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The Shake-A-Leg Body Awareness

Training Program:

Dealing with Spinal Injury and Recovery in a New Setting

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In Providence, Rhode Island, an experimental program for persons with spinal injuries has had results that are as amazing as they are heart-warming.



Harry Horgan: founder of Shake-A-Leg

Introduction: The Shake-A-Leg Body Awareness Training Program

IN A PREVIOUS publication (Ginsburg, *Somatics*, Autumn 1980), I reported two instances in which spine-injured persons (after injuries sustained more than ten years earlier) recovered some degree of functioning below the level of injury. As a consequence of seeing this report, Harry Horgan, a young paraplegic with a midthoracic T5,T6, injury, contacted Rolfer Bill Zimmer and me in January, 1982, to arrange a six-week period of intensive work with us. His goal was to learn to walk with braces and crutches, despite the discouragement of his physicians and the complete paralysis of his lower trunk and legs. Our goals with him were to help him restore some balanced use of his upper body, reduce the intensity of spasms in his lower trunk and legs, and to ascertain if any functioning was possible below his injury level. We assumed that brace-walking would be a difficult feat for him, considering the high level of his injury, but we encouraged him to continue his attempts at walking. We also found that Harry needed to slow down, relax, and begin to respect the whole of himself, including the lower part that he could no longer feel.

By June of 1982, Harry had indeed collected a staff.

Over a period of time, Harry did reach his goal of easy brace-ambulation, a task he carries out today with remarkable balance and agility. And he did regain some control of muscles in his lower back and along the sides of his trunk. However, in the winter of 1982, he had only a hint of the possibilities; nevertheless, his enthusiasm for our approach to working with him led him to start to plan a program so that others injured like himself could benefit. He would offer the program in Newport, Rhode Island (his home town). His idea was to offer as many alternatives as he had found useful in his own progress and to have the program ready by the summer. Bill and I were skeptical; but by June of 1982, Harry had indeed collected a staff, including Bill and me, an aquatics team, a physical therapist and assistant, and two counselors. Bill did individual Rolfing sessions; later, he also led movement groups and directed a dance group. I taught Feldenkrais Awareness Through Movement classes and individual

Functional Integration sessions. Jack Childs, a psychologist at Salve Regina College in Newport, codirected the program with Harry. He did some counseling and led groups in relaxation techniques, Yoga, and simple meditation processes. During that first summer, we also invited Emilie Conrad-Da'oud to present her Continuum Movement meditation process to the group during the second week of the program.

Needless to say, it was a very full and active program for the first nine participants. And it was unique in each person's experience. None of the participants had previous exposure to any somatic disciplines, such as Feldenkrais. For them, meditation was surely a strange activity to consider. Harry called this program the Newport Body Awareness and Sports Clinic.

All the Shake-A-Leg sponsored programs have been held on the campus of the University of Rhode Island.

At the end of the first program in 1982, Harry organized a nonprofit foundation called Shake-a-Leg to support further body-awareness-training programs and other projects that interested him. One of these projects is a study of functional electrical stimulation of paralyzed muscles in spine-injured persons, to be held in conjunction with Rhode Island Hospital in Providence. Shake-a-Leg has now supported body-awareness - training programs during the summers of 1983, 1984, and 1985. These six-week programs have all been similar to the first program, but with the addition of sports activities, including scuba diving, sailing, horseback riding, and wheel-chair football and baseball. All the Shake-a-Leg sponsored programs have been held on the campus of the University of Rhode Island.

Thirty-three people have participated in the four summer programs. Of twenty-six participants during the first three summers, fourteen have returned during subsequent summers. Nearly all have maintained some contact with Shake-a-Leg. The 1985 summer session included six new participants and ten participants from previous summers.



In terms of injury, the participants represented

all levels of injury as well as different stages of recovery. Sixteen of the participants were quadriplegics with neck injuries. Two of these participants could walk without assistance upon entering the program, and one walked with crutches. There were fourteen people who were paraplegics with mid-to-lower thoracic injuries. Three of this group also had closed

head injuries. Two were able to ambulate with a walker or crutches and short leg braces. One person could ambulate with a walker and locked knees, Eight others in this group could ambulate with crutches and long leg braces but many of these participants either learned or significantly improved this skill at Shake-a-Leg. In addition to this spine-injured group, there were three participants with moderate-to-severe brain injury; of the entire group, nine were women.

All our participants had been through traditional medical rehabilitation programs with the prognosis that they would make no further gains in functioning.

This diverse group of people allowed us to explore the impact of a number of alternative approaches in both attitudes and processes with a much larger group than had previously been available for such exploration. All our participants had been through traditional medical rehabilitation programs. They had been discharged from these programs, generally with the prognosis that they would make no further gains in functioning and that hope for such gains was not realistic. Some participants, however, had already made some dramatic gains after completing rehabilitation and before starting our program. Most of our participants came to the body-awareness-training program with a desire to improve and a sense of frustration with what traditional medical rehabilitation had to offer them. However, only a very few had ever sought alternative therapeutic or somatic learning approaches before Shake-a-Leg.

From my point of view, the staff and participants had an opportunity to explore a number of new assumptions. We were not all equally committed to these during the first program. A number of the staff people also had only limited contact with alternative or somatic approaches in dealing with the kinds of problems our participants had. But throughout the four summers, there has been more and more consensus on basic issues.

Some general assumptions and attitudes shared by all are these:

1. We do not predefine what people can do, but we give support, so that people can discover their own possibilities.
2. We assume that everyone can improve in some way and that the important step is the improvement.

Shake-A-Leg is a precedent for a new kind of program for spine-injured people that takes up at the point that traditional rehabilitation has done all it can.

These two rather simple assumptions are, in fact, quite radical with respect to the way rehabilitation is usually carried out. Although I have heard about rehabilitation programs that do encourage people to explore and are supportive of the person through the rehabilitation process, interviews with many of our participants suggest that (typically) many rehabilitation programs give people strong negative messages about their possibilities, discourage innovation and exploration, rely on mechanical techniques, and generally define a client by injury level rather than by finding out what each client can do. The purpose of most rehabilitation programs is to teach people the basic skills they need in order to function in daily life - with such problems as eating, transferring in and out of wheel chairs, and so forth. In rehabilitation, there is, in fact, little interest in exploring recovery or in getting people to transcend their

predefined limitations. If the Shake-a-Leg assumptions are operative and result in changes for people, then Shake-a-Leg is a precedent for a new kind of program for spine-injured people that takes up at the point that traditional rehabilitation has done all it can!

