

Resolving the Body Schema of Anxiety

Sword training as empowerment for trauma victims

By Bertram Wohak

As a body therapist and aikido instructor I often work with clients and students, whose bodily structure had become fixed in a characteristic configuration termed by Moshé Feldenkrais as the "body schema of anxiety": a chronic contraction of the flexor muscles on the front of the torso, a flattened thorax and restricted breathing. It is a chronic form of an ancient defensive reflex, instinctively to bend over, contract and hold one's breath in reaction to falling, shock, fear or other threats. The defensive reflex should cease once the threat is over, but instead has become a permanent neuromuscular pattern that is no longer consciously controllable and can be considered a "sensorimotor amnesia" (according to Thomas Hanna). In this article I will describe how training with a bokken (a wooden training sword modeled on the Japanese katana) can be used to empower and rehabilitate trauma victims by resolving this „body schema of anxiety“.

Two observations led me to consider working with the bokken outside the martial arts, where I had learnt and practiced with it over a long period:

One observation came from treating body therapy clients suffering from chronic contraction of the flexor muscles on the front of torso, rounded shoulders and limited breathing capacity. In many instances, such clients also had difficulties in asserting themselves and in expressing their energy appropriately in critical situations. Even with deep structural body therapy, it was rarely possible to resolve this body schema, and improvements were often not enduring.

My second observation resulted from one-week ki-retreats which I have carried out with small groups for several years: after just a few days of intensive practice with the bokken, participants with various forms of the pattern previously described improved surprisingly. Their whole bodies straightened up and stretched out. Their breathing and voices became freer and deeper. Their charisma was transformed. Clearly, experiencing comfortably and effectively defending themselves against attacks with the bokken had helped them to express and experience their own energy and hence to overcome their "body schema of anxiety".

These observations motivated me to study bokken training more closely from a body therapist's perspective. I was interested in how it can contribute to improving the *structure, function* and *energy* of our bodies, to reach a higher overall level of order, balance and freedom. Firstly, from a structural perspective, if a well-organized body is standing upright, the major segments, the head, shoulders, thorax, pelvis and legs, should be arranged vertically in the Earth's gravitational field. Good organization can be recognised when seen from the side because the ears, shoulder joints, hip joints, knee joints and ankles are arranged in one vertical line. Furthermore, the right and left sides of the body are symmetrical, the pelvis is horizontal, the spine is almost straight and the head sits free and mobile directly above the spine, rather than being displaced forwards, as is common. This structure requires the least muscular tension to remain upright against gravity, and as a result allows the greatest freedom of motion. Ida Rolf, the originator of *Structural Integration*, was of the opinion that gravity even helps to energize a body that is oriented in this way: a "symmetrical, balanced pattern in a man's segmented aggregate of material units allows his lesser field to be reinforced by the greater field of the earth" (from "Rolfing" by Ida P. Rolf, page 30).

Normally, as adults, we are however far from upright and well orientated. Inevitable physical and emotional burdens and traumas over the course of our lives accumulate in our body tissues. Compensatory mechanisms and unconscious habits can easily cause such deviations to become embedded and perpetuate them long after their actual cause. The longer they last, the more deeply such damaging patterns can become engrained in our sensory and motor functions. They finally become visible when our body structure is no longer vertical, symmetrical and balanced. Chronic muscular hypertension, reduced mobility, weakening and pain almost always result.

The therapies offered by orthodox medicine, particularly orthopedics, for disturbances of the body structure such as tilting of the pelvis or shoulders, differences in leg lengths and scoliosis, as well as for related symptoms such as back and shoulder aches, lumbago, sciatica and limited joint mobility, are in most cases severely unsatisfactory. Extremely expensive, high technology diagnostic tools such as nuclear magnetic resonance are almost invariably prescribed for a wide range of motor

ailments, but are in stark contrast to the severely inadequate range of possible treatments. As a result, a large proportion of orthopedic patients seem to be disappointed by the therapy available. However, overall structural body therapy rarely leads to lasting improvement either, as long as it only concentrates on orienting the skeleton, muscles and connective tissue, without considering the functional and energetic aspects of the "body schema of anxiety".

Biology: the Defensive Reflex

Our characteristic movements and postures, including inappropriate and ineffective ones, are learnt and "programmed" into our nervous system. These patterns are inseparable from certain thoughts and feelings. Shock, fear or threat lead involuntarily to the defensive reflex, a contraction of the flexor muscles on the front of the torso. "This pattern of contraction of the flexor muscles always arises when a person resorts to passive self defense, whether it be because the person does not have the resources for active defense, or because the person doubts his or her own strength and ability. The muscles that stretch us and hold us upright are then inevitably somewhat inhibited. Based on my observations, in people considered "introverted", these straightening muscles are usually poorly developed" (from "Die Entdeckung des Selbstverständlichen" by Moshé Feldenkrais, page 106).

