Elements of Well-Organized Action
by Darrell Bluhm

We always have two universes of discourse---call them 'physical' and 'phenomenological', or what you will---one dealing with questions of quantitative and formal structure, the other with those qualities that constitute a 'world'. Oliver Sacks

The understanding of our body and the physiological principles that underlie its efficient action is central to the practice of Aikido. We can approach this understanding from different perspectives. One is to look at the "physiological body" or "objective body" - the body that can be separated into its various parts and processes and appreciated in the ideal. Another is to view the "phenomenological body" or "subjective body" that is experienced not as "a body" but as "this body" in which the parts and processes must be appreciated in relation to the reality of a unique individual. The study of the physiological body allows us to explore the body in a finite form, study of the phenomenological body opens us to the body as infinite possibility. It is useful to join both perspectives. The first can be enriched through the disciplines of biology (especially evolutionary biology), anatomy and physiology, kinesiology, neurology, physics and other related sciences. The second can be enriched through any means that disciplines our attention and opens our senses such as meditation, yoga, hunting, fishing, the arts (drawing/painting/sculpting, music, poetry, dance, theater) and other martial practices.

One of the primary questions growing out of and leading me back into my practice has been: *What constitutes effective human action?* Aikido, Tai Chi Chuan, and the Feldenkrais Method® all provide structure for my research. Each of these disciplines requires that this question be answered in practice rather than theory. What answers I may have found will be best expressed in demonstration, yet I will offer here some theory and explanation regarding three principles that underlie effective action: vertical organization, centralization of movement, and relaxation.

Vertical organization

Our unique capacities for movement, which have emerged through the process of natural selection, are best understood in an evolutionary context. The foundation of human movement is upright posture which began with the emergence between four and five million years ago of our

bipedal ancestors (i.e. australopithecine) . Our upright posture allows us to survey our environment easily, move multi directionally in response to varying conditions, and freely use our hands. These and other advantages of our upright carriage exist in tandem with certain physiological and mechanical challenges (i.e. easily imbalanced, vulnerability for low back, knee or ankle injury, abdominal hernia, etc.). The strengths afforded by our dynamic vertical organization are well employed in the movements of Aikido and the weaknesses are well exploited.

Moshe Feldenkrais, through his experience in Judo and research into the mechanics, physiology, neurology, and development of human movement, formulated a precise understanding of human posture. He coined the term 'acture' to replace the term posture when discussing the activity of positioning ourselves in the gravitational field whether standing, sitting or lying. He delineated four features of well-organized acture; *absence of effort, absence of resistance, presence of reversibility, and uninterrupted easy breathing.* When present, these features lead to the ability to move freely and efficiently in any direction.

In the ideal, the activity of standing should occur independent of any voluntary effort. Standing is organized by the autonomic nervous system such that the skeleton and a select group of "anti-gravity muscles" can hold us upright without any awareness of effort. When we recruit voluntary muscles in the service of posture we limit our ability to move freely. This is especially true for the voluntary muscles acting on the spine. In actions that involve bending and twisting movements of the spine, as many vertebrae as possible should participate to limit stress on the ligaments and intervertebral disc of any one vertebrae. The permanent immobilization of any group of vertebrae shifts strain to those remaining mobile and increases risk of injury as well as limiting range and ease of motion.

Well-coordinated action requires that the spine be carried by a mobile pelvis and in turn provide support for the head. The head houses the sensory organs that connect us to the distant world (teleceptors). The head also carries the vestibular mechanism that detects vertical deviation, changes in velocity or acceleration of our movement. Balance of the head is critical to the overall balance and effective use of the self.

In the process of learning to explore the world, an infant first raises her head to orient to the horizon, thus stimulating and organizing the sensory systems needed for balance and orientation in space. Later, while still confined to a prone position, the infant turns over from front to back and back to front by rotating around the central axis of her spine to

further explore her world. This horizontal turning prepares her for the later activity of rotating left or right to access her surroundings in the vertical plane. In our practice every execution of irimi tenkan offers the opportunity to refine this action.

Centralization of Movement

The capacity to turn around the vertical axis of the spine is dependent on the mobility of the pelvic joints (the hip, sacroiliac and sacrolumbar joints). Any constraint in movement of the pelvis will adversely affect fluency of action. The activity of the pelvis is closely associated with the lower abdomen and in relationship the two form a sphere. At the very center of this sphere is the center for well-organized movement. When our movement is centered in this way, the distribution of effort is such that bigger, stronger muscles do more of the work and the smaller muscles do work proportionate to their size, creating a sense of ease and effortlessness. The strongest muscles of the body attach to the pelvis, and the power of the body is determined by the power of the pelvis and lower abdomen.

Power is never a consequence of strength alone, but results from the coordinated action of the whole self. In Tai Chi it is said that power originates in the feet, is distributed through the legs, controlled by the waist , released through the spine and manifest in the finger tips. In Japanese, the word for the area of the lower abdomen is *hara.* When action is coordinated from the *hara,* there is no sense of resistance encountered to the movement. However, when the shoulders, arms, legs, or chest are made to do the work of the *hara,* resistance arises at the expense of efficiency and grace. The centralization of movement in the *hara* is critical to the proper execution of Aikido technique. When our movement is organized around the vertical axis and centered in a vital *hara,* we are able to express power without strain, move freely in all directions and at any point stop or change direction (presence of reversibility).

Relaxation

The primary obstacle to well organized effective action is unnecessary effort and parasitic tension acquired through faulty habits. The refinement of action is accomplished more through the process of unlearning than by means of acquisition. Unlearning requires a letting go of poor habits and a relinquishing of excess effort. The importance of

learning to relax, when understood as the inhibition of unwanted or parasitic tension, cannot be over emphasized.

There is an especially delicate organization of action between the eyes and the head. Any excess occular-motor tension can disrupt ease and efficiency of movement. This can be easily confirmed. Fix your eyes on a point in front of you and then turn your head left and right and observe the range and ease of the movement. Then release your eyes to move with your head as you turn side to side and notice the difference in the range and comfort of the movement. Or consciously hold the eyes in a fixed manner and walk around the room and observe the effect. Relax the eyes as you walk and notice the difference. Hold your breath and do the same thing. Breathe freely as you walk around. Fixation of movement in one area of the body can profoundly effect overall action.

If the head is floating on top of the spine, the sensory apparatus that orient us to the world (space, gravity, light, sound, etc.) can function effectively. Tension in the eyes, jaw, or neck can impose constraint on the movement of the head (and whole body) and represents noise in the nervous system that compromises sensory function. The clarity of any signal is determined by the ratio of signal strength to background noise. When we relax and let go of unnecessary effort we lower the noise and increase the sensitivity of our nervous system. To learn to relax in this context requires a reorganization of the most fundamental aspects of our living; the way we breathe and the habits of use that dictate how we move, feel, sense and think.

Chiba Sensei has said that if we think putting more hours into our practice will necessarily lead to improvement, we are thinking like children. Improvement can only come when we develop the skill to observe ourselves at a deep enough level to recognize habits that impede our progress and learn how to change them. If we don't develop the capacity for self-reflection and self-refinement, our practice only drives our habits deeper.

It 's only when you have learned it in your own body that you will see to make a wider choice for yourself, you will have to increase your sensitivity and reduce the effort. And you cannot reduce the effort without improving your organization."

Moshe Feldenkrais

(If you want to explore effective human action from an evolutionary and anatomical perspective, and much more, attend the 10th annual Martial

Movement and Traditional Life Skills seminar/retreat this August 11-14 and/or 14-17 at Ancient Arts Center in Alsea Oregon with D. Bluhm and M. Mathewson.)