Beyond the more general assumptions of the program as a whole are the assumptions of the staff people involved in somatic learning disciplines: specifically, Rolfing, Feldenkrais, and (in the first summer) Emilie Conrad-Da'oud's Continuum Movement process.

The first of these is that changing the self-image and self-organization through increased awareness, sensitivity, and letting go of chronic holding and tension will improve the way people function in all other activities. The second is that the above processes can open up the possibility of functional recovery.

Although there have been dramatic, immediate changes for some people, the process of change for spine-injured people is often very slow and arduous.

The Shake-a-Leg Body Awareness Program has been a learning laboratory to explore the effect of all the above-mentioned assumptions and processes, but documentation of what we have done has not been an easy process. Although there have been dramatic, immediate changes for some people, the process of change for spine-injured people is often very slow and arduous. Testing of muscle strength, for example, as a way of showing progress is often too crudely done and does not show the change in organization and functioning that may make significant differences for a participant. Psychological testing involving such issues as self-esteem, locus of control, or quality of life has indicated changes for participants - often less dramatically so than by observation of the person in a social setting. But we have created useful documentation, nevertheless - outside of standardized instruments.

The most useful documentations we have are videotapes of individual and group learning sessions in various parts of the program, including physical therapy, aquatics- and particularly Feldenkrais. Approximately twenty-four hours of individual sessions in Functional Integration were taped each summer; and a number of Awareness Through Movement classes were also taped. I will refer to taped documentation in my discussion of individual case histories and the work in the program.

In addition to these tapes, we have pre- and post-program tapes of participants in activities such as wheel-chair transfers, brace-ambulation, and so forth prepared by the physical therapy staff. There are also pre- and post-program "Rolfing" photographs showing changes in the sitting posture of the participants.

Verbal documentation includes written reports on each participant by each staff specialist. There are also video- and audiotaped interviews in which the participants describe their experiences prior to and during the program. All the participants' quotations are taken from these taped interviews.

The results of our project are, in a few instances, very vivid and dramatic. For example, Paul T., a young quadriplegic, is now able to walk supported between two

people. Providencia L. recovered leg movements after sixteen years in a wheel chair. Jack P., another quadriplegic, recovered full use of his right hand. Danny F. who came into the program walking with two canes and almost no ability to balance as a result of a brain injury was able to run at the end of six weeks. For others, the physical gains may have been less dramatic. But what seems like a small gain may in fact have profound positive consequences for a participant. Mark H., a T3,T4 quadriplegic with almost no movement past the tips of his shoulders, learned that he could transfer the feeling of a wrist-turning movement in his left hand to his right and produce the same function on the right. For him, this improvement was a major victory. Mark C., another quadriplegic with the same injury, has enjoyed the program so thoroughly that he has returned for a total of four sessions. His major gains include increased control of severe muscle spasms and an improvement in the movement of his head and neck. Yet for Mark C, there have been other less tangible improvements: For example, he is about to graduate from college - after a few years of pecking at a typewriter with a stick in his teeth. Many participants have enjoyed the program just for the sense of support and encouragement it provides and for the opportunity to be with and talk with and share with people who have similar problems. In these broad terms, there is no question but that the program has been a success.

The Nature of Spinal Cord Injury and Recovery

It is extremely rare in a spinal cord injury for the cord to be severed, or even partially torn or cut. What is called, medically, a *complete injury* is defined by the situation where a person has no pinprick sensation or voluntary motor control below the injury level. The injury level is given by the particular vertebrae at which the fracture or dislocation occurred. It is assumed then that there is no nervous system communication from the central nervous system to the cord and the peripheral nerves below the injury, and vice versa. But this is indeed an assumption. However, many spine-injured persons consider the medical term *complete injury* as indicating that the cord is cut.

Even in diagnosed complete injuries, careful elicitation of feeling or movement may result in detectable feeling or very tiny voluntary movements.

Many injuries, even those considered complete, are, in fact, partial injuries. In a clearcut case, there may be sensation of various types (i.e., skin-surface feeling, deep touch or proprioception and/or voluntary movement) possible below the injury level. But even in diagnosed complete injuries, careful elicitation of feeling or movement may result in detectable feeling or very tiny voluntary movements. In the absence of any voluntary movement and feeling, it may still be possible for a spine-injured person to develop some ability to control muscle spasm, which suggests some relation between the CNS and the periphery.

Without CNS connection (for example, in the experimental transection of the spinal cord), there is an initial period of spinal shock in which all sensation is lost, along with flaccid motor paralysis below the injury level. Classically, flexor reflexes, exhibited by muscle spasms and possibly more sustained contraction or spasticity, return first. The reflex spasms are usually elicited by irritating the skin. In six months, extensor reflexes return and become predominant. There is no sensation and no voluntary movement.

In actual injuries, however, the pattern of reflex return is quite individual, as is the degree of recovery of sensation and function. The question remains: What does happen in the cord?

The typical injury is a bruise. The nerve fiber itself is usually left intact.

Research has shown that the typical injury is a bruise. Swelling of the nerves results in rupture of the myelin sheath, the insulation around the nerve fiber. The nerve fiber itself is usually left intact. But in human injuries, repair of the myelin sheath does not occur in a way that restores the functioning of the nerve fiber. Breakdown products of the fatty substances in the myelin affect blood supply and functioning. These technical matters are important in working towards a medical solution to the problem of spinal cord injury. But even to identify the injury (and this is not done in many cases) does not lead to an understanding of the consequences.

Harry Horgan's injury, for example, was seen by his neurosurgeon as a tiny bruise on the cord, no larger than the head of a pin. His injury is considered complete. He has had some success in increasing muscular use of his back and trunk below his injury level, but there has been no change in his pelvis and legs in terms of feeling or voluntary movement. On the other hand, he has learned to control the intensity of the spasms in his trunk and legs.