Thomas Hanna, the founder of "Hanna Somatics", characterized this pattern of contraction of the flexor muscles as somatic retraction: "This phenomenon of somatic retraction is a very special event. In characterizing it I have used the words *cringing* and *shrinking*. This is precisely what the neuromuscular functions are doing in response to an intolerable stress. In somatic retraction, the functions draw the body inward, from the periphery toward the center, making it smaller. Not only is the spine shortened by the muscular contraction around the lumbar and cervical vertebrae, but the arms and legs, shoulder joints and hip joints contract, flexing inward and narrowing the width of the body. It is the same cringing and shrinking response that occurs in any animals when they are frightened or stricken: they withdraw into themselves, becoming smaller, tighter, and less visible, as if, in order to protect themselves, they are attempting to disappear by pulling everything inward toward the center" (from "The Body of Life" by Thomas Hanna, page 35).

The withdrawal reaction or defensive reflex is initiated by the brain stem, an area of the brain which dates from much earlier in our evolution and is much faster than the sensory and motor parts of the cerebral cortex, which are responsible for our conscious movement. The brain stem is also known as the reptilian brain, as it is reptiles' most highly developed neural structure.

The defensive reflex is a primitive, but nevertheless very effective mechanism also found in lower organisms. This contraction and withdrawal can for example be seen when a snail is touched lightly, and is even present in worms despite their very simple nervous systems. The defensive reflex is very fast, even in mammals including humans, their most complex representative. Within only a few milliseconds of a stimulus such as a very loud noise, nerve impulses from the brain stem cause the trapezius muscles to contract, the shoulders to rise and the stomach muscles to tense. The front of the thorax and pelvis are drawn closer together, the breath is held and the body ducks and contracts to take on an embryo-like defensive position. „The organism can fight, flee or become rigid in reaction to a threat. These behaviors are parts of a defensive system. If the organism cannot fight or flee, it instinctively contracts and resorts to its last alternative; it becomes rigid. During this contraction the energy which would have been used to fight or flee is compressed and retained in the nervous system“ (from "Trauma-Heilung" by Peter A. Levine, page 106).

Pathology: how a Defensive Reflex can become the "Body Schema of Anxiety"

The defensive reflex occurs fast and without conscious activity. It is our most primitive protection, initiated by parts of our nervous system that we share with many non-human organisms. But how can a reflex that is so important for our survival, so easily lead to a chronic body schema in humans, unlike animals?

When animals escape a threatening situation, they usually expend the muscular tension they had built up in vigorous flight or fight reactions, which liberate the energy stored in their bodies. The same lower areas of the brain that initiated the defensive reflex can complete the instinctive reaction cycle. As a result, animals in the wild return relatively rapidly to their normal patterns of behavior once a threat is over. A chronic "body schema of anxiety" does not develop, because energy does not remain bound in their bodies.

It seems that the most highly developed and "human" part of our nervous system causes the development of the "body schema of anxiety". The sensory and motor parts of our cerebral cortex are

able to overrule the direct stimulus-response reactions of the brain stem that largely govern animal activity. We, in contrast to animals, as a result have almost unlimited capability to learn new sensorimotor behaviors. However, this freedom brings the risk of pathological development. Peter Levine, the trauma researcher, comments: „Why can't humans enter and exit these diverse reaction patterns as naturally as animals? One reason is our highly developed neocortex (the rational part of our brains), which, motivated by fear and a strong need for control, can hinder the instinctive impulses and reactions of the reptilian brain... In people, traumas result because an instinctive reaction cycle is initiated but not completed“ (from "Trauma-Heilung" by Peter A. Levine, page 107).

There is no clear distinction between physical and emotional traumas. For example, if a child is often beaten, it will try to protect itself by contracting. It will duck its head, pull its shoulders forward and hold its breath in expectation of the blows. As the child usually cannot flee or fight, it can only contract. A traumatic body schema will result if this occurs regularly. By comparison, if a young girl is unusually large or matures early and feels she has developed large breasts long before her peers, there is a high probability that she will try to reduce the resulting feeling of insecurity by making herself smaller, flattening her chest, pushing her shoulders forward and so developing a similar schema to the child that was repeatedly beaten.

A particularly serious form of trauma results from the abuse of children by adults. This problem is significantly more widespread than is generally assumed and is only gradually gaining public awareness. The results for the afflicted children are often devastating and endure for their whole lives. "When someone is abused, whether physically, sexually or emotionally/verbally, they learn that they are profoundly powerless, powerless to control their bodies and their environment and create safety. That sense of powerlessness becomes a core element in their self-identity, and many of the symptoms of trauma such as dissociation, drug abuse, body numbness, or acting out involve some feeling/belief on the part of the survivor that they cannot create safety" (from "Winning is Healing" by Paul Linden, page 2).

