauss in the observation of one’s own actions are the dynamics involved in “*feedback*”: The student asks: *What is my own attitude in this situation? Does it nourish the other or inflict my own limitations on her/him? Can my attention shift with what I sense? Can I transmit what I want to communicate with a single movement? Can perception of the facts add something new to the spectrum of my experiences?*

Krauss thinks it is important to: *“have the courage to venture into territory which I have not yet dared approach myself because I have been afraid of such expansion.”* Limitations can thus be overcome, a breakthrough attempted. *“Changing your attitude is very important.”* Of course, this applies to both one’s inner and one’s outer attitude. He encourages people to use their own bodies with more creative imagination, to try new ways of communication in FI. Focusing on only one particular technique can be a barrier here. *“There are millions of possibilities. The question is: What do we allow ourselves to explore?”*

His example comes as a surprise, and for some it unquestionably means a breakthrough into new territory.

The teacher sits above the student (lying on the back) and places the student’s head in his lap. In this way, the teacher’s knees are free to move the student’s shoulders, ribs, and neck.

Another example is a sensing exercise focused on remaining sensitive to the most subtle sensory perceptions: the person lying on one side is very gently rolled to and fro with one hand on the pelvis, the other on the chest. In this case, it is a matter of registering changes whenever the active partner alters inner attitude, intention, or feelings. Are speed or quality of movement affected? Amazing for some, even alarming, discovering to what extent the smallest sentiments and feelings are communicated by the hands! This enabled the participants to begin a journey into practicing FI more creatively and with more resources at their disposal to help them develop their own unique styles and creative freedom. ■

Never Working With the Problem

Paul Doron-Dorofeti

THE RIGHT TO BREATHE EASILY

Whether I breathe or not, and how I breathe, will reflect my direct understanding of the activity or function I want to perform. In other words, breathing is a function of what I expect of my ability or inability to perform a specific movement. For example, if I am expected to walk on a rope a few hundred meters above ground, and I know I

cannot do it, my breath will definitely be different from the way I breathe while I am lying under a palm tree on a calm and sunny beach, my mind lulled by the sound of the ocean and my back caressed by the mild rays of the sun. In the first instance, I would be functionally able to do, while in the second, my functional capabilities would not be used to their full potential. Lying on the belly would not be particularly difficult for us, and for most of us it could be done without thinking.

Within the short time of this conference workshop, it was only possible to show how things that are second nature for us, such as lying on the belly, may not be so obvious at all. With the help of a few examples, I put the participants in the situation of a handicapped person for whom lying on the belly could be fatal. This was to let everybody feel such a condition, and to make them understand the importance of such a capability as a question of mere survival. In the *Feldenkrais Method*, it is possible to understand such a condition in that more or less normally functioning persons perform a certain movement which is unfamiliar for us when we lie on the belly.

Each of us can turn his eyes to the left and to the right, and up and down. We can see the influence of the eye movement on our breathing while our bodies are in a specific posture, and how the unusual posture will reflect on the quality of the eye movement and on our breathing. In other words, whenever we come to the limits of a function we are familiar with, we experience the difficulties of a severely handicapped person in performing a function which is relatively easy for us.

Healthy breathing is a function which can only be considered in connection with another specific function. Healthy breathing is as spontaneous as our heartbeats, and does not have to be intentionally controlled. We can improve our breathing, i.e. adapt it to our respective conditions, by improving and refining the spontaneous reactivity of specific parts of our body which cooperate with the breathing, such as ribs, neck, abdomen, tongue, etc.; but this should happen independently of the breathing. Our breathing is different when we sleep and when we have to run or to swim. A well functioning organism is capable of changing its breathing spontaneously and in accordance with the circumstances and the functions performed, similar to the spontaneous change of position of our bodies in movement.

ATM in which the relationship between the quality of breathing, the non-functional tension in the neck muscles, and the ease or difficulty in the eye movement, becomes more obvious:

Standing with the feet parallel and 10 cm apart, try to move your eyes to the right and to the left at eye level, and observe how far you can look right and left *with ease*.

When you feel the smallest change in the regularity of your breath, don't go further, but change the direction of your movement. Try to keep the ease of your breathing and of your eye movement in mind in order to be able to continue the following movements with the same ease.

Feel how gradually the whole body begins to oscillate in the rhythm of your eye movements. Observe: when are you breathing in and when are you breathing out? Stop this, and walk a little. Feel whether your body is moving forward more easily, as if someone is pulling you forward from the head. Let your body follow your head.

Come to standing again in the same way and then do a vertical movement with your eyes. Pay attention to how far you can look upward and downward with ease. Also, in this movement observe how your entire body is gradually following the movements of the eyes.

Lie on your back. First, try the movement of the eyes from side to side, many times. You will see that the floor is very drastically limiting the movement, so that the movement of the eyes is spreading only in the neck, and there only slightly. The shoulders and the entire body are lying without motion. Observe which parts of your body are pressing the floor in a futile way: the heels, the hips, the elbows or the shoulder blades? Try not to press with any part. Observe the regularity and the quietness of your breathing. Repeat this, using an up and down eye movement.

Turn onto your stomach and place your hands as if you wanted to push yourself off the floor. Spread your legs comfortably, and try first to observe the quality of your breathing, and to feel which parts of your body are pressing the floor in a futile way. Observe the pressure of your knees on the floor, the pressure of your chin and of your hands, and try to reduce it to a minimum. Observe your breathing in the small of your back and in your lower abdomen. Put your chin on the floor, keeping your arms standing near your shoulders with the elbows pointing toward the ceiling. In this position, try to look to your forehead and afterward, let your eyes go down, in the direction of your chin. Try not to fix your eyes as you are looking in the direction of your forehead, but let them slide with ease. The ease of the movement can be measured by its fluency, like a pendulum which doesn't stay at any extremity of its trajectory. Try to move your eyes in the same way and observe which parts of your body begin to press the floor *while you are doing* the up and down movement of the eyes. Observe how far your back muscles are involved in the eye movement, and whether your sternum or your hands, because of an insufficient functioning of your back muscles, gradually begin to press the floor in a futile way.

Continue to do the same eye movement, but gradually do it more and more fluently, quicker, but without haste. The

difficulties you now feel, by doing this eye movement in this specific posture *and not in any other one*, is the very discomfort felt by a spastic child or baby when someone puts him on his stomach. You can see that in the *Feldenkrais Method*, we can learn very much about the functioning of an injured nervous system by becoming aware of our own limitation in exercising a specific function which is insufficiently developed. Feldenkrais said that he did not teach, but created the condition in which others were able to learn.

Lie on your back and feel the effect of the movement along your body, from the heels to the head.

The lecture was continued with a videotape showing the different stages of my work with a very handicapped girl, from the beginning of my work with her when she was 3 1/2 years old up to the present. She is now 7 years old.

When this little girl came to me, she was not able to breathe for half a minute without going into a spasmodic kind of suffocation at least once, as her throat muscles became as tight as steel, practically closing her nasopharyngeal passage. Her body was undeveloped and she was not even able to lie because of the heaviness she felt in her head the moment she wanted to direct or to move it. Her kinesthetic feeling was so distorted that she immediately got into a deadly panic the moment someone intended to lay her down. When this girl came to me for the first time, she wasn't able to sleep a quarter of an hour at night without feeling that she would suffocate.

On the video tape, you can see what her breathing, lying and eating was like in the beginning, as well as some of the techniques of the *Feldenkrais Method* I used in my work, especially the work with the lower abdomen and the use of the so-called atavistic movement of the head (birdlike movement of the head, or the movement pattern used by animals when drinking).

In my work with small children, especially with those who have endured traumatic experiences by other manipulative treatments, the first and most important thing is to bring the child into a state of mind in which he not only ceases to cry, but actually gets into a cheerful state of mind. The next steps are to enable the child to reach that physical condition which can allow him a regular and easy breathing. The last stage is the actual learning phase, when I have induced the child's attention and interest in a kind of learning process which will permit him to become a healthy being, which is the natural way common to any healthy child. These three phases are not distinctly separated from one another, but in each one of them, more importance is given to a different aspect of the child's behavior. To be able to assist a suffering child, it is of crucial importance to be aware of the impossibility to invert the order of priority which must be given to these three different stages.

As she was highly irritable in her neck-throat region, I tried to reduce the tension in this part only indirectly, without touching the neck, i.e. through all kinds of invisible and slow movements of her torso relative to her head leaning on my hand fixed in space. The way I handle her during the sessions is always conditioned by a deep feeling and empathy for her, and the quality and complexity of my thinking is confirmed by her behavior and spontaneous positive reactions. In the way I support her (by supporting the body or the limbs, I also support her soul). I first give the suffering child the feeling of utmost security in the field of gravitation and only after she becomes confident in her physical and psychical surroundings, do I bring her into some kind of movement. Feldenkrais once mentioned that his lessons were like a dance between him and the other person. Only with this kind of 'dancing', when the body and the soul of both the practitioner and the client are moving in absolute resonance with one another, can improvement occur in any functional ability.

As a practitioner, I am also guided in my work by the student as I am guiding him through a learning process. The highlights of my sessions are when a child falls asleep, as if she were going into a state of meditation and begins to smile as a response to my 'teaching'. The child smiles because my touch is not only relaxing (I profoundly dislike this word, by I have no other choice for the moment), but also interesting, and all this even in her sleep! We can learn in our sleep, too, and also improve the control of our minds, as if we were in a deep meditation. This requires a very special state of mind in the practitioner and the pupil, a state of mind which cannot always be reached.

On the tape you can see how the child is now able not only to lie and breathe noiselessly and eat with her mouth closed like a grande dame, but also to enjoy her ability to move and to have an influence on her environment, as she can use her limbs and crawl or move a ball, etc.. The lecture ended with some practical experiments with a few techniques shown on the videotapes. The silence and the attention of the participants in this practical part of my lecture showed that they had understood the message of the lecture. ■

Lea Wolgensinger

THE POWER OF SPEECH

Communication in the *Feldenkrais Method*

Through participation in this seminar, it is possible to increase attention to the process of communication in *Feldenkrais* work. Moreover, you will become aware of how the teacher can playfully deal with the language and at the same time use it in a more responsible way.

Since I teach lessons using the technique of *Awareness Through Movement* all the time in German and Italian, sometimes simultaneously; I noticed how difficult it is to deal with a language in conformity with the meaning. As a consequence, I started to investigate this topic and discovered a series of things that impressed me very much. First of all, I found out that almost half of the communication in *Feldenkrais* work occurs through speech. The expression 'verbal', used by Moshe for the ATM technique, already confirms this. In spite of the fact that during the teaching we have to speak so much, we know very little about speech and probably are not fully aware of the power of speech. The large field of communication and speech have, meanwhile, become a vast research area in every single language.

While teaching the *Feldenkrais Method*, we employ not only auditory communication, but also kinesthetic and visual communication. Very few of us are aware of this fact. As a general rule, we don't know 'how' we do it. We just take it for granted that 'it' works, and usually 'it' does. Why? Because, first of all, we follow our intuition, our experiences and make use of our usual ways of expression. If we contrast these elements: intuition, experience, and usual ways of expression, and the consciously applied communication, the previous communication structure is completely upset, becoming newly mixed, receiving new priorities and opening new paths inside the *Feldenkrais* work. The most important part of this seminar is to become aware of this.

Teaching Through ATM:

It is interesting to notice that, during an ATM lesson, we usually have to deal with three different types of partners. First of all, there is the ATM group as a whole. Second, there is the possibility of speaking to one single person out of the whole group; and third, we can choose to address ourselves specifically to an individual. Do we know how we are doing this?

There are three pedagogic factors that determine the contents of an ATM: its course, its feasibility, and the personal (philosophical) explanations. In addition, the use of speech consists of three factors: the cadence, the rhythm, and the sound intensity. All these factors together represent, therefore, a part of an intention, in this case to teach an ATM lesson successfully. The intention, in my opinion, can be transmitted in a clear and easily understood way only if all these factors are applied in a deliberate way.

Exercise During the Seminar:

Students were asked to perform short exercises in groups of three, during which the participants had to change roles, experiencing the means of expression and the phrasing. The whole group then analyzed the process, suggesting new possibilities of expression.

Teaching Through FI:

During the teaching of FI, a clear communication cycle develops. At the beginning we have a dominant verbal communication, followed by a long phase of kinesthetic communication, concluded by a second verbal communication phase. Mainly during this last phase, there are many possibilities to round off the FI through the deliberate use of the language and stimulate interest for the new questions from the student.

Exercise During the Seminar:

In this instance, everyone works for a while alone, answering the following questions: What kind of an image do I have of my student? What kind of an image does he have of himself? What kind of formulations has he used? Are they oriented in a positive or in a negative way? To what kind of associations is he sensitive? In what way can I direct his attention to new ones? The answers received were then analyzed and evaluated by the whole group, who then looked for possible alternatives. ■

Myriam Pfeffer

Reported by Hanja Rau with translation by Lore Schäfer

IT'S AWARENESS THROUGH MOVEMENT AND NOT MOVEMENT THROUGH AWARENESS

Myriam Pfeffer opened her workshop by mentioning Moshe's contribution to our lives and the lives of coming generations. He brought to our lives, at the right time, a possibility of re-education that helps us to reach a fuller experience of our humanity; or in other words, to become aware of our actions and how to know what we are doing.

Another Moshe, the biblical Moses, took the Jewish people out of slavery. Today, says Myriam, we have another kind of slavery, those dragons and demons in us that weigh upon us and fix us in our compulsions, our stresses and our fear of ourselves. This evokes anxiety that constrains us while our self-imposed constraints evoke our fears! Our affinity to our habitual ways, the security of that "internal house" that we dare not leave; these are our problems. This attitude of being closed in by our habits is hostile to life, because "our brains have been made to learn and grow!" It is the development of awareness in the *Feldenkrais Method* that can help us to go to the non-habitual. Each individual step calls for mobility; each slight change is somewhat destabilizing. What we need is the mobility of

Myriam Pfeffer: Photo by Corrie Joswig

our “self”. We have to develop the capacity of regulating between stability and mobility in each moment.

The *Feldenkrais Method - Awareness Through Movement and Functional Integration* - gives us instruments to help us master life in this way. We can learn for the whole person, both body and psyche, fitting the way we live as an integrated individual. And we learn in an individual way and an individual rhythm, drawing on our own depth and resources, where our real master can be found. The teacher can only act as a guide: “I can suggest that we go for a walk together, but I cannot look at the landscape for you!” The internal, complex movements of the self can best be found by taking non-habitual steps down a road we have not yet taken. We learn best without pressure and without judgment, much as a child discovers gravity while learning to stand and walk, or a kitten whose ball of wool becomes his mouse.