Steve S. has an injury described as a crushing of the cord at the C6,C7 level. Yet he has spotty areas of his body that he can feel. Minor but significant voluntary movements were possible in his hands. These improved and strengthened during the six weeks of the program. Minor movements in trunk and legs were also detectable.

Joe B., with a C4,C5, walks without any aid and relatively freely.

There were as many variations in the way an injury affected a person as there were participants in the program. Shirley B., with a C6 injury, has no voluntary movement in her hands, trunk, and legs and no feeling. She has only infrequent spasms in her trunk and legs. Michele C. also has a C6 injury. She can feel and has a complete body-image in terms of touch sensation and some proprioception. But she is intensely spastic and has quite strong spasms when she is touched. When the spasticity is reduced, however, she finds that she can make some voluntary movements in her trunk and even in her legs. She has some use of her hands. Joe B., with a C4,C5 injury, recovered feeling and movement in the hospital. He was able to walk with a cane when he began the Shake-a-Leg program, and now he walks without any aid and relatively freely. He does have a lot of flexor spasticity and some spasms, especially in his feet. Jack P., with a C6 injury, had strong flexor spasms in his legs when he first came to Shake-a-Leg and only minor use of his hands, He now has near-normal use of his right hand, and his spasms are quite manageable. Dan S., with a T12 injury, has no spasms, nor any feeling in his pelvis and legs. His legs are atrophied. He does ambulate well with braces and crutches.

I cite these variations to indicate how different injuries can be just in terms of the so-called physical manifestations. The fact is that to this point there are only a few technical approaches to the problem of spine injury that have made a significant difference to injured persons. Possibilities which are being investigated vary from

studies of functional electrical stimulation of paralyzed muscles to the use of electrical stimulation of the spinal cord and to proposed operations that would shunt across the damaged area. Other alternatives include approaches using enzymes and nutritional factors that could improve blood flow - and, thereby, function and nerve growth at the injury site. But all this work is in a beginning stage.

People are frequently discouraged from trying further on the basis that they must face reality and learn to live with the paralysis.

The traditional medical and medical rehabilitation approach to injury has been to stabilize the spinal column physically at the injury site and then to define the patient's capability to function by the injury level. Training for daily functioning is often carried out only within the confines of the defined injury level. People are frequently discouraged from trying further on the basis that they must "face reality and learn to live with the paralysis." Those who do recover to a greater extent than predicted often do so by their own persistence and drive. A lucky few may find a dedicated physical therapist to help. Many people are undoubtedly stopped from further progress by the inner acceptance of negative messages and the misunderstanding of diagnostic terms. A majority of injured persons may well accept a kind of finality about their situation, but those who do not are frequently frustrated by their physicians and therapists.

Paul T., for example, discovered that he could move his left leg during his stay at a rehabilitation hospital and wanted help in increasing his function. He was told, "It would serve no purpose yet." Kenny O. was sent home from the hospital with the prognosis that he would never walk again. However, his father persisted in trying to get Kenny to move, and he now walks with a walker and short leg brace. Providencia L. had to practice crawling while she was out of her physical therapist's sight, for the therapist would stop her every time she asked to try.

If patients are frustrated, most likely physicians and therapists are frustrated too. People who are helpers like to be able to be successful. Even when it is possible to recover from an injury of the spine, the process is long, slow, and arduous.

Spinal cord injury is a severe disruption of the space between intention and action.

An alternative view is needed

If one puts aside any questions about the physiological nature of spine injury and the technical ways of dealing with the injury, there are still some interesting things to be said about it. Looking at spinal cord injury from a functional and somatic viewpoint, one could say that spinal cord injury is a severe disruption of the space between intention and action. Emilie Conrad-Da'oud speaks of it as a kind of amnesia. What is missing is the body - not the physicality of it, but the image, the presence. But the body is self also. And so there is a space in the self, a lacuna. When Harry first worked with Bill and me in New Mexico, he literally threw the paralyzed part of himself about as if it were a rag doll. Respect for that part of himself that he did not feel was Harry's first step toward control of the spasms that also threw his body around as if it were a thing, an object.

It is interesting how Emilie Conrad-Da'oud's Continuum process can bring about a change in the embodied self-image, Emilie has investigated movement down to the smallest aspects of conscious perception through the use of sound, feeling, breathing, and what she calls *micromovements*. Emilie's passion for movement is in recognition that life and movement are inseparable; she discovered that through movement one could expand ones awareness to very deep realms of the self - as long as one explored movement without intention or direction or thought of trying to function. Micromovements accomplish this through a kind of play with tiny waves of movement that one can try at any place in the body. By letting the movement spread without conscious intention, one may feel the waves of movement at some new place, or even spreading throughout the body. A paralyzed person can, for example, experience how this movement feels some place far below the level of injury. An outside observer may see no apparent change - or the beginning of tiny movements. Because there is no intent other than to enjoy and flow with the experience without effort, the compensations a paralyzed person usually makes in trying to function cannot interfere with the process. At the same time, awareness and sensitivity are enhanced, and there is an experience of aliveness in the usually "dead" body-space below the injury.

While exploring the micromovements, he began to feel the pelvic movements and to produce them.

During the first summer, Harry Horgan experimented intensely with the micromovement process. At the time, I had been asking Harry to imagine moving his pelvis forward and back and up and down, a movement he could not voluntarily produce. At home, while exploring the micromovements, he began to feel the pelvic movements and to produce them. By the end of the summer, I was able to videotape Harry in the process of making very clear movements with his pelvis, using the muscles at the side of his trunk and in his lower back.

Emilie has documented on film the progress of three people with varying types of paralysis in regaining function by using the Continuum process. One of these persons, with a spine injury at the T5 level, has regained movement as far as the level of the deep pelvic muscles.

From my experience in using the Feldenkrais approach to recovery from spine injury, I would like to suggest that the word embodiment fulfills the description of the phenomenological process involved. The meaning of embodiment will become clearer when viewed in the light of the specific events described in the case histories presented here.

The contrast between the two approaches is startling.

