

FUNCTIONAL INTEGRATION: *A Literal Position Statement*



Moshe Feldenkrais

Bernard Lake, M.D.

An Australian physician, having made a close study of the Feldenkrais system of bodily change, has reached the conclusion that Functional Integration "has as much potential for understanding the mind-body relationship as Einstein's general theory of relativity had for physics."

MOVEMENT IS AN integral part of creativity. It may be only the means for producing music, drama and visual art, but without effective movement their expression founders. Control of movement produces better usage and leads to more direct, freer authentic expression, and fresher, less impeded feeling-tone. In the rich, culturally diverse heritage of dance and self-defense systems, skill and artistry are gained by long years of dedication, of teaching by simulation and practice by adherence to relatively fixed patterns. Over the past century there has been developing, in a variety of different disciplines, a re-evaluation of the body in motion. These have been gradually converging onto a new paradigm.

With liberation from arduous daily tasks of fetching water, hewing wood and walking long distances, we have been seduced by the apparent glories of the mind and have come to regard the body as a drab appendage from an evolutionary past. But the emerging realization is that the mind/body axis is a unit with equal potentiality for mutual interaction. The system developed by Moshe Feldenkrais, to which he gave the apt and pithy title, *Functional Integration*, has as much potential for understanding the mind/body relationship as Einstein's general theory of relativity had for physics. What follows is a personal synthesis.

As originally developed, Feldenkrais created an open system of deceptively simple, personal procedures called *Awareness Through Movement*. The aim is, quite literally, to increase awareness through movements and vice versa. As gravity has such a profound and continuous effect on our bodies, the

The emerging realization is that the mind/body axis is a unit with equal potentiality for mutual interaction.

exercises are usually begun on the ground, supine. Further, in most positions other than horizontal, the head is the arbiter of the body's position and usually determines how the body is disposed. But in the horizontal position the effect of the head is much less obvious and the body's contribution more

explicit in sixth-sensing. Movements are made slowly, continuously, and repetitions are made after suitable pauses. They are not goal-oriented; one moves in a given way, just as much as one can. Movement of an arm or leg may be the prime action, but with suitable practice, one comes to sense how the neck, chest or belly can become integrated into the prime movement. There is often a stage where self-consciousness is evoked.

One of the most interesting aspects of Awareness Through Movement is its mental effect.

Later, this conscious interphase is inhibited or bypassed and there begins to occur more precise movement with less delay, more fluidity and increased range. Simple movement patterns are followed by more complex patterns. These too, subsequently, become smoother and more accurate. Intricate associations and dissociations of movements can then be practiced.

One of the most interesting aspects of *Awareness Through Movement* is its mental effect. The statement of the body space is clarified in relation to its segments. One is more certain, lighter, easier, more mobile. There is a feeling of rightness, satisfaction, mood elevation, freedom from anxiety and clarity of thought. The mood elevation can sometimes be profound enough to produce a "high" lasting for some hours or days.

At the behavioral level it is virtually impossible to feel depression or to maintain acute anxiety when the body is in a position that is counter to their expression. Cortico-spinal pathways thus appear to act faster than the relay through the spino-thalamo-cortical tracts.

What indeed has happened in the substrata of the neuron and their transmitters? We now know about endorphins, our very own opium-like productions which produce pleasure and freedom from pain, and perhaps these are involved. And, certainly, it is experientially the case that the criteria for better posture are made to prevail, i.e. there is more economic stability in maintaining the body in space and the potential for freedom of action is higher.

By virtue of *Awareness Through Movement* each of us can find a dif-

ferent and individual solution to gravity, basically depending upon the specific relation of our movable segments one to the next and also each segment in relation to the overall resultant pull. This leads to an harmonic set of interactions where, for instance, the be of the foot may affect the neck or vice versa. This underscores one of the major therapeutic advances of *Functional Integration*. With a frozen shoulder or an exquisitely painful neck or hip, one may choose remote areas on which to work with assurance that the act of freeing up patterns in the remote area will bring some, or complete release in the painful area. We should not really be surprised at this inasmuch as multiple synapses are the rule rather than exception in the central nervous system.

The moment of inertia, $I = MR^2$, is a statement of rotary forces in movement. Most simple movements are circular or elliptical, and this factor is useful for understanding the forces acting either on segments of the body or the body as

At the behavioural level it is virtually impossible to feel depression or to maintain acute anxiety when the body is in a position that is counter to their expression.

a whole. It may be resolved in either horizontal or vertical planes. Moreover, ease is correlated with the lowest moment of inertia. Small changes in radius can, as we know, make for a very big change in force so that the muscle resistance needed to compensate for unwanted momentum must be correspondingly increased. Continual postural readjustment to cope with such resistance—a resistance caused by sudden transfer from one set of fatiguing muscle groups to another in an uncoordinated or aching body—can be avoided by using the most economic muscular pattern, i.e., by lowering the radius of segmental swing.