In the ATM lessons of the day, we explore to find a way to add depth to our sensation. The clearer our self images become, the easier it is for our brains to find what is best for us. Lying on the back, with “the floor as our teacher”, we learn to know our tonus when we are doing nothing. We explore by exaggerating that which we are doing, ever so little, emphasizing that which is, rather than opposing our own inner selves. We follow the same principle in working with our partners, sensing how they shift their weight, following and then understanding their patterns of moving. Moving with them, while maintaining our own internal centeredness and skeletal balance, we learn to sense and know rather than to change, to make something clear for ourselves and our partners rather than to explain.

As the workshop continues, the theme shifts to the relationship between our tonus and our mood. “What we are doing is to tune ourselves, to find harmony in our inner sense of ourselves. And we function in the same way that we sense ourselves, with harmony or dissonance.” Myriam asks us to attend to our moods and feelings as we explore breathing out while we expand our abdomen, and breathing in while lifting the sternum. This is then combined with sounds: breathing out with laughter, breathing in with crying and moaning. We are discovering the relationships between our moods and our movements. This can give us the ground to sense in others the relationship between tonus, mood and pain in our *Functional Integration* lessons.

In the remaining *Awareness Through Movement* lessons, we explore a series

of tubes that we sense in ourselves: our mouths, throats and lungs, and our digestive systems. Lying on our backs, we experiment with opening these imagined tubes in various combinations. The criteria for the lesson is: “the less tension, the more attention!” There follows a fascinating lesson to find the midlines of ourselves, first by following the tracks of an imagined ball covered with colored paint, as it rolls along over our skin. We then extend this midline by imagining that a plate of glass passes through us along this line dividing the space in front of us in two halves, left and right. We then explore the surface of this glass with the hands and feet never crossing the middle, experiencing new aspects of our spatial orientation. Finally, we find ways to roll the pelvis on the floor, making figure eights around the seat bones in sitting, standing, and walking. How do we feel now? In contact with all parts of ourselves, awake, aware and attentive. On our way to more mobile brains! ■

Ruthy Alon

Reported by Irene Sieben with translation by Ilana Nevill

THE RATIONALE OF ORGANIC LEARNING

Like Myriam Pfeffer, Chava Shelhav, and Gaby Yaron, who was so painfully missed at this congress and will now be missed forever, Ruthy Alon belongs to the illustrious circle of the “Magic 13” to whom Moshe Feldenkrais began to

pass on his knowledge in Israel at the end of the 1960s. As a senior trainer, she has carried the method from Italy, where she regularly runs trainings, to Australia. Her highly individual, poetic style of teaching inspires through its depth, combined with her forthright verbal skills and her constant readiness for communication and discussion of the small and great miracles of transformation. Her expeditions through the hilly landscapes of rolled up blankets and soft obstacles in the form of knotted socks, also condensed and available in her book *"Mindful Spontaneity"*, constitute an enrichment for every *Feldenkrais* teacher and student.

Ruthy's favorite theme, *"Free Your Back - Free Yourself"*, was not central in her Heidelberg workshop. In her ATM, she focused on the dynamics of locomotion in the process of evolution, particularly on elements involved in the transition from homolateral movements to contralaterality (cross-crawling). Initial mobilization of hip and shoulder on one side (while lying on the back), and exploration of using them like feet to propel the body up and down resulted in the pleasurable feeling of being a creature with six legs and a torso like an accordion. As a preliminary stage and preparation for contralateral crawling, the role of the spine (prone lizard-like position), especially its capacity for lateral movement, was investigated in an intimate research laboratory of brief F.I. sequences, by applying the gentlest (including restrictive) pressure to the spinal processes. In this sequence, the subtle quality of the most varied pressure impulses from the sole of the foot was transmitted through the entire organism in an astonish-

ingly effective echo.

In her conversation with students, Ruthy Alon presented the issue of whether the *Feldenkrais Method* belongs more to science or art as a riddle, which literally seemed to take on the shape of a living question mark. Can rediscovery and revelation of what she calls *"biological optimism"* ever be fathomed by way of current scientific procedures? What kind of laboratory could, in fact, measure qualities and transformations brought about by this vast "power of differentiation"? It became clear that Ruthy has doubts about the objectivity of learning processes, with the possible exception of the absorption of simple, rational information, especially when it is filtered through a person's commitment, ideas, perceptions, and particularly, his personal growth process. Viewed objectively, however, she feels that break-throughs for the method, in terms of solid research, are long overdue.

Sooner or later, the systematic process of rediscovery and experimentation, which Ruthy untiringly stimulates in her lessons, touches on what she calls *"the knowledge of the organism"*, *"the locomotion of nature"*. Apart from *"silence"* and *"honestly looking inside"*, which Ruthy encourages, she says that the objectifiable capital of this work includes: *"looking for the factor in the brain that transforms chaos into order"*. Or put differently: Moshe Feldenkrais knew how to create the climate which melts the frozen pattern of movement and behavior.

The learning processes Ruthy Alon sets up for her students are continuously interspersed with intriguing paradoxes.

In short, in highly effective movement sequences she thus explores how mistakes can result in learning. While pretending to be drinking out of a cupped hand, for instance, the side which functions better is invited to take on the pattern of the *"disturbed"* side. In this way, the range of action is increased in the other. The nervous system tends to choose what is most secure, what is easiest and most useful in its function. Ruthy coined the term *"neurological diplomacy"* for this, an apt expression in which art and science happily meet. ■

Roger Russell / Ulla Schläfke

THE KINESTHETIC BASIS OF THE SELF IMAGE

In 1989, we began a systematic project of making video films of infants, beginning shortly after birth until they began to walk freely. These films were made weekly while the child explored and played at home. They were planned as a longitudinal study to capture the process and content in the development of action. Since we had the opportunity to film several children, we have been able to make comparisons among them to capture both the common features of all the children and the unique process that each child found on his way to understanding. These children have provided us with a developmental thread to weave together the complex fabric of the *Feldenkrais Method* in our work with ATM and FI.

This research has diverse potential. We can relate our observations to many of the ATM lessons that we all know, and which are strikingly similar to the developmental activities of children, leading us to a deeper understanding of both the *Feldenkrais Method* and child development. We find many parallels here, but it is important to recognize differences between these two subjects, since in our *Feldenkrais* lessons we do not need to evoke the entire process of development in order to reach functional improvements in adults. We can go further, though, and ask ourselves about the outline and the details of the experience of self image and its developmental process. In this case, we can be especially interested in the basis in movement of the so-called “psychological” sense of self. This is not just an academic question. All of us with experience in the *Feldenkrais Method* know that we are drawn to it by more than the movement experience. Our sense of fascination with this method comes from a deep sense of confidence, potency, ease and fulfillment; all so-called psychological experiences that accompany our discoveries in the *Feldenkrais Method* and motivate our continuing endeavor to understand its complexities.

Self image, or what Daniel Stern calls the sense of self and how it develops, would then be the proper subject for research. Indeed, Moshe Feldenkrais outlines such a question in his first chapters to *Body and Mature Behavior*. Our objective was to relate this sense of self to the functional movement development of the child. This turned out to be a very tall order indeed! We have learned to be humble and explore those realms of development that adapt themselves to the tools we had at our disposal. For this one-day workshop, we chose a small piece of this complex puzzle. Our purpose was to look at several related points:

- Moshe Feldenkrais' concept of self image, and Daniel Stern's concept of the sense of self.
- The process of movement development occurring during the development of one of the domains of the sense of self: the Core Self.
- Video films of the activities of two children and some experiential explorations of these movements in ATM.
- Understanding the movement patterns observed in these children as a functional foundation of movement that is recognizable in the movement dynamics of everyone we see in our classes and FI practice.

Our tools for the day were ATM lessons, the video films, a short FI experiment, and a short description of the primary concepts of Daniel Stern's “sense of self” as outlined in his book, *The Interpersonal World of the Infant*.

Stern outlines an approach for understanding what he calls the sense of self, a concept that seems very similar to Feldenkrais' idea of self image. Stern is a psychoanalyst and developmental psychologist and some of his ideas have turned psychoanalytical theory on its head. His fascinating book promotes a theory about the development of the sense of self, drawing on a wide field of research in infant development.

Stern proposes a scheme in which the child develops a sense of self, grounded in his organic nature and growth. The child is related to his physical and social world, and these relationships provide the growing infant with opportunities to identify what Stern calls “self-invariants”. These are experiences that remain constant in spite of all of the changes in the child himself and the world around him. Using his complex nervous system and the interactions with the world, including the social world, the child develops four “domains” of his sense of self. The experiential content of these four domains is related to the content, quality and focus of the child's interactions with his world. These domains are not stages in a process, they are constant domains of experience that remain part of our experience for the remainder of our lives.

We have access to all of these domains of experience in normal life; indeed, we move through them without even noticing it. These four domains of self are: (1) The sense of emergent self. The child senses that he is able to organize his experience and make order out of the constant changes in himself and the world. (2) The sense of core self. The child acts “as if there is now an integrated sense of himself as a distinct and coherent body, with control over his own actions, ownership of his own affectivity, a sense of continuity and a sense of other people as distinct and separate interactants.” (Stern, p. 69). (3) The sense of subjective self. The child discovers that there are means to communicate and share these experiences. (4) The sense of verbal self. The child discovers the power of speech as well as the ways in which this tool of communication affects the sense of self by verbal categorization of experience.

We chose the sense of core self because Stern's description of the self-invariants that the child can identify in his experience are almost all grounded in the child's kinesthetic sensation of his action. This raises two intriguing questions. First, are the developmental movement experiences at this age the embodiment of our core self? Secondly, when we explore these same movements, as we do in the *Feldenkrais Method*, do we have access to this domain of core self, and what are the consequences for us if this is so? Of course, these questions open up a field much too complex to cover in a one day workshop; we ask them in the hope that they will continue to puzzle the reader as they did us and the workshop participants.

We shared with the group some films of one of the many fundamental developments that emerge between 3 and 7 months. During this time the child makes great strides in his movement development.

We see many of the basic skills emerge that we use for all further action: control of vision, grasping, orienting the head in the upright, rolling, and coming up on all fours, to name a few. We chose to look at the process by which a child rolls from back to belly and returns in a smooth reversible manner. This skill emerges out of a complex set of movement

experiences that enable the child to identify sensations of himself in action. Many of the activities that lead to this skill, as well as the rolling itself, are seductively similar to some of the ATM lessons that we all know.

The first ATM lesson of the day is a "classic", and strikingly similar to a film where the child is lying on his side and turning around himself. This lesson consists of lying on the side and lifting the straight arm toward the ceiling while looking at the hand. The leg is then moved in the same direction as the hand. The remainder of the lesson involves the differentiation of the leg, arm, head and eyes while turning. At the end of the lesson, we asked the group to explore, with their eyes closed, their sense of the space around them, comparing the side on which they had

been lying to the side that had been moved. There is usually a surprising change in the sense of the space around oneself on one side. Does our kinesthetic image of ourselves affect our sensation of external space? If so, how does this happen? Does this ability to turn completely around in space, which we watched as it emerged on film, also now help create a sense of space around us?

We then explored, in more detail, what seemed to be the two basic strategies for rolling in this manner, while flexing the spine or while extending it. By understanding how these two ways of rolling are related, and their development, we can make more sense out of the way that all of us and our students utilize the spine in the very common human activity of rotation while standing or sitting. Intriguingly, it also enables us to make sense of the fact that all of us are asymmetrical in our posture and action. This

also included a short exploration with partners, looking at their positions in lying on the belly, back and both sides, to discover these positions as an "interrupted movement" that, when seen together, helps us identify the way they habitually turn themselves around the rotational axis of the spine. This offers many opportunities for creating FI lessons.

Ulla Schläfke/ Roger Russell: Photo by Corrie Joswig

We closed the workshop with a creation of our own. The "eyes-in-the-back-of-your-head" lesson". In this lesson, we begin again on the side. In a series of steps, we roll over our arm towards the stomach while imagining that we have eyes in the back of our head and use them to look at our back, or heels, as we lift the head and turn. It is a fascinating experience to do this, shifting the way we lift and tilt the head, and thereby reorganizing the entire way of turning around ourselves. The result is almost exactly that of what we saw the 5-month-old Ronja do on film only an hour before. What other promises does this kind of developmental exploration hold for our understanding and teaching? ■

Amos Hetz

MOVEMENT STUDIES

Many treatment methods exist for movement difficulties and limitations which try to bring about change - to improve performance. I maintain that this should be done by enlarging the movement vocabulary, not by treating the symptom and removing it. The characteristics of the movement language should be examined, along with its relationship to the environment. We must recognize the human need to move as a basic manifestation that has long been neglected in Western culture, the value of which we are only now beginning to appreciate.

One can view movement as a mechanism vital to human existence for the performance actions, much as spoken language is necessary to order our lives with each other. But the written word - prose and poetry, and music - sung, played and also written; all of these exist in human culture as well, their value unquestionable. This need for expression exists as well in dance, in play, in the need to move. Through all these the movement language expands beyond everyday needs.

I would like to link movement work with human curiosity, which experiences every stimulation of the senses, explores it and engages in it, not for existence purposes. The symbols that are thereby created bring about integration of personality, and connect us with our fantasy and dreams. Most therapy techniques, which strive to improve, to organize, to make more efficient, and to "cure" the patient, relate only to the level of existence. They pay no heed to the poetic, symbolic side which allows for the integration of the conscious and the unconscious, of the possible and the fantastic.

I wish to teach the mover the poetry of his movements. I want to make him conscious of the fact that he moves not only to serve himself, but that he has a need to move, just as he has a need to sing, to read, to gaze at paintings, sculptures, movies, and to create form in clay and music. Making him conscious of his movement language confirms and strengthens his inner world, and thus he has opportunity to see for himself and to show others how he connects to the world. Throughout our lives, we face new and changing experiences. As we shape and reshape our movement world, we must create tools to contain these new experiences.

It is in the nature of the unconscious that it cannot be easily pinned down. Our entire range of capabilities must be used: the poetic, and also the analytic, which is not

usually considered creative. In movement we are speaking of a capability that is with us at all times, and therefore there is urgent need for a tool to reflect this capability. With the help of this tool we can perform the act of making the movement conscious and poetic. This is achieved through the confrontation between the analytic system - EWMN (Eshkol-Wachman Movement Notation) - and the habits and movement limitations that we bring with us - mental, physical and other.

The notation, which does not recognize body limitations, enables us to develop ideas in movement; mirrors, connects and skips over the habits and limitations that we have unconsciously developed; and also recognizes what exists, both good and bad. The definition of the movement, and, through it, the ability to connect man to himself, also enables us to transfer the experience onto paper and from there to other people, i.e. from a "subjective" to an "objective" experience.