Feldenkrais at Shake-A-Leg

Harry Horgan hired a physical therapist for the first summer program: she had had hospital experience in working with spine-injured patients, but found my Feldenkrais approach strange and quite different from what she had been taught to do. We did not get along that summer. The second week she videotaped a session in which she and her assistant were trying to teach Shirley B., a C6 quadriplegic, how to roll from lying

on her back to lying on her side, A week or so later, I videotaped a session also teaching Shirley to roll. The contrast between the two approaches is startling. But it says everything as to how the Feldenkrais approach differs from physical therapy.

In the physical therapy session, Shirley is trying to gain enough momentum by swinging her shoulders with great effort to pull her upper body over and hopefully have the rest of her body follow. Shirley has only voluntary movement in her shoulders and her arms, down to the wrists. By extending her wrists, she can get her fingers to flex enough to hold things, using the permanent contractions in her forearm. As observed on the videotape, the physical therapist and her assistant cheer her on, using the words, "Keep going, keep going, reach, pull it, keep your head down;" and so on. Shirley does finally roll through her strong effort, eventually pulling her body with her hand at the edge of the mat.

She rolls her hips over herself. I say, "You, just did it." She says, "I now can feel it."

In the Feldenkrais session with me, I sit on the floor in front of her, where I can use my hands to guide her. I immediately see that in her effort to roll and to "reach" she contracts the stronger muscles behind her shoulder and literally prevents her own movement. I don't tell her this, however I say, "Everything feels very easy, so only go as far as is comfortable...Take your head towards me. Follow my hand. Make things lighter." As I take her hand and guide her to allow the shoulder to follow and her head, neck, and spine to turn, I use my own movement to take her just to the edge of her own resistance. She feels only a hint of what she has to do, but she does it and quite quickly turns without resistance. I say, "That's beautiful." I then ask her to "follow the same path yourself...but only where it is easy." When I say, "I want you to use organization," she rolls to the side perfectly, except that her hips do not follow. I say (about the hips), "You can roll them a little." I touch with my hand and bend the leg a bit, and the hips follow.

We then get into a discussion about how I ask her to do things so differently from the physical therapists. I say, "I'm not interested in accomplishing the task. I want to get you to organize yourself so well that you put no effort in it." I then say, "If you go easy, you just might bring your hips over." But when Shirley tries again, she struggle. "Now, think," I say. "When you don't think and don't get it, you struggle - because you want to get there - don't worry about the getting there." Immediately, she organizes herself and moves beautifully. I touch her hips and say, "That's it" as she rolls to the side. After rolling back, the next movement is perfect: she rolls her hips over herself. I say, "You just did it." She says, "I now can feel it."

My words are not designed to "cheer lead", but to encourage Shirley to change her entire approach to moving herself. In much of what I say, I am actually indirect about the goal, but Shirley learns easily.

Shirley had not (in the two years she was in the summer program, nor in the years since) regained any lost function of her muscles, But in this session she was able, with minimal muscular function, to carry out a seemingly impossible task through learning the self-organization necessary to roll. This is a basic movement of the self which is usually learned in a number of ways in the first year of life. It is developmentally

significant and, thereby, a step in the direction of possible increased muscle function. In the physical therapy session, the goal is given all the weight, but the means at hand is completely ignored. Any organization will do. There is little learning.

I pace the sequence of movements and lead to the final result through small increments of movement.

When I am teaching a large group of people to roll in an Awareness Through Movement class (on videotape from the 1983 program). I evoke the same ease through the way I pace the sequence of movements and lead to the final result through small increments of movement of increasing difficulty. I begin with a movement that seemingly has nothing to do with rolling, but with lifting the elbows with the hands pressed on the lower ribs. Later one elbow is lifted with the hand placed in the crook of the other elbow. Lifting the elbow requires turning the shoulder in the direction needed for rolling. So in the process of lifting the elbow, the person begins to organize for rolling without necessarily becoming conscious that is what is intended. By the time we get to rolling, the majority of the group is ready to roll and finds the rolling easy. Even those who don't accomplish the rolling have improved their movement.

In another similar session videotaped during the 1982 program, Gary M., a young man affected by severe spastic cerebral palsy of his legs and lower trunk, not only learned to roll to the side but also to roll to the sitting position without effort. Previously, Gary had always gotten to the sitting position accompanied by strong spasms in his legs and trunk.

I am constantly reminding him to go slowly and gently.

It was not easy to get Gary to slow down and pay attention to his organization. On the videotape, I am constantly reminding him to go slowly and gently. At one point, he remarks about the difficulty of what we are doing. I say, "It's difficult, but you can learn." In fact, he had a remarkable capacity for motor learning despite his brain damage. However, his survival up to the time of the program had depended on forcing himself.

Gary (who was nineteen that summer) had never been given the opportunity to use his learning ability as a child but had been treated surgically instead. He had undergone multiple surgeries to attempt to lengthen his spastic and shortened heel cords, adductor muscles, and hip flexor muscles. Gary used his spasms to jump from a table into his wheel chair; he also had developed many ways to accomplish tasks in order to compensate for his lack of functioning - even becoming a champion swimmer at the Special Olympics.

The need to function - however you do it - does interfere with improvement at a certain stage, even though putting every ounce of effort into recovery can accomplish great changes for people. During the second summer of the program, I tried to get a young football player, who had broken his neck in his first college game, to slow down and learn to organize his trunk to roll to a sitting position. He had accomplished much by his own strenuous efforts and could walk with two crutches. But efforting

was so important to his success at that point, he would not give it up, and my work with him resulted in only minor improvement.

In one case, we were able very successfully to get a participant to slow down. Barbara R. recovered some feeling in her legs and some use of her quadriceps muscles at the front of her legs after a decompression operation performed long after her paralysis had occurred. In trying to walk with a walker, using a locking action of her knees to hold her legs straight, Barbara clenched down so hard on her jaw that she had needed surgery on her temporal-mandibular joint. After some weeks in the program, she was able to abandon the mouth guard she had been using at night. Beginning with barely perceptible movements, Barbara also learned (between the first and second summer) to flex and extend her ankles. She did this by making many movements, mostly in her imagination, and then trying tiny movements in the swimming pool - always with the smallest effort possible.

A recovered function that is not used will disappear very rapidly.