For the whole body this resolution of force occurs round the centre of gravity, a point located in the centre of the body below the navel. So long as the vertical connection between it and the ground falls between the feet, stability is maintained. However, the segments of the body can be arranged in a host

of different ways. Relative ease prevails so long as the outer margin of shoulders, hips and feet remains parallel to the vertical. However, unless the moments of inertia for the segments are also minimal, we must shift resting tensions from one muscle set to the next within this framework.

There is a hierarchy of movements: what is called "rest" involves a minimal transfer of resistance within the slow-twitch, tonic muscle groups, a state which preserves an habitual posture with minimal firing. Assuming fixed postures leads to an increase in low key repetitive firing. At the next level the Feldenkrais system, and also Tai Chi, represent the first "overdrive" of obviously co-ordinated segmental move-

Continual postural readjustment can be avoided by using the most economic muscular pattern.

ments in space, and it is at this level of muscular economy and at the level of balanced posture that the most refined sense of kinaesthetic awareness can be developed. Increasing the movements for some specific goal or "end-gain" as in speaking, walking and eating, is an even more intense level of movement which requires a great deal more conscious effort in order to perceive and retain kinaesthetic feedback.

Finally, at the high level of repetitive, dynamic movements in strenuous exercise, kinaesthesia usually becomes sacrificed to the demands of end-gain. Such strenuous exercise may, therefore, allow many people to live more happily with their disabilities but even so it will not alter their basic muscular holding patterns. Nor let them become kinaesthetically aware of these patterns.

A second phase of development in the Feldenkrais system is a set of "hands on" techniques, specifically referred to as Functional Integration. It is still open-ended and adaptable to any number of situations. Here the operator and subject become as it were, a cohering system. It is essential that the operator be alert, calm, capable, and confident. If any of these elements are absent, there will be no progress. It is as much a therapy for the operator as for the patient. The patient must neither help nor

hinder: both ends of the communication system must be open for effective transmission of the low key signals and for receipt of the patient's response to these signals. The operator acts somewhat as a sculptor, carefully using his hands to refer to segmental mal-adaptations and re-align them within the comfortable limits imposed by the patient's condition to produce more economic conformity. The operator must be continuously alert to the changes produced and, rather than pursuing a fixed set of procedures, move into and make use of the changing response signals of the patient. I suggest one reason why it works is because passively stretched muscle is not elastic. There is a plastic element of deformation so that when the muscles are released, they do not return to the initial conformation. Skilful use of this allows resetting of basic holding patterns, often with dramatic, immediate results.

Our posture is an environmental statement. It portrays significant aspects of our history, present feeling tone and is a prediction of future response.

Changes in posture induced by these techniques may therefore, produce novel emotional responses. There may be a sense of insecurity or uncertainty and sometimes an exaggerated response leading to crisis. This may be due, either to confusion over the new state or the rejection of a distorted body image that had been habituated to past events. The operator must be able to cope with these reactions and help the patient establish confidence in assuming the new posture.

With conditions as different in aetiology and progress as rheumatoid arthritis, multiple sclerosis, or osteo-arthritis, the feedback effect of improvement in movement pattern is at present quite uncertain. What a field day therapists will have in designing carefully controlled assessment programmes! The most easily postulated benefit would be in osteo-arthritis where realignment of stress through joints would appear to offer halting of long term microtrauma and opportunity for repair of damaged surfaces. Basic changes in other pathol-

The Feldenkrais system, and also Tai Chi, represent the most refined sense of kinaesthetic awareness.

ogy are imponderable without detailed study. Can function alter structure?

This system returns responsibility to the patient for his own personal control by providing him insight into the posture and movements which accentuate or reduce pain and fatigue. It can explode the locked-in, "poor-me," vicious circle of increasing mal-adaptation. Such self-help becomes a major stabilising factor against associated fears and insecurities and provides a readily available tool for breaking away from the past. Re-entry into the old habits would occur only in the face of overwhelming feedback experience of dis-ease.

I suggest that we have here in Functional Integration a subtle, yet powerful, creative art and science fundamental to the creative arts in therapy. 44



Feldenkrais Lecturing