From the outset of my path in dance, I have been engaged in the creation of tools which provide the mover with opportunity to experience the poetry of movement - in

composing dances and in creating games with a partner, in a group or with various objects: balls, sticks, bags, ropes and chairs. I would like to present one of these games, as I did at the conference in Heidelberg.

The Chair Game:

Chairs are scattered around the room, in the same number as the participants.

A. The mover stands with his front facing the chair. He places the palm of his hand on the seat and shifts his weight onto it. He walks around the chair without moving his hand on the seat until he closes in on himself and can turn no more, his back in a frontal arch. He disconnects his palm, and the momentum of the turn transports him away from the chair; he straightens up and reaches another chair. He repeats this sequence once more, touching the seat with his other hand.

In the next variation, he stands in the same manner with his palm on the seat of the chair, but now he walks backwards, turning toward the free hand. When he can no longer turn, his back curved backwards, he disconnects his palm from the chair, and the momentum of the disconnection transports him away from the chair. He straightens up and turns to another chair, where he repeats this sequence once more with his other hand.

B. The mover stands behind the chair, facing the back of the chair, one hand resting on it. He lifts the opposite leg over the resting hand, and from the momentum, his entire body turns; the hand disconnects and the mover continues to advance and reaches another chair, where he repeats the sequence with his other hand and leg.

In another variation, the mover stands in the same manner, his first hand resting on the back of the chair. He lifts the parallel leg between his standing leg and the chair and raises it over the back of the chair. Once again, the body turns from the momentum, but this time the turn is outward, the back is curved slightly backwards, and from the momentum of the turn he continues to advance, straightens, and repeats this with another chair.

C. The mover stands by the side of the chair, his front identical to the front of the chair. While walking in a half-turn around the chair, the mover sits without transfer of weight to the seat, and stands up again while continuing the turn. As a result, a momentum is created here as well, and the mover continues to transport away from the chair toward another chair. He repeats the sequence, turning in the other direction.

Amos Hetz: Photo by Corrie Joswig

After each stage has been practiced alone and all the various stages have been understood, including the difference between goal-oriented movement (the short way) and movement which is generated by the entire process (the modulation - continuous movement of the entire body), the entire game will be repeated. As a result of all the unexpected movement taking place around him, the mover is required to use his peripheral vision; his reactions change, and he moves with less force and yet with continuity and grace. ■

Larry Goldfarb & Jim Stephens

SCIENCE AND THE *FELDENKRAIS METHOD*

The workshop on Research was presented by Larry Goldfarb and Jim Stephens. The workshop was divided into two parts. Jim presented selected research that has been done on the *Feldenkrais Method* (listed on the bibliography which was passed out to participants). The presentation included a description of methods and a short discussion of results to give people a flavor of what has been accomplished. Jim also described some of the work that is currently in progress in the US (see the committee report below). Larry made a more philosophical presentation, discussing the present state of movement science, some of the questions that are being addressed there, and how that thinking might impact us as practitioners and guide us in the kinds of questions we ask

or how we might speak to the scientific community to direct them in questions they might ask. There were two kinds of reactions and focus in the discussion that followed. We need more documentation of the traditional sort to show that the *Feldenkrais Method* is effective for people with various kinds of medical diagnoses; many people believe that we should not be in a position where we need to prove that what we do works.

There was a feeling that we also need to think in terms of doing research which is more global, and oriented toward the outcome and the process. Qualitative research that does a better job of capturing the person even though the information itself is less precise was suggested. Some examples were given of work with athletes and people with whiplash, although this work has been preliminary and on a very small scale.

This workshop seemed to be a success in the sense that there was a lot of conversation and thinking generated and some contacts were made which may be productive in the future.

Research completed and planned:

Completed: Two Ph.D. dissertations were completed this year. This not to say that the research committee had anything to do with them. We mention them to make people aware of the expanding and wide ranging research base that is developing. Larry Goldfarb completed his dissertation titled "Understanding Standing" at the University of Illinois Department of Kinesiology. This was a study of the effect an ATM lesson had on the participants' ability to balance. The study is accompanied by an excellent discussion of the scientific basis of how the *Feldenkrais Method* works. Olivia Cheever finished her doctoral work at Harvard University School of Education with a dissertation titled "Education as Transformation in American Psychiatry: From Voices of Control to Voices of Connection". This project traces the roots of education in psychiatry and relates it to several models. Olivia uses *Functional Integration* as a model for somatic empathy in action.

Works in Process: Four *Feldenkrais* practitioners are working on important research projects. Nancy Denenberg is working on a project for her Master's degree in physical therapy, measuring the efficacy of *Functional Integration* compared to regular physical therapy on patients with back pain. The hypothesis is that after *Functional Integration*, people will stay better longer and be able to take care of themselves better. Jim Stephens is working with physical therapy students at Widener University on a project involving 4 children with cerebral palsy. The hypothesis is that, with FI, children will be able to make improvements in their movement patterns so that movement will be more efficient. Computerized motion

analysis will be done of each child walking and moving from a supine to a standing position. Oxygen consumption will be measured in walking before and after FI's. Osa Jackson has written a grant for the National Institute of Health to support a study on the use of the *Feldenkrais Method* with the elderly. She is developing a process of movement assessment and screening, looking for improvements in the mobility and stability of elderly people. The grant has not yet been funded. Beth Rubenstein is working on the development of an instrument or set of instruments for the assessment of outcomes for the patients in her practice. She is calling this the "*Feldenkrais Outcomes Management Project*". She has started conceptualizing a *Feldenkrais Model of Care* based on the World Health Organization classification system of impairment, disability and handicap. ■

Edward Dwelle

IS IMMEDIATE PERCEPTION STILL POSSIBLE?

The question, "Is immediate perception still possible?," is posed in order to examine our assumptions about perception. There is no attempt to formulate a (new) theory of perception, rather we investigate our experience of perceiving, or how we distinguish what is so, what we take to be real.

This investigation is based upon the hypothesis that our perceiving is conditioned. When we purposely start the process of setting our conditioning aside, we can become conscious. This process is similar to what Samuel Taylor Coleridge called 'the willing suspension of disbelief', which he proposed as the prerequisite for aesthetic appreciation, to allow beauty to appear. Of course, this ability is not learned in the wave of a magic wand; we find ways to become naive in perceiving. Indeed, this discovery, this learning, is the goal of our experimenting. In painting, many artists experiment with this possibility. Here, too, the way is the goal. 'Getting there is (more than) half the fun.'

Have you ever had a feeling for the hardness of the floor or the warmth of your hand or the coming and going of breathing or the sound of traffic without an inner picture or a verbalization? That is, perceiving without a 'something' (picture or word) between you and what you perceive. Your proprioceptive system can sense, with and without visual perception, with and without words. For example, as your eyes become quiet, your experience of the quality of the solidness of the floor becomes clear and simple. Each meeting with the floor in stepping with your foot can

become new when you give up the holding in your eyes, which represents the picture of the previous touching of the floor. Thus, you can allow yourself to become more ready to respond to this moment of contact. (cf.: Larry Goldfarb's article on experiments in standing as reported in *The Feldenkrais Journal*)

In Heidelberg, the workshop started with the participants standing in a circle. They were asked to stomp one of their feet against the floor several times, one person at a time. By the second or third round of stomping, we could feel the listening in the circle to the rhythm of the stomping. We walked through the room feeling the difference in contact with the floor between the two feet. Coming to lie on the floor, we continued this question of how differences in stimulation are felt or received. At least one possibility was to distinguish our responses. To the question: "How do I feel my response to the stomping?", some answers might be, "Right now, I feel a change in the pressure of the foot on the floor (or in its place of contact, or even in its temperature)."

The question, "How do I distinguish a particular response to a certain stimulus?" raised other topics to investigate. Our experiments were practical. Another question followed concerning what we do in order to attend. For example, "Do I make some effort with my eyes or strain in the neck when I'm simply sensing the contact between my foot and the floor; that is, do I give preference to visual perception when actually the question is one of tactile sensation?" This provided another insight into how conditioning colors the ways in which we receive stimuli, such as the contact with the floor.

We continued the theme of 'how I pay attention' with an experiment in lying on our backs. Here too, we each stomped one foot against the floor to experience how this stimulus spreads from the point of contact in our feet through the nerves and other tissues to our hips, pelvises and lower backs. In these experiments, it became clear that our attending guides our perceiving as, in an analogous way, our intending guides our acting. However, we can attend to the feelings of contact of our feet on the floor without intending to do anything about it. Attention and intention are different qualities and functions of consciousness.

We devoted the rest of the seminar to following the topic of how we attend to sensations. Experiments followed out of reports of experience. For example, one woman reported seeing many inner pictures in feeling her foot on the floor. However, immediate perception is perceiving without visualization. We can perceive without pictures; and experimenting with this is possible only because of our habits of using pictures to communicate our experiences of both things and processes with each other. In order to differentiate this function, we try to find out how to experience without using words or pictures; that is,

directly, immediately. This was the project of Else Gindler in her work in Berlin, and is how I experienced the work of her student, Charlotte Selver.

At the present time, in the language of the presentation of the *Feldenkrais Method*, perception in visual terms is often assumed. For Moshe Feldenkrais, the possibility to experience and act without words was of vital importance in learning the potent use of self. Indeed, actions become more effective and economic to the extent that we rid ourselves of this inner dialogue; it slows us down. Clearly, we can learn to use our powers of visualization to improve the details of our actions in the learning phase, or we can use images while we are planning actions; but performance itself does not need the conscious use of images.

Before we finished, we tried an experiment with a partner: exploring the readiness for standing. One partner slapped the buttocks of the other, who was lying on his belly, directing the impact to evoke a perception of a flow of sensation in the direction of the head as well as towards the floor. Perhaps we can find out how to let our skeletons do their work better, so that we can allow our tendencies to be upright to be supported through easy contact with the soles of our feet on the floor. If we are pressing our feet into the floor, the normal activities of our righting reflexes are diminished; the excess pressure shows the disorganization of our ankles and means that our joints cannot line up, one above the other.

Even when we have pushed against the floor like this for many years (perhaps this pushing is grounded in our emotional attitudes) as soon as we reduce the pressure and allow our skeletons to work properly, we come to easier senses of being upright. We return to our human inheritance and give up some of that which has conditioned us, some of that which we have assumed from somewhere or someone else. Letting our skeletons come into direct connections with the floor, and letting the sensations of contact move through us, gives us the possibilities of immediate perceptions. This means that we are not biased in the one direction or the other. We have connections to what supports us, and they are unbiased connections. We can move in any direction at any time.

We closed the workshop with another round of stomping our feet while standing together in a circle. The rhythm that the group spontaneously found, the quiet attention and their upright stances, reflected their direct perceptions of the immediate moment. As the participants left the room and went downstairs for the lunch break, I was reminded of a verse from "Christabel", one of Coleridge's masterpieces of 'suspended disbelief':

"Sweet Christabel her feet doth bare,
and jealous of the listening air
they steal their way from stair to stair." ■

Reinhard Fuhr - Martina Gremmler-Fuhr

A Report of our Experiences

THE DYNAMICS AND RELATIONSHIPS IN ATM CLASSES and ARE *FELDENKRAIS* TEACHERS PEOPLE TOO?

We were surprised at being invited to a *Feldenkrais* Conference as guests, being at home in quite another approach, which is Gestalt therapy. However, we were fascinated by the basic idea of Ulla Schläfke and Roger Russell to transcend the boundaries of the *Feldenkrais* work at an early stage in its history. This appeared so challenging and courageous of the two that we willingly engaged in this experiment. As we have some painful experiences with this attempt of transcending the boundaries of one's own approach as "functionaries" (we have been members of the executive board of national and international associations for Gestalt therapy), we more than appreciated this attempt.

As we expected, our participation at the congress was both irritating and encouraging for us. Among the congress participants we were foreigners from a different culture, or rather from two different cultures, belonging to the guild of educators on the one hand, and to the community of Gestalt therapists on the other hand. As such, we felt respected by the participants of the congress, but at the same time, we often felt like intruders into an intimate community which itself is in the course of finding its own identity and self-assurance. (Gestalt therapy, by the way, which came from the US in the late 70's, was in much the same process some ten years ago.)

We had interpreted the topic of our first workshop, "The Dynamics and Relationships in ATM Classes" from an educational perspective and therefore we had planned the seminar more specifically on *didactic and group dynamic concepts* for the *Feldenkrais Method*. Similarly, we conceived the second seminar, "Are *Feldenkrais* Teachers People Too?" (which we had taken over on short notice as the original group leaders had to cancel their participation) as a supervision course on the dynamics of relationships and their problems in *Feldenkrais* work.

What resonance did we receive? One group of participants could not be warmed at all to our educational perspective, neither in practice nor in theory. As these participants

rarely expressed themselves and just stayed away after the breaks, we can only speculate on their motives for leaving the workshop (as it is not our experience that people run away because we are boring, there must at least be some other reasons as well). Another smaller group of participants was openly critical and judgmental towards our approach. They spoke of greater forces through *Feldenkrais* which one should not try to reflect and explore in detail and with scientific arguments. It was most difficult for us, however, to handle a third group, whose expectations we felt were: "Now show us what new things you have to offer and we will show you that *Feldenkrais* already has everything in its encompassing concept".

From our own history with Gestalt therapy, we know this phase of over-identifying with one's approach quite well; still it was painful for us to experience it this time in the role of outsiders. Fortunately enough, there was a fourth group which became intensely interested in our work. They had no problem with accepting our educational and group dynamic approach as an important supplement to *Feldenkrais* work, particularly as they had painfully missed this perspective in their trainings or came to miss it in their daily work. This then led to exciting practical work units and moving talks.

Instead of reporting about the contents and the proceedings of our courses in detail, we would rather like to sum up our experiences on a more general level. We are well aware that we might raise very delicate questions and that our assessment may appear judgmental at times. This is not our intention. We are very interested in *Feldenkrais* work and even partially involved in it, and many of our critical remarks and annotations are valid in a similar way for our own approach in therapy, counseling and adult learning.

The self-definition of the *Feldenkrais Method* is that it is neither a medical approach to healing, nor an encompassing therapy, but rather an educational approach. On the basis of this assumption, it would be necessary to consider the following ideas:

1. The *Feldenkrais Method* must be justified on an educational basis. *Feldenkrais*' theory of learning, the structuring of courses, trainings and continuous education, as well as the relationships within the groups must be reflected by referring to the theories, models and research findings of educational science and social psychology.

2. The range of validity of *Feldenkrais* must be clearly outlined. This could be realized by trying to answer the following questions:

- For what kinds of clients and for which contexts and problem areas is the method appropriate or most appropriate?
- Which dimensions of the clients' personalities are

the main focus of the method and what kinds of learning processes are supported?