The question of actual recovery of function is a difficult one. Where it is possible, it requires a tremendous persistence with the process. A small function experienced dramatically at one time may not be possible the next day, and then it may be recovered again a few days later. A recovered function that is not used will disappear very rapidly. But a small function that a person uses, experiments with, and plays with over time may well strengthen enough to be recognizable as a real action the person can accomplish. Of the entire group of spine-injured participants in the program, five people did regain some functioning in a dramatic way, and ten others discovered that at least some slight movement was possible. Perhaps more is possible, but the Shake-a-leg programs are hindered by not having enough funding for a long-term follow-up.¹

One area where both the Feldenkrais and Rolfing methods have had a positive effect is the control of muscle spasm and spasticity. I use the term spasm here to indicate short-term reflex contraction of the muscles and the term spasticity to refer to muscles that stay in more-or-less continuous contraction. Although spasm is usually viewed negatively, a muscle that goes into spasm frequently will not atrophy. Taking another point of view, spasm is movement. It can be viewed as being part of the road to the recovery of functions. And although a spasm is considered to be a completely involuntary movement, it can actually be the beginning stage of a voluntary movement. The transition point occurs when a spasm can begin to be produced at will. There is no feedback control of the movement at this point, but there is the possibility of intent. At this stage, a person may suddenly feel that they are doing the movement; that is the experience of the movement is embodied. When this happens, the distinction between involuntary and voluntary movement disappears.

¹ In a separate incident, a young woman with a neck injury with whom I worked for a few weeks in Australia, made dramatic progress over a year's time, working almost daily with two chiropractors, Desmond Donovan and Bill Murray in Sydney. Both Dr Donovan and Dr Murray had workshop experience in Feldenkrais Awareness through Movement and, with my suggestions, they were able to devise a pathway for this woman to go from crawling to standing to walking between parallel bars, and then to crutches.

At the time I saw her in Sydney, she had recovered some body image and feeling, but only the very tiniest movements. Dr Donovan has sent me a videotape documenting her remarkable progress.

If spasms are useful to recovery, they can often get out of hand. In Harry Horgans case, his spasms initially prevented him from ambulating. He still has spasms today in his trunk and legs, and he would not want to loose them altogether; but, from his point of view they are now quite manageable most of the time.

Spasm control is an individual process. Each person needs to explore various possibilities. I can list here some things that worked for various individuals. Marc C., who is profoundly paralyzed with a high C3,C4 injury, has powerful extensor spasms in his arms, trunk, and legs that can literally shake his large body out of his chair. Control for him began when he stopped trying to fight the spasm. By stiffening his neck and his breathing movements, he actually increased the spasm's intensity without knowing it. Letting go into the spasm was his way of reducing its intensity.

Cheryl C. turned the spasm into an intention.

Cheryl C., with a C5,C6 injury but with considerable feeling of her body, learned to begin to control spasms by internally moving herself in the direction the spasm was already taking her; in other words, she turned the spasm into an intention. The intention in this case did not produce movement but did result in a rapid subsiding of the spasm.

Michele C., with a C6,C7 injury and (like Cheryl) a more or-less complete body-image and high sensation level, has very high spasticity as well as exceedingly strong spasms. She has begun to control a spasm by thinking of moving her big toe downward on the leg in spasm. She has also discovered that when she allows herself to breath and stops fighting the spasm, she has more control. Very recently, I worked with Michele by moving her hip towards her rib rage and holding for a long time; when her increased breathing indicated she was letting go, we were able to release the spasticity in her leg enough so that she discovered she could move her legs.

Providencia L., with an L1 injury, has reduced her spasticity by regaining her body-image. I will discuss her improvements in more detail in the next section of this paper.

In general, spasm control has been a major gain for a number of participants. (Rolfing also leads to spasm control.) The gains that the participants have made have allowed them to cut back, or eliminate altogether, the many drugs needed to suppress spasms and reduce spasticity.

The Feldenkrais approach at Shake-a-Leg (as documented by the videotapes) has provided participants with both improved functioning and a spirit of positive accomplishment. In some cases, increased functioning below the level of injury has been possible. Moreover, the Feldenkrais approach has also influenced staff members from other disciplines. One of the aquatics instructors commented that when she was able to get people in the pool to slow down and to increase their awareness, her teaching was not only more effective but their learning was also easier. Carol Sarrubi, the physical therapist who has worked in the program since the second summer, pays much more attention to the way people accomplish transfers and do other activities than she did when she started. Many participants have commented that they wish their

previous physical therapists were like Carol, Although the somatic disciplines of Rolfing and Feldenkrais have both had a strong impact on participants (as described here, particularly in the case of Feldenkrais work), great gains have been made in the other components of the program. The case histories that follow will illustrate how this has been accomplished.



Paul T. at the beginning of Shake-A-Leg program. June 18, 1984



Paul T. at completion of program. July 23, 1984



Paul T. taking a step with his aid, Sherry Raymond and with Bill Zimmer

Two Case Histories

Paul T.

Injured in March of 1983 in an automobile accident, Paul had a high neck injury at the C3, C4 level. He was almost eighteen years old at the time. Initially, he couldn't move anything in his body. His neck was stabilized first with an anterior fusion; when this proved to be insufficient, a posterior fusion was performed. However, Paul's injury was incomplete; after a while, he found that he could move his left foot and toes. He could also bend his left elbow.

Paul spent eight-and-a-half months in a rehabilitation center, starting in May of 1983. He initially had great difficulty sitting, due to a lack of strength and also a blood pressure drop. During the second month, he began to be able to use his arms and his hands a little. The left side was stronger. He improved further in therapy - first pushing against resistance and then lifting small weights. He was provided gadgets to help him eat and use his hands. About the third or fourth month, he became aware that a lot of feeling had returned. He was told this was a good sign, but he was given no promises about further improvement. He began to move his left leg and the fingers of his left hand.

Up to this point, Paul felt good about his experience at the rehabilitation centre, but he wanted to work with the returning movement of his left leg. This is how he described the response: "They said at this point it really served no purpose, and I was pretty mad at them, because I had the movement and wanted to get it stronger, but they wouldn't work on it. That kind of turned me off right there, right around the time I started moving my leg, kicking it out."

Paul's attitude towards the rehabilitation experience deteriorated quickly from that point. He wanted to go home, but he still couldn't sit up well enough. Attempts to teach him to transfer with a slide board were unsuccessful - When he did finally go home, he was depressed, unmotivated. He did have some outpatient therapy care. His

parents encouraged him to try the Shake-a-Leg program which they had heard about from Jack P., a participant the summer before. Paul came for the 1984 summer program.

When I first saw Paul, he looked completely helpless.

When I first saw Paul, he looked completely helpless. His head hung way forward and his body was collapsed. His aide had to do everything for him, and we had to lift him in and out of his chair. I was surprised then to find that he had as much return of feeling and movement as he did. However, he seemed unimpressed with his recovery to that point and unengaged in everything we did together - at first. Ann Dahlberg, his Rolfer in the program, took a photograph of him, collapsed in his chair, before the start of his first Rolfing session. I videotaped him - head thrust forward, eyes downcast and heavy, at the start of his second Feldenkrais session. We began by exploring the movement of his left leg and foot. I had Paul really feel what he was doing. After awhile, I asked him not to try to move the right side, but just to feel the right side as if it could move as the left did. It was during this session that Paul began his first tentative movements with his right side.

We then worked to improve the freedom of movement of his head, neck, chest, and shoulders. Because his injury was so high in his neck, his upper chest was paralyzed and collapsed so that his breathing was accomplished only with his diaphragm. Even when more movement in his chest was possible, he still couldn't evoke very much movement of his chest in breathing. However, when he was carried back to his chair, he spontaneously lifted his head and sat in an entirely new and erect way. The videotape of this moment is quite dramatic with further Rolfing sessions, work in the pool with the aquatics team, and so forth. Paul ended the summer sitting very differently than when he started (see photos). In my Feldenkrais work with Paul, we continued work isolating and differentiating finger and toe movements, transferring the feeling image of movements possible on the left side to the right side, and evoking larger movement functions of his back and trunk; for example, I had Paul learn to roll on his hips while sitting on the table. After a while, he could begin to sit without my support, as the movements began to evoke functioning in his backs extensor muscles.

By the end of the summer Paul was able to move his right leg while sitting in his chair.

By the end of the summer Paul was able to move his right leg while sitting in his chair. In work with the physical therapist, Carol Sarubbi, he began to be able to transfer with the slide board. He was energized and beginning to appreciate his accomplishments.

The period after Shake-a-Leg was not a happy one for Paul. The end of the program was a heavy letdown. He did not do much to continue his progress and retreated into his old pattern of being helpless. But he did have this to say about his experience, "Well, I think Shake-a-Leg is a lot better than outpatient therapy. They just go through the motions, you know, and tell you, "Go ahead and do it..." Shake-a-Leg has made me much more aware of what I can do with my arms, with my legs. Just using my chair:" Paul described how the physical therapist at Shake-a-Leg "taught me to try to get my right leg up and cross it over my left, put the board underneath my butt, and

then uncross my legs so it will fall just right on the board...” This is in contrast to the therapists at the rehabilitation programme who “...really didn't give me any clues...”

In the spring of 1985, Paul saw Dr Joseph Walz in New York City who implanted an electrostimulation device in Paul's spine - coupled with a transmitter that produces a pulsating current. With the stimulator device, Paul found his strength increasing. When he returned to Shake-a-Leg for the 1985 program, Paul could use both legs better as well as make



Carl Ginsburg with participant, Mark H.

transfers much more easily. With his increased strength and the encouragement of the aquatics team, he began to be able to stand in the swimming pool. Eventually, Joanne Delhery, the director of the aquatics program, had Paul walking around the edge of the pool while holding on to the pool edge. By midsummer, the physical therapy group was able to get Paul up on his feet, supported between two people, and he made his first tentative steps bearing weight on his legs. In the meantime, I was working with Paul to have him learn to roll to the side and sit, hoping this function would help Paul increase the use of his back. Overall, however, Paul has gained most of his strength in the lower body and less in his upper back and chest. But at the end of the summer, he was clearly walking, supported by two people and using both legs, with a short brace on his right ankle. Bill Zimmer decided that Paul was ready to dance, and he did - with a broad smile on his face - at the Shake-a-Leg open house at the end of July (see photo).

Paul's progress has clearly not ended. At Shake-a-Leg, he was listened to and valued as a person. He was given processes that expanded his awareness and the use of his body. It would be even better if he could find support like this in the community at large.

Providencia was injured in an automobile accident when she was fourteen years old.

Providencia L.

Providencia was injured in an automobile on July 4, 1968, when she was fourteen years old. She was thrown out of the car into a ditch where she landed on her buttocks. Initially, she was treated for an L1 compression-fracture with traction. At this time, she couldn't feel her pelvis and legs. Then she was taken to a larger city hospital where her spine was fused and Harrington rods were inserted, apparently to stabilize the spine around the injury. A clear-cut explanation for this procedure was never given by her surgeon. After the surgery, she immediately experienced pain in her legs, “a lot of electrical, prickly kind of pain, and an ache, like an aching feeling in

my legs”; at that time, she did not have an attached sensation of her legs and pelvis. However she did feel something some years later, when she burned herself accidentally. She was told that such feeling was in her imagination.

Providencia spent a year in a rehabilitation hospital in the same city. Her experience here was worse than discouraging. Here is a sample:

“They had a catheter in me and I could feel it inside. And I told them I could feel it, and they told me that was impossible...That was really very much pain, you know. Working on the pain with the legs, I was able to get away from it. But that (the catheter) was constant, aggravating pain. And I found when I took the catheter out, the pain, the irritation wasn’t there. So I put myself on expression. I didn’t know that that was what I was doing, cause I was never allowed to be trained like that... And in time I was expressing normally...When I had to go to the bathroom, I would spill some water on me, and I would urinate...They recathed me and I would take the catheters out and they recathed me many times...finally, they just gave up on me.”

Providencia was not a good patient.

“I saw somebody else getting upon his hands and knees, trying to crawl, and I asked my therapist, I said I wanted to do that’. She said, ‘You can’t; your level of damage won’t allow you to do that.’ And this is what got from my therapist all the time. ‘I want to try that.’ ‘Oh, you can’t.’ So finally what I did was, after they left...I got up on my hands and knees.”

Later, she asked the therapist to show her what crawling looked like; then she got on her hands and knees and crawled to the other mat. The therapist told her she was not supposed to be doing that.