If the *Feldenkrais Method* were to assume an encompassing and limitless range of validity (“*Feldenkrais* is good and helpful for everybody under all circumstances and for everything”), it would sound a little presumptuous. Actually, it would get into the vicinity of a doctrine of salvation or religion, which could not be taken seriously, even by goodwilled colleagues from other schools. We believe that the *Feldenkrais Method* should shun this risk since it deserves to be taken seriously.

Didactic and group dynamic aspects

During our first workshop we talked mainly about the didactic and group dynamic aspects of the *Feldenkrais Method*. Again, we would like to list some of these aspects in the form of questions which came up during our workshop asked by the participants themselves,

1. What are the didactic models which implicitly form the basis of the *Feldenkrais Method*?

This question must be dealt with by taking into account the respective learning/teaching situation. For example, a course for spinal diseases needs another group model than the one used for a training in the *Feldenkrais Method*. We must assume that the implicit or explicit didactic concepts applied have an enormous socializing effect on the learners and teachers alike; i.e., the conscious and unconscious processes in the group of participants, the educational principles and the structure of the courses may trigger learning processes which may be in tune with the intentions of the *Feldenkrais* teachers, or they may contradict them. A “secret curriculum” is at work in any teaching/learning situation, and it may be useful to open the secret as far as possible. We could therefore ask:

- Does the setting of FI perhaps induce a doctor-patient model of relationship and behavior, although the proclaimed intentions of the teachers are geared toward participative learning and partnership?
- Which possibilities are there to match the intentions of the *Feldenkrais* teachers with the didactic settings in the different contexts of *Feldenkrais* work?

2. Which models of group leadership are basic for the *Feldenkrais Method* in different contexts like treatment, training, continuing training, etc.?

The conceptions of the workshop participants of their own implicit leadership model ranged from wanting to be a charismatic (and therefore strictly hierarchical) leader to

the assumption that they as leaders are completely irrelevant as persons because greater powers are at work. In education theory, there is some well-proven knowledge available as to the learning effects of different leadership models, which could be made use of. This starts with the research by Kurt Lewin on authoritarian, laissez-faire and democratic styles of leading groups, and moves on to the more recent knowledge on transference and countertransference, or different kinds

of projection processes between participants and leaders or mentorship models etc.

3. In which ways are learning experiences of participants in *Feldenkrais* groups or in individual sessions evaluated? In particular, what is known about the transfer of learning results which are achieved in *one* dimension of the personality to *other* dimensions?

The assumption that learning processes which focus on bodily dimensions are automatically transferred to other dimensions of human experience is a risky one indeed (even though the focus of the learning experiences may aim at reorganizing neuronal patterns). Our own experience and knowledge (e.g. from many years of supervision with body therapists and from working with a body movement approach ourselves) actually point in the opposite direction. There is no doubt that the transformation of postures and habits of movement do have an effect on emotional, mental and other dimensions of the personality. It is, however, unclear how this transfer takes place and which effects this has. An improved *Functional Integration* in terms of posture and movement seems to be a very good basis for improved contact functions of a person, for a better handling of conflicts and difficult situations in life, if - but only if - learning processes in these other dimensions are also stimulated and supported. The naive assumption that learning experiences on a biological level would automatically affect emotional and mental dimensions of a personality in a similar direction could lead to a painful overestimation of one's abilities and to a limited perception of reality.

Relational aspects

Under the perspective of the relationships between *Feldenkrais* teachers or trainers and participants and among participants, another series of interesting questions came up during the workshops which deserve pedagogic reflection:

1. How do the group dynamic processes which take place in a *Feldenkrais* group support or undermine the aims of the learning process?

2. Which kind of relationship is established between *Feldenkrais* teachers and participants or clients, and how could it be used for a holistic learning process and for personality development?

-These complex questions can further be differentiated according to the respective context. In training groups, the following more specific questions may be important: How visible and touchable may/shall the *Feldenkrais* trainer be as a person and as a man or woman?

-How do *Feldenkrais* trainers handle authority conflicts and group conflicts which necessarily occur in groups (unless they are repressed collectively or by authority)?

-What dependencies between trainers and trainees, teachers and clients are initiated and supported in *Feldenkrais* work? Will they be made transparent in order to eventually dissolve them or are they accepted and even welcomed?

-What support is there for the dissolution of the strong ties the trainees usually develop to their trainers once the training is over (the dissolution of the ties may have a similar importance to the child/parent relationship once the young person has grown up)

If we maintained before that the implicit or explicit didactic concepts which are applied in *Feldenkrais* work stimulate particular learning processes, which develop their inherent dynamism, this is even more so with the relational dynamics in *Feldenkrais* groups. We could, for instance, ask whether some settings of *Feldenkrais* work do enhance regressive tendencies of clients and trainees, although the explicit trainers' goals, like autonomy and independence, go in the opposite direction. According to research findings and common experiences in training groups, it is obvious that the model which the group leaders and trainers shape by their presence and behavior has an enormous effect on the trainees and clients - whether they want it or not. In this way, learning processes may be triggered which are in opposition to the explicit intentions of the trainers.

In conclusion, we would like to thank Roger and Ulla and the participants of our workshops who made it possible to discuss such topics and questions very frankly. We also see a great chance if *Feldenkrais* teachers can talk about such educational questions at a relatively early time in the development of their method. Educational science, social psychology, research in evolutionary and learning processes have produced a multitude of models, concepts and knowledge which may be useful for *Feldenkrais* teachers. There are also quite a few practical education concepts, which seem to be compatible with the basic principles of the *Feldenkrais Method*, such as the theme-centered interaction by Ruth C. Cohn, Gestalt education, dialogical counseling, group dynamic training concepts and communication courses. They might help in

developing a solid educational legitimation for *Feldenkrais* work and in improving its practice in those dimensions which are not originally implied in the *Feldenkrais Method*, but which we believe are nevertheless at work. ■

Mara Della Pergola

WORKING WITH ACTORS - VOICING THE MOVEMENT / MOVING THE VOICE

In the 1970's, prior to my training in the *Feldenkrais Method*, I taught in a theater school. This experience helped my understanding and sense of the connections between body, mind and emotions. I am grateful for this training which supported my own development in a field which has infinite potential, and I want to share part of this experience with my colleagues in this contribution to the conference.

During a performance the actor is totally centered, vital and focused, in other words, ready for action. The energy created from this constellation is an almost magical combination that moves in two directions: towards his own internal experience and centeredness and towards the exterior action. This energy is not only communicated to the public which also supports it, but also toward the colleagues on the stage. This complex interaction of communication will multiply in many variations. For example: The internal centeredness of a quiet and unmoving actor, which can be almost like a meditation, can lead to direct contact with the observer's soul, or can be highlighted by the movements and expressions of the other actors on the stage. The interaction of these three elements, the actor, his colleagues on the stage, and the public, can create several combinations of communication. This can lead them to continuous movement on different planes; creating a magic spiral, a three dimensional figure that never closes in on itself which can develop into a crescendo, a descent or movement between the two. It is evident how important it is in the actors' training that they be given the opportunity to cultivate this energy through self awareness of the way they move and speak. This awareness obviously is not only intended for the performance, but can remain before, during and after it like a melody which renews itself in many variations. Awareness, which is that special attention directed by the actor to his own way of being, moving and speaking, is the most important tool for his expression, and helps him to remain free of parasitic acts that may unduly interfere with his personal style and expression.

The personal style of the actor is the basis for his profession. In the search for a personal style, the actor has to go through the recognition of all that is his own in attitude and essence, as well as all that has been added in the years of working or through academic theater training. This is like a cleansing of all that is unnecessary to move or to express oneself. This process does not add new knowledge or concepts to that which we already find in ourselves. Instead, it leads us back to our center and the primary sensations of wholeness, pleasure and freedom. It is from this neutral centeredness that one can move in any direction, utilizing these sensations to develop new and different relationships within oneself, with the character being interpreted, and with the artificial space and time of the theater. Specifically, the artificiality of the theatrical situation requires that the actor find his own neutral center, his own essence; enabling him to explore a much wider range of situations and expressions, even the most extreme. This is a profession that compels one to return to one's primary self and allows one to cultivate and communicate new experiences in unusual and sometimes unlikely places.

One way to introduce the *Feldenkrais Method* in the first year of an actor's training is to start from the seemingly simple requests made by other teachers: asking that the student stand straight and abandon the postural "defects" that freeze him in voice as well as in movement. This request leads us to the complex and differentiated process of *Awareness Through Movement*, moving on the floor and while standing, exploring many elements of oneself and one's functioning.

In the second year, I encourage the actors to be better observers not only of themselves, but also of others through imitation games. In this way, they can begin to appreciate their own capacity for sensing themselves while observing or imitating others, and even observing themselves while feeling and thinking. This involves working with several approximations: (1) imitating without reflecting or thinking, (2) imitating with awareness, which means knowing which details are being perceived, (3) imitating and feeling at the same time, (4) feeling or thinking about something and observing oneself while standing or moving. This develops and refines the innate sensitivity of the actor while at the same time directing his attention toward his companions and the group. As an example: during the workshop, I asked the participants, in pairs, to make a gesture and to imitate the other person's gesture (1) without attending to the way of doing so, (2) observing the details in a *Feldenkrais* manner, and (3) attending to how they were imitating and observing.

At the beginning of their training, the capacity for imitation is not an easy task for young actors. It may become a parody and therefore be rejected. On the other hand, when asked to play a particular character, it is not enough to search inside oneself for the kind of emotions that belong to the character in order to reproduce it. One cannot always find inside oneself the necessary experience and emotions, which was the theory of acting in the 60's and 70's. Therefore, we must cultivate the capacity of observing what the other is doing, their motivation, and the ability to differentiate in one's action.

This ability to differentiate movement, voice, interpretation and thinking can be mastered through the experience of differentiating movements in the *Feldenkrais Method*. The differentiation of one joint from another is direct and immediate; in fact we practice that in all of our lessons. However, in acting we deal with thought and emotions and how we can communicate them to others. This leads us to rhythm and timing, exploring a silence, a gesture or a stop in movement just as we would explore how a knee or ankle would cooperate in the walking of the whole person. For example: working alone, the students are asked to make movements in different rhythms, slow and fast, with breaks, but without thinking. Then they are asked to try speaking at one speed and moving at another speed. This proves to be challenging for the beginning student and also confronts him with one of the dilemmas of his training.

In the school where I teach, the students are educated to read the text while sitting for many days. In parallel, they learn singing, acrobatics, voice, mime and the *Feldenkrais Method*. Not all of the teachers share the same ideas. Some famous actors give workshops where they suggest breathing techniques or postures unacceptable for people with our experience. They suggest that the students take a posture and hold it. The students want to please the teachers, who obviously have a long and successful experience in the theater. However, this situation ignores the fact that there is not one back like another, no person has his pelvis in relation to his head like any other, and all voices are different. The students can be confused by these conflicting messages, and at first do not understand the necessity of becoming aware. They would like to receive a recipe for how to act, such as learning how to enter the stage, since they are focused on the what and not on the how at the beginning. Some of these lessons can make them enthusiastic, but the work can be long and hard for those who are not used to listening to themselves.

Some students, therefore, find it difficult to move and talk at different speeds. Others find it difficult to talk and remain standing still for a long period. Some find it very demanding to maintain a subtle and deep attention. Others have found that the suggestion to imagine their spine to be very long or very short can be disorienting. They find the space inside themselves too small to feel well,

or too large to be comfortably explored. However, the game of discovery in movement and sensation eventually seduces everyone, leading to new skills and capabilities.

I have found it to be very interesting and instructive to introduce work with pairs or small groups, just as in the *Feldenkrais* trainings where I work. This expands the field of observation beyond oneself, and directs the same quality of attention to the other members of the actor's group. This can begin by exploring the difficulty that some students have in observing themselves. Some discovered that they could more easily find the limitations of another person. Accepting this, I had them observe new details, directing them toward function and away from static patterns, and then asked them to sense in themselves that which they were observing in the others. Thus, moving from observing to sensing to understanding and new skills is a natural movement that leads to spontaneous interest in the *Feldenkrais Method*.

At this point in the actor's training, I like to work with the voice and movement together. The expressiveness of the voice is the first thing that is noticed on stage, together with the scenic presence. We can notice a broken or forced voice, a powerful or subtle voice, just as we recognize a fluid, jerky, strong or easy movement. We need to work not just with the voice itself in order to create a context for change. The quality of a movement and of the spoken word is even more evident to our eyes and ears if the actor is interfering by using effort in his action, or in contrast, is breathing freely because of appropriate use of the skeleton. This can be explored by speaking a sentence and moving with and without effort,

The quality of the voice belongs, paradoxically, to the field

of non-verbal communication. It is not enough to say the right words in the right way and with the right rhythm. If we are not aware of the movement of the sound within the self, and the tensions that can be unnecessary barriers to this movement, we may be communicating a meaning contradictory to that of the words being spoken. The expression may be unclear. It is like crossing the legs while sitting: we can do it lightly and gracefully; but sometimes we may need to be heavy, in order to be more clear in our expression. Or we may have no other choice than to use effort, even when the situation requires ease. Thus, the quality of the natural voice is not controlled directly. It springs from the organisation of the whole self, and is particularly shaped by the action that we are doing as we speak. The resonance and the internal volumes become greater as we reduce the interference of our habits. For example: reaching for an object, the actor can speak before, after, or during the gesture of reaching. When the words come with the gesture it is more incisive. This allows a short dissonance between action and work to communicate different sensations. Or, if the sentence doesn't fit with that which we are thinking, there is an interference similar to that caused when we change our intention while moving. Try saying a sentence while making a contrary internal comment to sense this dissonance for yourself.

This review of some of the ideas and experiments of the conference workshop can give the reader insight into how the *Feldenkrais Method* can be applied to the diverse situations that the actor needs to master in his training in order to present a convincing and moving performance. At the same time, many of these methods which apply to actors can be used by each of us to improve our teaching and, of course, in our daily interactions with our neighbors, family, and friends. ■

Larry Goldfarb

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SCIENCE IS CATCHING UP WITH US. WILL WE BE READY?

In recent years, the movement sciences have made great advances, both in developing new frameworks for understanding movement and in adding to understanding of the particulars. Theoretical and technological advances have made it possible for investigators to consider complex whole-body behavior rather than relatively simple part-body movements. In recent years, the field of kinesiology (which in academy refers to the scientific study of human movement, not to “applied kinesiology”, an alternative health practice based on ‘muscle testing’) has been revolutionized by dynamic systems theory and ecological psychology. Dynamic systems theory evolved from the work of a Russian of Moshe’s generation, Nicholai Bernstein, and has been greatly expanded upon in current research. Ecological psychology, developed by J.J. and Eleanor Gibson, offers a framework for understanding the organism in relationship to its environment.