“I said, ‘Why am I not, because I cannot, because why?’ She said, ‘Because your level of damage should not allow you to do that,’ And so that was my therapy experience. No one wanted to pay attention to me.”

The therapist made fun of her calling her a “psychic” on the basis that she imagined feeling her legs.

Unbelievably, Providencia was sent for psychiatric counseling - to explain to her that her feeling was just in her imagination. Later in group therapy, the therapist made fun of her, calling her a “psychic” on the basis that she imagined feeling her legs.

“I really did think that there was something wrong with me. That I could feel, and yet everybody else was telling me I couldn’t. Many times I wanted to commit suicide because I felt wrong...but it wasn’t me I wanted to get rid of. It was the condition. I was so angry.”

But when she was tested, she was tested with a pinwheel that would discern only whether or not she had skin-surface sensation. What she did feel primarily at that time was deep pressure. At Shake-a-Leg, as the following detailed description of a therapy session will show, I quickly corroborated that Providencia could feel.

At the rehabilitation hospital, Providencia says that she lost her fighting spirit. But she never did really give up; through the years, she sought alternative therapies: at first, chiropractic, later, biofeedback, She married twice and had three children. While living in Haiti in 1982, she found a neurosurgeon who recommended removing the Harrington rods; he found that the rods were putting compression on her spinal cord. With the rods removed, she not only gained more feeling but also an increase in the spasticity of her legs. Back in the United States again, she began Rolfing sessions with Ann Dahlberg (who had visited Shake-a-Leg and was considering joining the program). She also tried pedaling a stationary bicycle after working with electrical stimulation of her leg muscles.



Jack P., a quadriplegic, has regained enough control in his trunk to hold his hands over his head

She felt improvements. Rolfing helped the muscle tone in her legs improve and further convinced her that she really could feel.

Providencia first came to Shake-a-Leg for the summer 1984 session, sixteen years after her accident. The second session we did together was so dramatic, I have chosen to quote directly from the videotape of this session.

At this point, Providencia was able to flex her left leg slightly, while lying on her back and attempting to move her leg on a roller, but she could not straighten it. On her back, her legs splayed outward, the knees bent and hips flexed as a result of contractures in her deep hip flexors. Her feet were held rigidly by the spasticity of her lower leg muscles, but she could tell when I touched her foot and which foot it was.

We began the session by working with left leg movements. The way I asked her to make her movements is typical of the way I generally work to get people to explore movement as experience, as something concerned with “self” and not performance:

"All right, lift it a little bit...Now...that's good...so that you can move like this. Feel that? And what I want you to do is to make that rolling motion, but slow...just the movement that's completely comfortable to begin with...just see if you can become aware of what needs to change...but if you make a small movement, you'll figure out how to organize it a little better..."

About fifteen minutes into the session, I begin to touch Providencia's left foot.

"Now, do you feel your toes?"

"I feel you squishing them."

"O.K., but which toe?"

"The small one."

But in fact I was holding the big toe. She was surprised it was her big toe. At this point I knew that although she could feel, her body image was confused. So I asked her to "put the feeling together with the image," that is, to put the feel of my touch together with her big toe

"What I want you to do is to do something in your consciousness - to let you put it together right. It may feel backwards, but you can switch it..."

She asked then, "Can I look?"

"Yeah, you can look, whatever you need to make the correct association."

"It's working - now I can tell when you do that, touching. When you pull it back the way you pull it forwards, it's almost the same sensation. Except when you pull it back, it's like a stretching of the front part of the toe."

We would work with each toe, making its position clear. With each gain in awareness and location, Providencia's foot became softer and more movable. Eventually, the entire leg became soft and the spastic. On the videotape, her left leg lies almost straight compared to the right at this stage.

Working with the right foot was even more dramatic.

"I'm confused; I feel you touching my foot but I don't know where you are."

"Let's do the same thing which is as I touch, I'm telling you first it is the big toe. So see if you want to look."

"Oh yeah, when I looked I made an immediate connection."

"Good, now feel this: I'm going up and down -"

"Oh, I know where you are?"

In a minute or two she says, "Now you put an immense tingling sensation in that left foot. You just put it there ."

"I put it there?"

"By opening it up and pouring it in...Now it feels like my foot's O.K. It wants to wake up." As she makes more and more connection, "It's a tingling sensation that's in there, running up the front part of my calf...like a creeping feeling all through my leg right now, but if I were to delineate it through colour, the foot would be white, bright white."

Toward the end of the session, Providencia fears that she will lose what she has just gained.

"I want it to stick to me like flypaper."

I say to her, "I was only a channel. You did all the changing."

When she sits up on the table she says, "Oh God look at that, that's giving in! See my foot wouldn't have done that."

The foot stands on the floor instead of turning.

“My left foot should be cruising out...it’s not doing that. Look at those sexy legs. I feel like I’m in water. I can’t get over this...I would have this deep emotion. Look at that!”

At this point Providencia lifts her left leg and swings it right and left: “Oh God, I can’t believe I’m doing that.”

At this point Providencia lifts her leg and swings it right and left:

“Oh God, I can’t believe I’m doing that.”

The gains of this session were not immediately applicable in Providencia’s outside life. She did connect what happened to a kind of magic that occurred in the room with me. But over a series of sessions and with use of an “anchor” to recapture the state of our sessions together outside of this space, Providencia made these changes part of her life. After Shake-a-Leg she began to experiment with ambulating with braces and crutches (something she had tried 10 years earlier, but abandoned).