The method created by Moshe Feldenkrais is grounded in his experience as a martial artist, physicist, and teacher. With remarkable creativity and ingenuity, he developed a way of teaching based on an experiential approach to pedagogy and a systemic understanding of the design of the human body. His manner of teaching emphasized the student’s experience of moving; this preference extended to his process of training teachers. We know that his unique approach was borrowed from the sciences, especially from his training in physics and mechanics as well as from the understanding of applied anatomy and from research in the neurosciences. While he referred to these ideas, he did not develop an explicit explanation for his methodology; indeed, he often frustrated his students’ attempts to do so.

Science has come a long way since Moshe started to develop his work, and the relationship of our professional community to science, medicine and education has expanded as our numbers have grown. In order to communicate with other professionals, we would benefit from a better understanding of science and a greater facility in making bridges from our work to other frames of reference. This is especially true because some of the ideas Moshe expressed in writing and teaching, such as the notion that infants do not and cannot use their vision in the early weeks of life, have since been disproved. Another, the concept that development follows a linear unfolding, are

being challenged and redefined in current research.

My point was not that we need to legitimate or use science to prove the validity of our work. Rather, it was to show the progress that science has made and to demonstrate that many of the new ideas are approaching the kind of understanding that we have. We can benefit from understanding these new concepts and perhaps even contribute to the development of this general domain in the larger social context. One thing we know about science is that models and theories continue to evolve, so we must be careful about basing our explanations on the latest fashion or most recent ideas. Yet as new and better questions are being asked, and as progress is being made in answering them, we would do well invest some time and effort into learning about them, all the while remembering that the strength of the method is in its effectiveness. We do not have to explain our work to the scientists; it is up to them to figure out ways of explaining it.

In this conference workshop, I presented results from various branches of research and related them to our work. My presentation began with the fundamental notion that the structure of the body, including the design of our nervous system, affords a vast complexity in human movement. While this allows for rich expression and complex behavior, it also poses a problem. This difficulty, known as the ‘degrees of freedom problem,’ is expressed as follows: given the total number of possible movements allowed by our jointed structure and the multifiber construction of our muscles, how do we govern the variety of configurations and actions possible? As Moshe pointed out repeatedly, inhibition is central to the functioning of the nervous system: performing any one act means not doing a myriad others.

Taking research into motor and sensory aspects of balance as the main focus, I started by discussing research into the behavioral aspects. In particular, I presented the results from studies in which subjects’ muscular responses to externally imposed perturbations in standing were recorded. These experiments demonstrated how muscular responses are controlled in global synergies, rather in an individual or additive fashion. This research provides a concrete example of patterns of muscle activity, something that we often refer to but which has rarely been demonstrated. As such, it is an example of a profound shift in movement research and its accompanying thinking.

After presenting these findings on the motor aspect balance, I turned my attention to the perceptual basis of equilibrium. Here the complexity of movement is quite evident. How is it that we maintain our poise when speaking, looking around, and gesturing? How does the nervous system handle the fundamentally unpredictable and incomputable consequences of such a complicated, multidimensional task? What must be perceived and how

is that we perceive it? Citing research carried out with children and adults, as well as with pilots, I presented ideas of how the sensory systems involved in balance—somatosensory, visual, and vestibular—work together, and how they are engaged in an active perceptual process.

One central idea in my presentation was that there is more than one type of feedback: performative feedback, which informs the systems about its achievement of a goal, and informative feedback, which informs a system about its ongoing activity. When we speak of feedback, we usually refer to performative feedback; that is to say, perception of progress toward an end. Informative feedback tells about the means whereby we navigate on the way to the goal, and it is based on exploratory movements. Exploratory movements inform the mover about the moment-to-moment consequences of an activity and orient the movement in the environment. Research has shown that small, barely perceptible but constantly occurring movements, such as those demonstrated in the constant small movements known as postural sway, make a major contribution to our ability to keep finding our balance and remain standing.

Having demonstrated the contributions of fine exploratory movement to posture and movement, the workshop turned to how these ideas relate to the practice of the method. I taught an ATM lesson in standing, bringing out the themes of exploratory movement and its role in balancing. Touching briefly on research findings about the tactile sense and relating it to the idea of informative feedback, we also explored how to improve our sensitivity and acuity in working hands-on with others.

(Further information about this research is available in my article “Why Robots Fall Down,” which was published in the 1994 issue of the *Feldenkrais Journal*, #9.) ■

Jeff Haller

Reported by Hanja Rau with translation by Lore Schäfer

THE POTENT USE OF THE SELF

“Moshe was a Judo man”, says Jeff Haller, emphasizing that the ATM lessons on the floor help us to coordinate our behavior in sitting, standing and other action. He also reminds us that the source of many of the ATM lessons can be traced back to Moshe’s Judo work on the mat, when he began to observe the changes in standing after working on the mat. As *Feldenkrais* teachers, part of our action is giving *Functional Integration* lessons. In this workshop, Jeff wants to bring these ideas together in the “potent use of the self”

in our work. We can consider the FI lesson not only for the client’s well being. We can find a way to work that lets us also experience ease. We can understand the FI lesson as an applied ATM lesson for ourselves. This is not only to our own advantage, as the client will profit from our improved organization of ourselves. Jeff’s insights and suggestions are based on the experience he has in Aikido, Tai Chi, meditation, and above all, from his observation and interpretation of Moshe’s use of himself when he was giving an FI lesson. Jeff found himself watching Moshe more than the person who was receiving the lesson.

In the introductory ATM lesson, we are on our backs and observe our breathing, quietly waiting for the inhalation. We are asked to attend to the difference between perceiving ourselves from the “outside” or from the “inside”. In sitting, we imagine a ball in our pelvis, letting it move back and forth, side to side, and in circles. We then breathe into the lower abdomen and back, letting it fill up and expand, imagining the expansion of the “ball” in the pelvis. With the exhalation, we search for a way to let the air out while we increase the tonus of the entire ball at once. We continue this experiment with a partner, exploring with touch the possibility of sensing the fullness around the center of the body.

With our partners, we begin to work at a table. Anchored in the pelvis, with a spine that is erect and mobile, we begin to explore our habits of moving around the table while we give a FI lesson. We are seeking ways to take the experience of the ATM lesson into our attitude and organization for FI. Using the sense of the open center that

Cooperation of Flexors
and Extensors

was available in the breathing movements, Jeff asks us to search for a way to move ourselves and our partner by utilizing the skeleton to support us without mobilizing unnecessary effort. To this we add the special skill that we learn in the *Feldenkrais Method*: to use our attention without judging ourselves or our partner, and with a sense of our own well-being. Jeff makes some suggestions that make this easier, noting that our attention is free when we are comfortable. From his experience of martial arts, Jeff encourages us to experiment with reducing the space between ourselves and the client. Let the client lie somewhat diagonally on the table as the partner sits on the corner. This makes it easier to lift and move the person on the table by bringing our center of gravity closer to that of the client. The back can remain erect and long, the best way to organize the potent use of the self. We explore a number of ways to realize this principle from any place around the table.

By mobilizing our centers and our power in this manner, we are able to sense that the hands are more sensitive and safe. Without the effort of having to lift or push with the arms, this work being done easily by our pelvis; the hands are free to communicate without imposing our habits on the other person. Moshe reacted to the feedback that he had “wonderful hands” with dissatisfaction, saying, “That was not an effective lesson. The person should experience himself and not my hands!” They should not need to sense where he ended and they began. Only this kind of contact opens up the potential for new discoveries and insights for the client. That the teacher feels lighter afterwards is not only an added bonus, but an essential quality of refined technique. This is the way that we can express the experience of the ATM lesson in our FI work, making the FI lessons more precise, sensitive and easy. ■

Garet Newell

Reported by Irene Sieben

DRAWING ON OUR LEGACY

Motivated by her own background as a dancer, Garet Newell’s path led, because of an accident, from New Dance, by way of Kinesiology, the Alexander Technique and Anna Halprin’s Life-Process, to Moshe Feldenkrais in Amherst. She lives and promotes the *Feldenkrais Method* as a professional vocation, especially in Great Britain, and has become absorbed by the fascinating life history of the Method’s ingenious originator.

Moshe’s transformation from pioneer in Palestine to physicist and military strategist, from judoka to creator of an outstanding method involving learning to learn,

inspired her with the vision of a biographical project. She has undertaken this project with the idea that it will be an important milestone of historical documentation for the entire *Feldenkrais* community, and mindful of those generations of *Feldenkrais* teachers and practitioners who have trained without direct contact with the originator of the Method.

Garet has tracked down some remarkable people who were closely associated with Moshe Feldenkrais. Of special interest are those who knew him while he was in the UK during the 1940’s, where he began his first experiments with groups and individuals and wrote and published *Body and Mature Behavior*. By interviewing these people, she has managed to preserve memories and anecdotal knowledge which would otherwise have died with those who held it. Such contributions afford deeper insights into the motivation, inspiration and problems of the unconventional thinker, who wrote very little about himself and often

Garet Newell: Photo by Irene Sieben

made contradictory statements (for educational reasons) in the lively lessons which are preserved on video.

Garet gave a glimpse into the treasures of her biographical research, affording a wider comprehension of Moshe's way of thinking and his highly creative passion for helping others to "learn to learn." She began by presenting the 1986 BBC Special, *Healing Arts*, which showed Moshe Feldenkrais in short sequences from ATM lessons, interspersed with extracts from an impressive FI given by Anat Baniel to a little spastic girl who is now a teenager and sings in a rock band.

What Garet learned in her investigations has enriched and added to the tapestry of knowledge about Moshe's early years in Palestine. This was the time when he developed his own self defense strategy against armed Arabs, which ultimately led to a meeting in Paris with the originator of Judo, Jigoro Kano. Garet didn't discover much detail about the women in Moshe's life, but his sister, Malka, played a key role. Thanks to her presence of mind during the war, Moshe was able to flee in time from Paris to England with a suitcase full of secret documents belonging to Joliot-Curie's Institut du Radium. When the Gestapo entered the laboratory, she discreetly removed all identification papers from the jackets of the scientists, thus saving all of them.

Some of Garet's informants were Moshe's friends, who were Judo disciples as well as first "subjects" in his early groups and individual lessons: David Boston, Bill Halliday, Allison Downes and Franz Wurm. These four provided deeper knowledge about Moshe's contacts with people like F.M. Alexander and Charles Neal; also with Heinrich Jacoby who, together with Else Gindler, worked on similar insights into self-development. They also knew the whole story of the photo showing Ben-Gurion standing on his head at Tel Aviv beach next to Moshe and Charles Neal, a document which is lying dormant in the world's picture archives.

As a practical illustration of the fundamental ideas from Moshe's experience in physics, mechanics, and judo, which he first experimented with in his group classes while in the UK in the 1940's; she chose a sequence from the Alexander Yanai lesson *Bending the head to the side while sitting*. By doing and then analyzing the sequence of movements, we understood that this process demonstrated how the second law of thermodynamics (reduction of overall energy loss), the balance of weights and load-bearing, and the initiation of movement from the center can be understood in an *Awareness Through Movement* lesson. The overall improvement in balanced muscle tone, less friction in the joints and a surprising sense of ease and efficiency exemplified the "scientific magic" of the *Feldenkrais Method*. ■

Anna Triebel-Thome

Reported by Hedio Meyling-Semah with translation by Paul Graetz

TO BE OR TO ACT - THAT IS THE QUESTION

The title of Anna Triebel-Thome's workshop reminds me of wise Shakespeare....

At the workshop, I repeatedly had to think back to the five years I spent studying dreams. Oddly enough, given the open mind and enthusiasm with which I started out at the academy, it was primarily the sense of *fear* which surfaced time and again. Fear of losing myself, fear of not doing it right, fear of finding better partners opposite me... In the first two years (when young students are still so vulnerable) there were the movement classes: posture development, ballet and mime. What we did there were mainly muscle exercises and fitness training, and we learned what was the 'right' posture. At the speech and singing lessons, they taught us a.o. breathing techniques, and the drama lessons were very competitive. It was hard to do something "right", which had, of course, disastrous effects on pleasure, creativity and the ultimate stage performance.

At the Hoshschule der Künsten in Berlin, where Anna has for many years been teaching actors to be, the unique situation occurs that in the first year the only movement lessons taught are *Feldenkrais*. In a very animated and enthusiastic way, Anna guided us during the workshop in Heidelberg (through a series of short individual and group ATMs) along the infinite possibilities of the *Feldenkrais Method* within drama education.

“It is as if *Feldenkrais* has been made, been developed, for stage actors.”

By means of simple ATMs, students are first of all made aware of their capabilities, their ways of moving and breathing, and finally who they are and what they want. “They get the opportunity to unfold.” These points of attention are the same as those found in our regular ATM lessons. Anna also provides our well-known ATMs, but “the *focus* of her lessons is always directed to the aim of the students, namely to be on stage.”

“I’m not telling them that I intend to do *Feldenkrais* with them, I just start to work.” An actor is not a dancer or motion artist. It is therefore not his task to create ‘beautiful’ movements, but to make his capacities for moving available to the figure he intends to be on the stage. He must be capable of substituting his own personal pattern of movement for the movements of the figure he is to play. An actor should be able to start from zero, from neutral, with his part, his text, in the space together with his partner and the group. That requires the highest level of consciousness possible. The actor may then *be* and the audience will be spellbound.

A selection from the many possibilities and examples Anna has put forward:

By means of a shoulder movement, Anna lets the students experience for themselves what *over tension*, *under tension* and a *proper tension* can be. Students are taught not to judge for themselves what the proper tension is, but to sense when these differences in tension can be used in their day-to-day lives, as well as in building up a part. In several ATMs, these tensions are experimented with: on the floor, sitting down, walking, and while working with partners. For example, one student is on the floor on his hands and knees and must support his partner on his back. When there is under tension, the person sitting starts to feel insecure, and because of the instability, he will lose his confidence in his partner. When there is over tension in the same situation, the partner sitting may start to feel guilty for letting his partner work so hard for him. Therefore, where is the middle ground that enables the partners to co-exist, to *be* together, to be able to play together, without always having to look out for each other?

Working first on one side in an ATM, while letting the *imagination* do its work on the other, is a fantastic training

for actors. They learn to think with accuracy and clearness, which helps them with building up the character and the history of a part.

Working on *motion lines* makes the connections between axis: torso and extremities, left and right, up and down, front and back and the diagonals, more clear. In a group ATM, Anna first made us walk in circular lines in the room. This made most people soft and friendly; there was laughter, there was a feeling of spring in the room. This was followed by the instruction to walk only in straight lines. The inner mood became more cool and tough, the people in the group more detached. Then Anna started to differentiate: we maintained the solid and tough feeling of the straight line while beginning to walk in circles and making round movements.

After experiencing these and many other ATMs, a *spatial consciousness* arises.

By means of ATMs, everyone can find his own *learning rhythm*. It is useful for the actor to know whether he is able, in a rehearsal, to continue working, or needs a short break every now and then. He might not otherwise be able to take in and produce something, with the result that he might be considered lacking in talent. How do I learn my text, memorize the scene, etc.? How often does it happen that the director says: “Yes, that’s it, that’s how I want it.” And the actor is at a loss as to how he did it and is not able to repeat it.

“If you know what you do, you can do what you want — in life and on the stage!”

Anna has also spoken extensively about *quality* versus *quantity*, about *truthfulness* and *honesty*, about being *available*, about *arriving* at yourself, your partner and your audience, about *terminating* a movement and *starting* again and, as if that is not enough, about letting the stage text speak through your feet. When the actor really believes in himself, in his own potential and possibilities, he will also believe in the possibilities of his partner. The rehearsal process will then become a feast of creativity, and the spectator will lose himself for an evening in the world of fantasy and reality created for him.

I would like to thank Anna, first for introducing me to the *Feldenkrais Method*, and then for the link back from *Feldenkrais* to the theater. ■

François Combeau

VOCALISATION IN CLASSICAL ATM LESSONS

How to involve the voice as self expression in our environment and with our emotion to develop a sense of our being through the vibration stirring deep inside. As the lesson proceeds the evolution in sound quality will provide continuous feedback and help us monitor the integration of our action.

The voice is one expression of the deep inner self. In this connection, the two-fold etymology of the word “person” is highly relevant. First there is **personare**, to sound through (**per** through and **sonare** to sound), In other words, Being finds expression through sound, it rings so to speak. Then there is **persona** or face mask used by an actor on the stage. Voice and sound lie at the crossroads between the expression of our Being and what we would like to be or seem to be.

What is proposed in the workshop, led by François Combeau, is not just how to use the *Feldenkrais Method* in order to improve sound quality or voice quality as such (which is possible of course), but rather how to use sound and vocalising during *Awareness Through Movement* sessions as a faithful mirror of what is growing inside us, the integration of our movements, our freedom to breathe, our self-awareness, and our relationship with our surroundings. Sound

is the reflection of an encounter between the inside and the outside, intention and action; and singing is an expression of the self in motion, of our deep-seated dynamisms, as well as of the sensorimotor experience lived at every moment of *Awareness Through Movement* and the ensuing evolution.

Sound and vocal quality develop in the course of the session because its authenticity is revealed, because voice and movement, self and movement, become one; and by removing the duality between “I” (ourselves, the subject) and the movement we are making (the object of observation), we fully become “Being in motion”, which is expressed in space through the sounds or melodies we are singing.

In order to allow each participant to live and to feel the full brightness and rich hues of vocalisation during *Awareness Through Movement* sessions, François Combeau had opted for straightforward standard sessions, such as discovering and developing the mobility of the pelvis, and more

specifically of the lumbar spine, while lying supine or on the side. First, it was overall mobility, combined with breathing; then making sounds on a single note and vocalising, either by imitating a model given by François, or each participant improvising any sounds and tunes he or she cared to produce and at whatever pitch felt good. There was no need whatsoever for singing skills since the vocalisation arose spontaneously and accompanied the proposed movements to which our attention and curiosity were constantly drawn.

Although cautious and somewhat timid at the beginning, the group’s overall sound became progressively richer until it filled the room with wonderful and moving overtones and colours; with voices blending and intertwining harmoniously in the expression of Beings free of the constraints, stress and worries, and of ever

François Combeau: Photo by Irene Sieben

more present, unified and authentic “I”s. The global mobility we started with became more and more differentiated and subtle until the singing/movement/breathing of each lumbar vertebra was explored.

When participants had rolled over onto their backs and drawn their knees up again, François suggested imagining the spine as a musical accordion, each fold being the joint between two vertebrae, and bit by bit, by opening and closing the different folds, the accordion began to sing ever more lively tunes.

Our attention was then drawn to the front of the spine and each lumbar vertebra, i.e. the surface in contact with the organs, and having placed a little “singing mouth” over each one to build an accordion with melodious folds, we unfolded the lumbar arch. This awareness of the anterior of the lumbar vertebrae came as a revelation to many of the participants and was an occasion for amazing sensorimotor presence, contributing to the development of a truly three-dimensional and spatial image of the spine.

Returning to a global and integrated mobility of the pelvis and spine accompanied by sounds initiated in the back and spreading “right through the universe”, François was prompted to remark that sound was the link between what we are and what surrounds us.

Throughout the session, it was obvious that sound and vocalisation allowed each of us to live, and be conscious of, the immediacy of movement and its development in the surrounding space; observations upon standing up again were surprising, concerning verticality, relationship with space, presence and bearings.

In a second session, we applied the same principles to approach the integration of arm and head movements and differentiated mobility of the cervical vertebrae, while exploring the relationship of the latter with the facial organs, including the mouth. Little by little, we all re-lived a clear inner image of the spine and felt sound being transmitted right into the chest. As the neck freed, the voice resonators became more balanced and harmonised, and sound became richer and deeper, while breathing unified.

By the end of the three hours, when the group stood up and walked around making sounds and singing improvised tunes; a great harmony could be heard and felt, bringing inner peace for everyone and also a very close and true relationship with the surrounding space. Being found expression **per sona**.

The French to German interpretation (François Combeau taught in French) was much appreciated. It was provided by a practitioner from Austria, Kajetan Schamesberger, who totally immersed himself in François Combeau’s work and way of thinking throughout the workshop. ■

Roger Russell - Ulla Schläfke - Helga Bost

THE FELDENKRAIS METHOD AND MULTIPLE SCLEROSIS

In the last several years there has been a growing interest in the *Feldenkrais Method* among people with Multiple Sclerosis, as well as from the MS societies in various European countries. We were involved in a research project sponsored by the MS society of the state of Saarland in Germany. During this 2 1/2 year project, we had the opportunity to explore some of the potential of the *Feldenkrais Method* for people with this disease. We were confronted with a wide range of problems and watched as the participants struggled to find just as many solutions. Since then, we have had contact with several of the participants as they continued to work with *Awareness Through Movement* and *Functional Integration*. We were able to follow their struggles to continue to develop and grow in the face of an ongoing loss of function as the disease progressed. This experience has given us insight into how the *Feldenkrais Method* can be utilized most effectively for this group of people, as well as some sobering thoughts about the limits to what could be accomplished. Our goal for this workshop was to present some information about the research that we did, and to share with the participants some of our experience of how to work most effectively with people with MS.

A short overview of the research project can serve as a beginning. Roger Russell has been working with ATM with groups organized by several different state MS societies in Germany since 1984. In 1988 the chairperson of the Saarland MS society initiated a research project and invited him to lead it. Ulla Schläfke and Helga Bost joined the project in the planning stage, and assisted throughout the classes, as well as making a decisive contribution to writing the report. The project had two goals: to provide an ongoing *Feldenkrais* class for state residents stricken with MS, and to follow the progress of the participants over the course of the class. The research was directed by the medical director of the neurological clinic at the state university hospital, and was carried out by two medical doctors and a psychologist who accompanied the project. The participants were given a thorough neurological examination at the beginning and end of the class, took regular psychological tests and were filmed on video at the beginning and end of the class doing several movement activities. The group was split into two groups of 25 people, who participated in 30 days of ATM teaching over a time period of 13 months. They were also provided with audio cassettes of some of the ATM lessons to do at home.

The project was financed by the state savings bank association.

The results, which were published in German in 1993 by the Saarland MS society, were complex. First, as expected, a large number of the participants were lost from the research by the end of the 13 months, since many had to confront a variety of problems during the time of the class, some in the hospital. Although many were able to return to the class, they were no longer part of the statistical report of the research, having been absent over the allowable limit set at the beginning of the project. Those remaining showed the following general trend:

- The neurological examinations over the 13 months showed almost meaningful change. There were some slight reductions in some of the measurements. This was seen as an actual positive result since it was expected that these would continue to lose ground to the disease.
- The psychological tests showed a marked improvement in self confidence, optimism and improved ability to deal with the problems brought on by the disease. They also felt an improvement in their respect and trust of their bodies.
- The video films showed an intriguing change. Although most of the participants had slightly more trouble in standing and walking, they were remarkably better moving on the floor. This, of course, should not be a surprise since some of the activities that were used in the video movement tests were similar to many of the ATM lessons of the class.

We were not particularly surprised by these results, since they were in line with our expectations as we began the project. However, some of the discoveries that the participants made surprised even us. Many discovered that, through the skills they learned in the ATM class, they were able to influence problems such as spasticity, ataxia, balance, sensation, etc., that they had believed were beyond their control. The growth in self confidence and hope that accompanied these developments was impressive. It was a pleasure to be midwife to these discoveries. We were also sobered to watch so many of the people we had come to like and respect struggle with some very intimidating difficulties. These included not only the problems that came with spasticity, paralysis and loss of sensation; but also the loss of a job, difficulties with marriage partners and children, or financial problems that ensue when one is seriously handicapped. This included real struggles with their sense of self worth and doubts about life itself. A number of people were unable to take advantage of the psychological services available from the MS society, because as they said, "I don't need a psychologist, I'm sick, not crazy", not knowing that seeking psychological

counseling did not mean psychopathology.

The experience we gained that can be useful for other *Feldenkrais* teachers can be summarized easily.

1. We found that in the course of a day the best time to work intensively was in the morning. By late afternoon, many were tired and were not able to summon the careful attention that is needed for the ATM process. We usually had 3 sessions in the morning, a long lunch break, and 2 sessions in the afternoon.
2. Most of the participants were completely uninitiated in the self exploration process of the *Feldenkrais Method* or any similar process. It took about 10 days of working together before the results of the work began to convince them that this quiet attention and easy movement would work for them. At this point, the attitude and quality of activity changed quite dramatically. It required quite a bit of patience to guide them through these initial days of doubt and insecurity. However, it was worth it!
3. The ATM lessons need to be restructured to fit the reduced attention and endurance of the participants. This is critical! We found that it was necessary to introduce only one, or at the most two, new movement variations of a lesson in each session. This may sound extreme, but it worked the best. The length of the ATM sessions were reduced to about 30 minutes. In this time we explored specific sensations and the changes that were evoked by one step in differentiation of the movement. Although this had the consequence that what normally takes one hour might take two days to explore, almost every person was able to do the entire lesson at the end of the two days. This was an accomplishment, since at the beginning one would have thought that the movement was impossible for almost everyone. Of all our experience, this point is the one we most strongly recommend. Very simple lessons, with only one or two new ideas that need to be confronted in each lesson, and 30 minute sessions.
4. Although it is very important to take any complaint of pain or difficulty seriously and find immediate solutions or have the person take a break, it is also important not to let these problems intimidate you as a teacher. We watched many people in heroic struggles with some very serious difficulties come up with surprising and unique solutions. This was especially true with problems with spasticity and dizziness. Some individuals couldn't find the resources in themselves to find an answer, but many did, and our job was to help them go easy on themselves while they continued to search.

5. Many problems that seem insurmountable, or have been troublesome for a long time, can and will change for the better. Most of the participants had never in their lives done anything like the ATM process, so any kind of respectful attention to themselves, and careful exploration, brought surprising new insights and new, unexpected skills.

6. There are real limits, and this should not be overlooked. Many of the participants came to the class, to some degree, because it was without cost. After the 13 months of the class many did not continue to do ATM even though they had experienced clear improvement. They have limited financial resources, and many people with MS try every new therapy that is offered in the hope of finding an immediate cure, rather than improvement that involves a real investment of time and energy. Often the family or partner was unwilling to support them in going to the class regularly because it interfered with the normal life of the family or required that they forego their own needs or hobbies. Finally, the disease continues to damage the central nervous system. Many of the participants have continued to go to ATM classes and receive FI lessons and, despite ongoing effort, lost many functions over a period of years. This is a tragedy to watch.

To summarize: short, simple lessons, great patience, and a realistic attitude about what is possible. But remember that realistic means not just limits, but also a clear understanding that it is perfectly realistic to expect that even with great problems, each individual can discover extraordinary resources within himself that can be realized. ■

Jeff Haller

Reported by Hanja Rau with translation by Lore Schäfer

AIKIDO AND *FELDENKRAIS* - EXPLORING INTENTION AND FIXATION

“Aikido is not based on predetermined technique, but on unlimited creativity in every moment,” Jeff Haller explains. He continues by saying that it was Moshe’s objective to train people who are self confident and free to move in any direction, acting without hesitation or preparation. The two schools correspond not only in their objectives, but also in the ways they utilize movement to reach their goals. Moshe’s method takes *Awareness Through Movement* and directs it towards function. The goal of Aikido is awareness of movement in function.

Ulla Schläfje/ Jeff Haller: Photo by Irene Sieben

We begin with some easy partner exercises from Aikido. Staying in constant visual and kinesthetic contact with our partners, we search for ways to let the movement affect us from the feet in contact with the floor, all the way through the skeleton, coordinating with the actions of our partners. Our attention is oriented both to our internal experience and to our partners’ movements. This is a skill that we all know through our FI work. We are surprised to discover how much in Aikido can be applied to the *Feldenkrais Method*. Of course we shouldn’t be surprised, considering the roots of Moshe’s thinking in Judo. We then direct our attention to the course of our thoughts and feelings as we move. Changing roles back and forth, we move forward with the palms of our hands together, toward our partners’ sternums with the intention of penetrating the partners’ space, each of us questioning our next move: What choice of possibilities do I have to react? There are various ways to avoid the direction of the thrust, or is it possible to hold firm and resist the thrust? I can open my arms and myself to the experience. What should I do? Here the emotional orientation and thoughts we have about the situation will

play a decisive role in our spontaneous decisions. Jeff demonstrates the Aikido way: in a turning motion, he moves to the side of the person who is directing the power of his thrust toward him. The goal is to adopt his view of the world for a moment, and in so doing, free ourselves of our own mental patterns. Only then do we make our decision. Jeff then leads us as we reflect on the process of this interaction. We can find many parallels to our process in a *Functional Integration* lesson.

As we continue, Jeff comments on the importance of being free to direct our attention and purpose in every possible direction. He reports on a conversation he had with Moshe, who had been working with a well-known American basketball player. Moshe felt that the player's head was well organized, but less so than five years before. In the meantime, the player had been injured in a collision on the court and had lost several teeth. This was reason enough to sacrifice some of his freedom, but it also inhibited his play by limiting his field of spatial perception and action. Surprisingly, the people with the 'best heads', according to Moshe, were some of the top businessmen with whom he had worked. The person with the best organized head and neck that he had known was Moshe Dayan, an unusually successful strategist. Moshe, drawing on both his highly disciplined academic training and the depth of his experience in Judo, defined strategy as the capacity to look at things from all sides without a fixed opinion or point of view. The ability to direct our thoughts and feelings in this manner goes hand in hand with the freedom of our necks and heads to see all parts of our world.