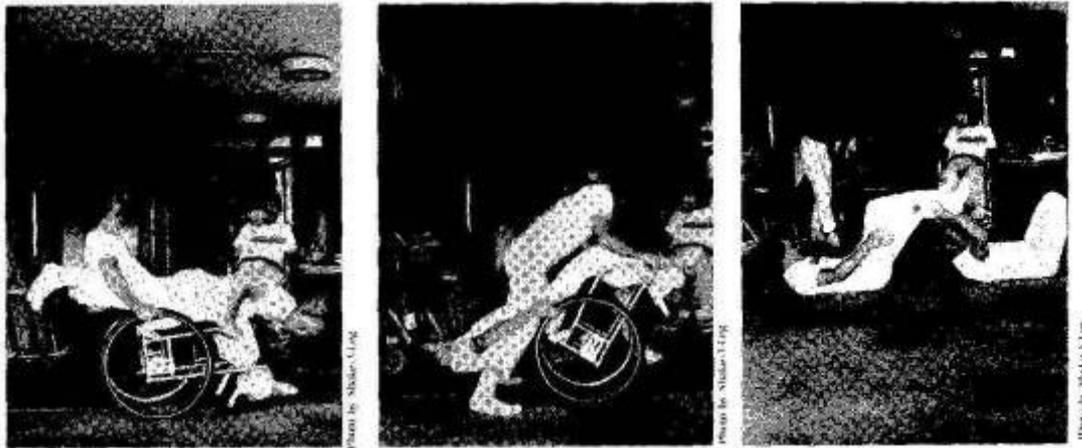
In March of 1985, she came to Albuquerque with Bill Zimmer and me. By this time, her legs were far less spastic, and her movements now included flexing and extending the hips. But the contractures still prevented her from standing easily, and her pelvis swung backward - the small of her back arching severely - when she tried to stand. Rolfing sessions, more Feldenkrais, and some teamwork - with Bill and me supporting Providencia in gravity - allowed her to learn to balance with much more ease. During the summer of 1985, Providencia continued her brace ambulation and continued to strengthen her legs.

One last aside: When her bracemaker designed her braces, Providencia asked, “What if my legs grow?” He said, “That will never happen!” But her thighs were already bulging out of the brace in April. The bracemaker made her a new set, with no charge.

A Summary

The two case histories I have presented illustrate rather dramatically the contrast between the Shake-a-Leg Body Awareness Training Program and rehabilitation programs that are constrained by institutional needs and medical protocol. The intent here is not to be summarily critical. After all, the purposes of a rehabilitation program and Shake-a-Leg are not the same. And the instances of Paul T. and Providencia L. are probably worst-case scenarios in which persons with quite individual needs are put through a preestablished set of procedures. But it is true that part of our intent is to move away from treating people as ciphers in an equation.

Jack Childs, who is now Counseling Group Coordinator, likes to see the program in terms of a holistic model. In an article in the Shake-a-Leg newsletter (Winter, 1984) called, “We Think Differently” he speaks of our assumption that we see “the individual as a whole being: made up of a body, mind, emotions, and spirit but functioning as a unit.” And then he speaks of our second assumption that “sees healing as basically the property of the individual organism or person.” He sees these assumptions as leading to an atmosphere in which one “can sense the therapeutic presence of the love and caring which is evidenced in the relationships of all members, staff and participants.” The result for participants is that they are not “‘patients’ acted upon so much as they are agents making informed choices about life



Bill Zimmer and Harry Horgan in dance performance, 1983

directions.” And the measure of success is not how many people get up and walk, but how each person’s experience is changed through the process.

Holism is a catchword these days, but Jacks comments are indeed relevant to what we do at Shake-a-Leg. Added to this are the specific somatic disciplines, such as Feldenkrais and Rolfing, that deal with a person as a moving, embodied being in the world. What these disciplines do, in part, is to bring a phenomenological perspective to the process of recovery. We are not trying A or B and then finding out what happens. On the contrary, we are always working within experience, ours (as teachers or therapists) and the participant’s.

Unlike her treatment in rehabilitation, I did not discount her report of her experience, nor did I assume that I, as a professional, knew better than she what she was experiencing in reality.

In the example of the Feldenkrais session with Providencia L. (as reported in her case history), it is my paying attention to her report of her experience (i.e. feeling the big toe as the little toe) that leads me to intervene in such a way that her experience of herself will change. It is this element that provides a breakthrough for Providencia and not any technical feat or accomplishment on my part. What I do in interaction with Providencia is done for her alone and cannot be generalized for everyone. Unlike her treatment in rehabilitation, I did not discount her report of her experience, nor did I assume that I, as a professional, knew better than she what she was experiencing in reality. On the videotape, I say at one point: “All I do is follow where you are leading”. In a sense, I am trusting her intelligence and the intelligence of our interaction. To do this requires a kind of “dancing” together. It is this, I suspect, that is most radical in what we do as somatic teachers, as contrasted to those who take a preconceived approach.

What happened in Providencia's experience, I would like to describe with the word I used previously: embodiment. Providencia's experience of herself (her body, if you will), was incomplete. In some way, she further cut her self-connection, as a way to avoid pain. This is not an uncommon process, even for those of us who are not injured.

The process of making the feeling - she actually experienced a part of her self-image - is probably similar to what a baby does to learn to know itself. One can imagine a

baby playing with toes and fingertip, touching itself all over to create a “map” of various places in the self. In Providencia’s case, each restoration of some part of the image of her foot resulted in an immediate effect on her spasticity and, ultimately, on her ability to move. So there is an intimate connection between the phenomenological experience of oneself and what constitutes an improved functioning and recovery from an outside observer’s point of view. If this is so, it is probably incorrect to speak of spontaneous recovery. No injured person with whom I have communicated has recovered any functioning without being involved in the process. The fact is that in these terms medical science knows nothing about the process—and cannot as long as it considers the personal experience of an injured person as an invalid instrument of knowledge.

Where do we go from here? Reform of medical institutions so as to prevent instances of the kind of treatment Providencia L. and Paul T. experienced requires more than just making the case for reform. People would need to be committed to changing their thinking and their skills. This is unlikely to happen. Alternatively, Shake-a-Leg could serve as a model for a postrehabilitation program that would serve people who felt they need more than what they got from rehabilitation. This is more likely - but it requires tremendous energy and commitment. Luckily, there are a few Harry Horgans in the world who are capable of making programs happen. Moreover, Shake-a-Leg has one curious feature that allows for hope: We are an interface between traditional and nontraditional therapies. Those who have been on the staff at Shake-a-Leg have gone back to the hospitals and other places where they work with new ideas and new possibilities. The more people get together and try programs like this, the more seeds will be planted in the larger community.

I have not given a complete overview of our program. I have not included much about counseling, group activities, problems with families, and so forth. But beyond this, there is still much more that can be said. I hope, nevertheless, to have given something of the spirit of what we have done.

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