This brings us back to where we began the workshop, looking for ways to free ourselves of habits as we respond to our social world. We close with another partner exercise. This time, we walk through the room, moving directly toward another person, thrusting with our hands. This is a lively and playful way to find our characteristic behavior in the world, and to experiment with alternatives. ■

Petra Koch

English translation by Lore Schäfer

THE UNITY OF ATM AND FI

In the conference program, I used the subtitle "FIMAT, MATIF, MIFAT." Why? A new technique? I use the mixture of the five letters of A-T-M and F-I as a symbol for the unity of the two techniques of the *Feldenkrais Method*. Both *Functional Integration* and *Awareness Through Movement* have their origin in the ideas of Moshe Feldenkrais. In their practical application, however, the two are entirely different. *Functional Integration* is hands-on work. *Awareness Through Movement* is a verbally conducted experience. Where do these two forms of movement come together again in our field of work, enriching and supplementing each other? What is our own experience - often born of necessity - in our practical work? This was the initial question to the participants of the workshop during the Heidelberg conference.

I summarize the report of the experiences that were shared by the participants:

1. **Monitoring:** During a section of an ATM lesson, the teacher accompanies the student's movements with his hands, a practice well known and used in trainings.
2. **ATM in FI:** As long as knowledge and practical experience in FI are still limited, ATM sequences may be used to help in a FI lesson. This may actually help the *Feldenkrais* teacher, especially the student he is suffering from a handicap at the given moment, such as back pain.
3. **FI in ATM:** If specific movements are not possible, for instance because of a handicap, the sequence of movements may be imagined by the student, and simultaneously assisted by the teacher in doing the movement.

One question was asked regarding the possible experience of limits found in ATM. To a large extent, it is possible to expand the self image with the help of ATM. Yet, as we only move where we can feel, FI is a genuine expansion of our scope of action. Only when, through the teacher's action in a FI lesson, our nervous system feels possibilities of moving which would otherwise not be used, can new aspects be integrated into the self image. For instance: Turn the fingers or toes around their own axis, or the movements of vertebra to vertebra, rib to rib, or rib to vertebra relative to each other in a differentiated manner. Can you imagine other examples?

I have limited my workshop to one topic which has given me basic orientation in my work: to find my own center under the aspect of lengthening the spine. We can only reach our full length (potent state) if we are neither bent nor extended in any section of the spine. Starting from an ATM lying on the side, I have transposed the movement into a FI to develop the theme in sitting (the position in which I work) in standing, and finally into walking.

Awareness Through Movement theme - lengthening (short description)

Lying on the right side, the left arm on the body, the hand grasping the left side of the pelvis.

1. Move that part of the pelvis.
2. Put the left hand to the ground, near the head, fingers parallel to the feet, so that the elbow is close to the head, and lengthen the elbow forward.
3. Move the pelvis as in #1 and lengthen the elbow.
4. Variations: Move the pelvis in the same way, but extend the back or flex the back. Where does the lengthening movement cross the spine?
5. Move the elbow and head together or in opposite directions.
6. Repeat #3 and while you do so, lift the lower ribs from the floor or alternatively, do not lift the ribs.
7. Repeating #3, can you find a lengthening between the pelvis, spine, and head without generating extension, flexion or lateral flexion in the back?
8. Imagine the tongue starting at the pelvis. Would it join in the lengthening? Stretch the tongue towards the lower arm and let the head follow in the same direction.
9. In standing: Feel the difference between the right and left sides. Which hip joint is further forward or further back? Sit. Which side is better organized for sitting? Which side is longer?
10. Come to sitting and back to standing. Sense your length while you do so.

I limited the transfer into *Functional Integration* in that I confined the work to lengthening only; and this in the same position as in ATM, lying on the left side. As a "test movement" I suggested the two basic elements under the same question:

1. pulling on the iliac crest to lengthen the side, and

2. lengthening the elbow forward. Do the ribs follow, and, if so, in the sense of a lengthening or as one block? Since we have not added any new movements, this is what in music is called "improvising on a theme". Josef Held, a *Feldenkrais* teacher and a musician, was in the workshop. He told us of his experiments transferring elements from music into the *Feldenkrais* work.

Regarding "improvising on one tone", he gave us the following parameters: 1. Repetition 2. Variation 3. Contrast.

Closing ATM lesson (abbreviated version)

1. While standing, roll the toes of both feet in flexion. In doing so, keep your head in the same position in the room and observe the effects on the length of the spine.
2. Put the hands on the scapula on the same side. This corresponds to the position of the arms in the first ATM lesson. Flex the toes of both feet or shift the weight alternating from right to left and back. Which elbow becomes longer when you do this?
3. Put the lower leg and knee on a FI table, put the hands again on the scapula as before, and again shift the weight. Walk along the table with the leg still bent.
4. Stand again on both feet, hands on the scapula. Begin shifting the weight and let this movement continue until you begin to walk. Sense your length and ease. ■

Livia Calice

Reported by Irene Sieben with translation by Ilana Nevill

ART APPRECIATION - A MOSHE VIDEO JUNE 26, 1980, AMHERST

This was a small, very exciting workshop. About a dozen people came together in order to study a work of art: "*Falling transforming into rolling*", later renamed "*Experience instability*", an exemplary lesson from the Amherst Training (June 26, 1980). Livia Calice served as our highly inspired companion in watching and interpreting, and led us in a not uncontroversial discussion. As Assistant Trainer, she belongs to the generation that had to forego the benefit of experiencing direct transmission by the originator of the method. This is why the Moshe videos incited her curiosity more and more. Attempts at analysis, as in this

workshop, thus became a necessity in order to return to the source and understand how ideas took shape and by what kind of roundabout ways of miscomprehension, failure, and experimentation they became explicit.

Once again, it became clear that Moshe Feldenkrais did not teach how to teach, but created the space which made learning possible; space for communication, which made change possible. On closer examination, this lesson, showing 250 people on knees and forearms, patiently exploring ways of rolling onto their backs without losing control or falling, reveals itself as a didactic masterpiece for teachers. It lays bare the whole spectrum of instruments and means at Moshe's disposal. He uses them lightly, playfully, sometimes angrily and provocatively, but always with deep love and respect for the human being. Convincingly, he turns science into practice by throwing light on natural laws. He intersperses an *apparently* chaotic, yet ingeniously structured lesson full of irrelevant digressions, with intimately personal experiences.

In the excursion about stability and instability, Moshe illustrates his point with a vertical stick: it is bound to fall if you let go of it: the smaller the base, the higher the center of gravity, the less stability. One can see the perplexity of the students who are indeed stable on their knees, and has the impression of being able to follow their thought processes as they once again and without success try to get down to

the floor. At that point, Moshe slips in some of his thoughts about the root of creative action, ruminates about what geniuses like Michelangelo, J.S. Bach, Leonardo da Vinci, Rembrandt, Picasso, etc. have in common. What unites them is the fact that they realized completely new ideas in an unmistakable way. Livia Calice interprets the confusion spreading amongst the Amherst group, as revealed to some extent by the camera, as a skillful invitation to let go of "patterns" and discover something new.

Some video watchers have experienced this confusion strategy as rather provocative and disturbing, and thought the stories and parables were 'banal'. They could not immediately appreciate their obvious impact as a kind of 'koan', riddles which Zen-Masters give their pupils to solve. Anyway, soon the screen shows a large group of students who seem to have found the key to the secret of adaptability, and with it the capacity to roll together with incredible speed like a single huge breathing body. Moshe: "Now you see human action at its best." The pride of the Judo expert resonates in these words. It became painfully clear that lessons such as this may be immeasurably instructive, but can't be copied. For me, the most important realization of this adventure was the sense of being encouraged to come closer to myself, to go in search of my own creativity and the personal expression of my enthusiasm for the method. ■

Claus Bühler

DANCING OUR WAY THROUGH ATM

One of the resources for the ATM lesson in this workshop is a group of movement techniques taken from Capoeira, a Brazilian martial dance. It is essential to know that these “techniques” are merely the initial ideas for the actual authentic expression of the movements. No experience in dancing is required for this workshop.

Planning the Workshop:

When I needed to change the topic of my workshop during the planning phase of the conference, my subconscious prompted this combination of *Feldenkrais* ATM lesson, authentic movement in dance, and Capoeira, the Brazilian martial dance I have been practicing for more than ten years. Capoeira is a mixture of effective martial technique and acrobatic elements, and music and dance steps. In this way, African slaves in Brazil developed their ‘martial training’, camouflaging it from the supervisors of the plantations as a dancing ritual.

When the printed program was in my hand, my hair stood on end because of the trap I had set for myself. Linking ATM and dance is familiar to me, and the way in which we can use the movements of other systems as a source of ATM lessons has been demonstrated by *Feldenkrais* himself. But Capoeira, without the specific dynamics of its movements and without its reference to a partner, would either remain an empty shell or appear unconnected to the other two components. I had given myself a task which required me to combine almost incompatible elements.

The questions I asked myself were these:

- How can I use the movements of other systems as a source of ATM, and vice versa?
- How will my lessons profit from learning a discipline (e.g. Capoeira) by way of the *Feldenkrais Method*?
- How can I show the ways in which ATM can be developed into dance?
- How can I relate the experience of ATM dance movements being created in free improvisation to directing our awareness and emotional impulses in harmony with the atmosphere or the rhythm of the music?
- How do I use and shape my space, including the negative space around me?
- How can I be upside down with open eyes and still find my spatial orientation?

The participants, including myself, were to have fun.

The Sequence of the Workshop:

The morning of the workshop was overshadowed by Gaby Yarons’s death, so we began the workshop knowing that dance offers room for mourning. In many cultures, dance is a part of mourning ceremonies. Some of the participants encouraged me, and felt Gaby would have said “it is meant to continue, do what you have planned”. So we began to walk around the room in circles. As the group crowded part of the room then corrected its direction, paying attention to the flow of movement; we observed, by placing our hands on the floor, the paths of the pelvis and head in the room. We then let this exploration of motion drift into free improvisation of movement.

In the following section, the participants learned the basic step of Capoeira (‘ginga’) via verbal instruction, imagination and implementation, contrary to traditional learning by imitation. By doing the steps with a partner, they obtained a feeling for the dynamics of Capoeira and came to understand the way in which attacks may be introduced or insults may be exchanged.

The essential characteristic of Capoeira is balancing on the hands in a handstand and doing a cart wheel. This is done to avoid attacks and to leave the legs free for effective kicking. While doing this, the person looks down with his head bent and arranges the configuration of his body in space so that he keeps his partner (opponent) always within sight.

During my preparations, I hit upon the Alexander Yanai lesson, “Four Points” (‘bearstand’), which uses the same movement requirements as Capoeira. I ended this lesson, with slight changes in the style and timing taught by *Feldenkrais*, by having the participants lie in any rest position from which a free movement could be created. They were then asked to move in harmony with music, keeping in mind the preceding lesson but not bound by it, in the awareness of shaping the ambient room. It was essential to listen to the inner impulses and to follow them, not falling into a habitual motion or dance routine.

After the break, I came back to the Four Points during the ATM lesson, combining the movements into a changeover to backward sitting (‘spider’). Playing with their partners, the participants changed in random variations from bearstand to spider and vice versa, with the task of keeping permanent visual contact with their partners. Finally, I included the basic ‘ginga’ step, and the dynamics of motion developing in the room became very similar to Capoeira. The change between movement in standing, the handstand, and the relation to the partner could all be observed in the characteristic flow of motion. Variations in speed and interactions with others were added, causing an essential change of atmosphere in the room.

At the end of the workshop, the group formed a circle, and

as a reverence to the old Capoeira masters, I played some rhythms on the one-string 'berimbau', the main instrument used in Capoeira music. The participants spontaneously transposed this music into the 'ginga' motion.

Impressions of a Workshop Participant:

Monday, which started with mourning for and farewell to Gaby Yaron, was the day on which Claus Bühler began his workshop: "Dancing Our Way Through ATM". In this mood and after the intense impressions of the preceding days, this was certainly not easy. Yet the morning proved to be full of life, resulting in the joy of motion felt in our bodies. Well prepared by *Feldenkrais* lessons, we hardly realized how complex and at what a high level the movements of Capoeira were, and it was absolute pleasure. I got an idea of what Capoeira could be, and many of us felt an urge to do more with it. What the participants were left with at the end were sweaty clothes, a wakeful state of body, a sense of animated action, the memory of the experience of mourning and parting, and a feeling of being very close to life. ■

Roland P. Gillmayr

Translation by Ilana Nevill

SKIING WITH AWARENESS AND PLEASURE

How can ease and pleasure in teaching skiing skills be enhanced by the *Feldenkrais Method*? Observing the usual kind of skiing lesson, you will notice that orientation is directed outward, toward the skiing instructor or some outer form that has to be copied. Rarely, if ever, is attention directed toward inner processes or perceptions.

Here is one small example from many years ago: A skiing instructor stands on a slope with his group of approximately 15 people, demonstrating a little exercise which his pupils are supposed to copy. He invites them to come forward one by one, correcting most of them by shouting, "You must bend your knees!" A number of more or less grotesque movements are to be seen, such as lifting the behind or dropping it as if sitting on the loo, pushing it forward or backward, etc. It becomes obvious that only two or three of the pupils have even the faintest idea what it might mean to bend one's knees in skiing. Any further movement sequences requiring this basic skill as a precondition will remain difficult to perform until those budding skiers have acquired an inner, kinesthetic awareness of what it feels like to bend their knees.

Ski-Aware aims at developing the inner skier. This

involves exploring diverse movement tasks and finding out for oneself what is easier, simpler, and more secure. For example, many skiers still dream of keeping their skis tightly together. More than 30 years ago, this was propagated as 'elegant skiing'. But is it really easy and elegant? If you try out the following exercise for yourself, on the ski-slope or at home, you will see. Stand on even ground with feet and legs parallel and very close together. Begin to move your pelvis lightly right and left and observe the range of this movement. Once you feel secure, it is best to close your eyes. Keeping your legs parallel, spread them as wide apart as is comfortable (approximately 50 cm) and once again let your pelvis go right and left without effort. Observe the range of movement now. You have thus explored the two extremes - tightly together and wide apart.

Now you can experiment with different distances between those two poles and try to discover which distance between the legs allows your pelvis to move most smoothly and with the greatest ease. If you like, you can let your pelvis circle as in belly-dancing. Make sure that your feet don't remain solidly stuck to the ground. Let them move as well; let your feet shift to their inner/outer edges as in skiing, while your pelvis moves right and left. If you are standing on a ski slope, you will notice that your skis move too. When you have found which distance between feet and legs (still parallel) allows your pelvis the most mobility and ease, look down and see how far apart your feet are. For most people, the distance between the inner edges of their feet will be about 10 to 15 cm. If you now drop a perpendicular from your hip joints (if you are standing on skis, you can use your poles), you will notice that the middle of each foot is exactly underneath the corresponding hip joint. If your skis maintain this distance, your hip joints will be at their most mobile and free to move in all directions.

Just for fun, you could also see what happens when you place your skis closely together before you start. I call this "preventive swing". After a while, you will become aware of the effort involved in keeping the legs together. Compare this pattern once more with the 'optimal' distance, also in terms of the mobility of the whole body. Now you can decide for yourself what distance you like best between your skis. If you watch a slalom competition on TV, you will notice that none of the skiers keep their legs tightly together. This is not a recent innovation, but has been the norm for many years. It is, therefore, a little strange that an uneconomical, dysfunctional form of movement still seems to be lodged in our brains as *the* ideal of elegant skiing.

Let's explore, using some examples from skiing, Moshe's statement that, "If you don't know what you are doing, you cannot do what you want." One feeling that every skier knows, at least as a beginner, is fear. There are many

reasons for our fear: we are afraid of falling, of high speeds, of steep slopes, etc. Common to all of these situations is the fact that we do not have control over our movements. When the skis and the slope can do what they want with us, and not the other way around, most of us experience fear. This leads to stiffness and tension which reduces our control; a vicious circle.

Ski-Aware offers the skier the chance, through lessons in moving and sensing, to become aware of what is actually happening as he skis. This includes developing the sensitivity to recognize the physical conditions that affect us as we ski. The skier can gain control over his own movements and the motion of the skis. There are many elements that need to be in our awareness: the space on the slope around us, the relationships within ourselves between the pelvis and the ribs, the distance between the skis, the movements of the head, the effect on the skis of the rotation of the chest and head, etc. The moment in which we know what we need to do, and are able to do it, we lose our fear. As we give up our fear, we are ready to try something new and more challenging.

Good skiing demands the development of *awareness*, which can make it easy, elegant and playful. One condition that normal ski instruction seems to have forgotten is that skiing should be both fun and pleasurable in order to make it possible to try something new. The 'right way' to ski doesn't exist. Here too, the idea that freedom comes from the ability to find new, personal alternatives is very meaningful. If we feel free to adapt to momentary conditions of the snow, the slope, and our own condition, we will find that skiing is indeed like a dance on snow! ■

Peter Jacoby

Translation by Lore Schäfer

EXPLORING THE ORIGIN OF THE VOICE

In the *Feldenkrais Method*, we use our awareness of movement in order to improve our lives. In this modern method of self investigation, we discover the more ancient patterns of the evolution of our species as a source of our functions, and as a resource and source of strength. The expedition to the origins of our voices is meant in this way, and can only be experienced in the 'here and now', in the work of each individual for himself and with his own voice.

The atmosphere on Monday morning was colored by Gaby Yarons's death, which moved us all very deeply. Stress of this kind isolates. This applies to the functions of our brains as well as to us personally as individuals in the group. As Francisco Varela told us on Saturday evening, the rhythmic oscillations of the nerve cells harmonize and bind them together. The vibrations of our own voices within us and among us can bring us together in harmony. This is why I began with "Om" (actually a-o-u-m), a sound we sung together.

The actual work, understood as a path to our own voices, begins as a kind of 'trip to the base camp': the immediate sensations of weight, boundaries and volume of our own bodies, awareness of our feelings and thoughts, and the sensations of our skeletons and skins. How do we breathe? The air we inhale is used as a medium to explore our breathing spaces, in the same ways we as teachers first use the floor to explore our locomotive organs. We start with our noses as the beginning of our respiratory paths, and the appropriate vocal expressing is humming. This is how we can combine our voices and our breathing spaces with our awareness, to sense and hear the reactions of our voices to our discoveries.

As a next step, we extend our explorations to other parts of our bodies. Touching our bodies with our hands as the beginning of social action supports the 'inner' communicative process from 'outside'. We let the energy we use for awareness be guided by our needs and our feelings of tension, unease, and even pain, in order to soothe them by attending to them. We can experience our pelvises as sources of power, initiating our breathing and humming from these lower poles of strength. Awareness can then be experienced as living energy, and breathing as an interaction with our environment. Our voices relate us to ourselves and to those around us.

After this exploration of our breathing spaces, we turn our attention to our hearing, and combine our hearing and our voices. The discovery that we hear differently in accordance with the specialization of the hemispheres of our brains (they have different connections with the body), will change the quality of our voices. Reflecting on the sense of smell, which is related in its development to very old environmental information and values, can inform us about our voices. Pleasant scents (and tastes) cause us to utter sounds; unpleasant ones cause us to produce noises. The active reactions of sounds correspond more to the chest voice, whereas the passive reactions of noises correspond to the head voice. In our heads, where we find our teleceptors and our centers of awareness (called in other cultures the crown chakras), we find our other poles. Here we direct our voices, being both open to the outside and related to our world.

We live by connecting these two poles, the power of our pelvises, and our awareness of our heads and teleceptors. We understand this as our response to gravity and our orientation toward the light of our environment, coming from the sun. We experience our voices as 'gestalts' between these two poles, as our emotional identities, and as our extensions beyond them, as our social identities. Analogous to the 'image of the body' we can postulate an 'image of the soul'. These images are the integration of our experiences of the connection that our language affords us between our emotional selves and the culture which has grown out of the relatedness of our mutual emotional selves. The central cores of our images of our bodies are our skeletons. So too, with our voices. The resonance of our skeletons, emerging from our skulls and going

downward through our structures, are the cores of our sense of our voices.

Upon arrival at the 'base camp' of emotional identity, I originally wanted to suggest a trip to our reptile past, continuing the thread of Chava Shelhav's seminar. This is where our social lives begin, by way of acoustic communications mediated by our breathing and our voices. Our consonants and the vocal series i, e, ae, a, reach back into that past. However, in my experience, this trip can be challenging and exhausting for most of us. I preferred a shorter trip to the roots of our mammalian heritage. Among other things, the investigation of sucking takes us to the discovery that sucking and breathing can be differentiated from each other. This is where our series of vowels (u.o.a) and singing has its functional origin. The sensation of sucking while singing is the appoggio, or support, which is practiced in all schools of song. It is the basis of directing the closure of the vocal chords and air pressure in a differentiated way. The 'vibrato' is the controlled expression of this process.

If we experience the reptile movement between i and a as a vocal movement directed to the outside (sympathicus, aggression, eating and devouring), the mammalian vocal movement between u and a is a movement to the inside (vagus, nutrition, gill breathing of fish, yawning). The former goes along with a feeling of isolation and power, the latter with a feeling of attachment and consolation. With this contrast, we closed the workshop and found a very deep and personal meaning in the 'om' sound with which we started the day. ■

From Left:
Myriam Pfeffer,
Roger Russell,
Ulla Schläfke,
Larry Goldfarb,
Francisco Varela,
Carl Ginsburg,
Chava Shelhav,
Ruthy Alon;

Photo by
Corri Joswig

BIOGRAPHIES

Ruthy Alon, (Tel Aviv 1969) Trainer. Ruthy leads and teaches in trainings around the world. Her book, “Mindful Spontaneity”, has been published in several languages. She lives in Jerusalem.

Helga Bost, (München 1989) Teacher (including sports) in primary and secondary schools, she has a private practice in Saarland, Germany. Participated in the *Feldenkrais* research project of the German Multiple Sclerosis Society.

Claus Bühler, (Neuss 1990) Studied sports and has taught dance and the martial arts of Capoeira and Philippine fencing. Has taught the *Feldenkrais Method* in a psychiatric hospital. Former president of the German *Feldenkrais* Gilde. He lives in Giessen, Germany.

Livia Calice, (Toronto 1987) Assistant Trainer, Administrative Director of the Vienna FPTP. Studied art and Romance languages in Boston/Vienna, dance in India for two years, teaches since 1986 at Max Reinhard Seminar in Vienna where she lives and works.

François Combeau, (Paris 1989) President of the International *Feldenkrais* Federation as well as former president of the French Guild. As a former singer, he is now a voice teacher and works in a hospital, with people with brain damage, as a speech therapist. In his work with actors, musicians and singers, he tries to find a synthesis between voice work and *Feldenkrais*.

Paul Doron Doroftei, (Tel Aviv 1988) Artist and sound engineer. Born with cerebral palsy, he met Moshe Feldenkrais in 1972 and began an intensive process of exploring his handicap and potential through the *Feldenkrais Method*. He concentrates on working with handicapped children and artists in Hamburg, Germany.

Edward Dwelle, (San Francisco 1977) Assistant Trainer, lives in Wackersberg, Germany. He met Charlotte Selver in 1973 and Moshe Feldenkrais in 1974, and since then has been a student of their distinctly different ways of working.

Reinhard Fuhr, Ph.D. is a teacher of education at the University in Göttingen, Germany where he lives. Gestalt trainer and supervisor, and with his wife, author of three books and many articles about alternatives to mainstream learning and teaching methods.

Roland Gillmayr, (Munich 1987) Sport teacher and ski instructor. He has developed ski courses utilizing the *Feldenkrais Method* for beginners and experienced skiers. He lives in Frankfurt, Germany.

Carl Ginsburg, (San Francisco 1977) Trainer. Carl leads and teaches in trainings around the world. A former professor of Chemistry. He has written many articles about the *Feldenkrais Method*. He lives in Albuquerque, NM, USA.

Larry Goldfarb, (Amherst 1983) Trainer, Ph.D. in movement science. Publishes Telekinesis, co-directs the Strasbourg Training. His book, “The Back Into Action Handbook”, was published in 1994. Private practice in Champaign, IL, USA.

Beate Gottwald-Trummer, (Amherst 1983) Assistant Trainer, Psychotherapist, Mother. Lives and works in Munich, Germany.

Martina Gremmler-Fuhr, M.A. in education, trainer and consultant in Gestalt therapy, and with her husband author of three books, the latest of which, “Gestalt Ansatz”, will prove to be very important for many *Feldenkrais* teachers. She lives in Göttingen, Germany.

Jeff Haller, (Amherst 1983) Trainer and Educational Director of the Vancouver FPTP. Jeff has a black belt in Aikido, is a sports teacher and a Ph.D. in psychology. He is a former president of the North American Guild. He lives in Seattle, WA, USA.

Amos Hetz, is a dancer and professor of dance, movement and Eshkol-Wachmann movement notation at the Rubin Academy in Jerusalem, Israel, where he leads the movement faculty. He worked many years with Noa Eshkol and Moshe Feldenkrais.

Peter Jacoby, (Neuss 1989) Professor of voice at the Opera School in Detmold, Germany where he lives. He studied piano, conducting, musicology and history, and he is the author of many articles about the *Feldenkrais Method* and voice.

Petra Koch, (Amherst 1983) Assistant Trainer and Physical Therapist. She assists in trainings across Europe, and works with children at the center of Dr. Inge Flehmig in Hamburg, Germany where she lives.

Jeremy Krauss, (Amherst 1983) Assistant Trainer. He has a special interest in Moshe's Tel Aviv ATM lessons, and has taught at the *Feldenkrais* Institute in Tel Aviv for several years. His last book was published in German in 1995. He lives in Tel Aviv, Israel.

Garet Newell, (Amherst 1983) Assistant Trainer and Administrative Director of the Lewes FFTP in England, founding member of the European Training Accreditation Board, founding member of the *Feldenkrais* Guild of the United Kingdom and one of the initiators of the IFF.

Mara Della Pergola, (Amherst 1983) Assistant Trainer and former president of the Italian Guild. She is the Administrative Director of the Milan FFTP. Besides teaching in various trainings in Europe and North America, she teaches actors at the Teatro Sabile in Torino, Italy.

Myriam Pfeffer, (Tel Aviv 1969) Trainer. She is Educational Director of the Paris FFTP's and teaches around the world. She began learning with Moshe in the 1950's and is particularly interested in the philosophical and psychological aspects of our work.

Gisela Rohmert, Singer. Founder and Director of the Lichtenberger Institut für Gesang und Instrumentalspiel, author. She has researched the coordination of voice and movement as well as the physiology of music.

Johanna Rohmert-Landzettel, (Neuss 1991) Singer, violinist, Assistant Director of the Lichtenberger Institut, directs a project at the institute to explore movement and sound and how they interact.

Roger Russell, (San Francisco 1977) Assistant Trainer in many trainings in Europe, and the Co-Educational Director of the Heidelberg FFTP, and to his own surprise, a Physical Therapist. He lives in Heidelberg, Germany.

Ulla Schläfke, (Paris 1991) trained in different fields of humanistic psychology, and has worked with groups for many years. She has a private practice in Heidelberg and has developed a program to work with women on body image. Administrative Director of the Heidelberg FFTP.

Chava Shelhav, (Tel Aviv 1969) Trainer. She leads and teaches in trainings around the world. Chava is completing her work on a Ph.D. at the University of Heidelberg. She has spent many years researching the *Feldenkrais Method* with children. She lives in Tel Aviv.

Jim Stephens, (Toronto 1987) Ph.D. in neuroscience and a Physical Therapist. He is the chairman of the research committee of the North American *Feldenkrais* Guild. He lives in Havertown, PA, USA.

Liane Stephan, (Hamburg 1992) Teaches dance, Aikido and *Feldenkrais* in Cologne, Germany. She has studied dance, contact improvisation, Aikido and Body-Mind Centering.

Linda Tellington-Jones, (San Francisco 1977) Teaches T.T.E.A.M. to beginners as well as Olympic riders around the world. Linda has published three books and many videos of her work. She lives in Santa Fe, NM, USA.

Anna Triebel-Thome, (Amherst 1983) Anna first met Moshe in Holland in 1975, at the same time that he was starting the San Francisco FFTP. She has developed a program for movement education for actors based on the *Feldenkrais Method*. She lives in Berlin, Germany.

Iris Uderstädt, (Paris 1992) dancer, choreographer and movement teacher. M.A. in sports. Tai Chi, modern dance and the *Feldenkrais Method* are her background. She lives in Michelbach, Germany.

Lea Wolgensinger, (Amherst 1983) knew Moshe since childhood. Assistant Trainer in trainings throughout Europe and Administrative Director of both Swiss trainings in Brig and Locarno. Active for many years in Swiss and international *Feldenkrais* politics.



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