In one important respect, abuse victims develop a special form of "body schema of anxiety": the child's experience of powerlessness to resist an abuser who is frequently a member of the family and from whom the victim is emotionally and existentially dependent, leads to a disturbed attitude to their own strength and energy which can permeate all aspects of their lives. In my work, I have often noticed that adults, who were abused as children, have severe difficulty setting and protecting their own boundaries. This inability to defend themselves appropriately results from a disturbed relationship to their own strength, caused by the abuse they suffered. The child experienced strength or power as so profoundly abusive, that the adult later sees suppressing its own energy as almost the only alternative to becoming the aggressor and so risking becoming abusive. The individual cannot experience expressing energy as positive and accepting of life.

Adults with this pattern usually have difficulty in my courses in attacking their partner "properly" and allowing their energy to flow freely and enthusiastically. Their natural and positive ability to be "healthily aggressive" is disturbed and blocked by this deep-set assumption that power is intrinsically abusive. This leads to a very serious form of the "body schema of anxiety".

The breathing of abuse victims is typically disturbed, particularly their breathing out, which is mostly abrupt, jerky, strained, laborious and incomplete. Exhaling corresponds to giving up energy, which is exactly what abuse victims do not allow themselves. Consequently the breathing disturbance tends to worsen when the person is in an energetic state: The increase in energy in the body is perceived as threatening and causes anxiety, which exacerbates the breathing disturbance. At the same time the body has difficulty releasing the energy precisely because breathing out is obstructed.

The reactions which make up this "body schema of anxiety" do not occur arbitrarily, but through the autonomous nervous system, unconsciously and mainly on an energetic level. The therapy should therefore, as well as consciously reconditioning, above all concentrate on the energetic level itself: if the afflicted re-learn to express their energy without obstruction and to experience this as lively and positive, their traumatic injuries can be thoroughly healed.

Therapy: Empowerment heals

The most important concept behind the therapeutic application of my bokken training is empowerment. The feeling of powerlessness, which underlies the contraction and blockage, can disperse once the afflicted learn to be in contact with their energy sources and experience their capability to defend themselves. They can progressively develop the necessary resources in their body and self-image to enjoy letting out the energy previously compressed and restrained by the "body schema of

anxiety". The schema and its physical, psychological and social symptoms can then be resolved, healing the afflicted in both body and soul.

On this topic, my friend and colleague, Paul Linden, the body therapist and Aikido master from Columbus, Ohio, USA, comments that "for the deepest healing to take place, purposive and effective behavior must have a solid foundation of correct body alignment, proper breathing, and expansive intentionality. To focus on a clear purpose, and to execute that purpose effectively demands correct use of the body. Merely pushing someone away, for example, while gritting one's teeth, stopping one's breath, and scrunching one's shoulders, won't be as healing. Healing comes from reclaiming joy as a foundation for power. And joy is a by-product of correct body use." (from "Winning is Healing" by Paul Linden, page 16). Training with a bokken has proven to be an ideal way to achieve this.

Creating the Basis: Standing and Walking Correctly

When I teach the use of the bokken for body therapy, I usually start with the feet. Clients should first improve their feeling for their feet, to feel that their feet are as lively as possible. For us overly cerebral people of the first world, our feet are somewhat akin to a third world country, they are underdeveloped and underrepresented in our consciousness; often we are hardly more aware of them than of the tires of our cars. People with the "body schema of anxiety" frequently have an uncertain stride and little awareness of how they walk. Practice in standing and walking therefore plays an important part in my courses and retreats. Attention particularly focuses on developing awareness of "one point", by which my Aikido master, Nobuyuki Watanabe Shihan (8th Dan) from the Hombu Dojo in Tokyo, describes the best possible organization of the body along its vertical axis, which enables us to reach our fullest size and freedom to move in all directions. This bodily organization applies not only when standing still, but also when walking; during every step this "one point" is consciously traversed. Intensive walking practice develops the participant's trust in his or her own stable grounding (e.g. forwards and backwards, individually and synchronously with a partner, with the eyes closed guided and unguided). Grounding, when standing still and when moving, thus becomes a first important resource with which to overcome the "body schema of anxiety". Once my clients develop this stable lower foundation by intensifying their awareness of their ground contact, it helps them to avoid "lifting off" when they raise the bokken; they consciously stretch downwards (which is unusual) as well as upwards.

Energizing: The Breathing

Breathing is an exceptional bodily process, in that it can be governed both unconsciously by the body's autonomous nervous system and consciously by the mind. Breathing is simultaneously a bodily and cerebral, material and immaterial, unconscious and conscious process. Most people with the "body schema of anxiety" are unaware that their breathing is constrained. Learning to breathe more consciously and deeply helps them to raise their bodily awareness and their energy levels.

Although there are numerous breathing exercises and techniques, in my bokken training I particularly teach a way of breathing I learned from my Aikido master, which is practiced in the Budo martial arts and also in traditional Japanese Noh Theater. Its principle is to hold one's breath in one's lower belly, and while the breath is held to execute powerful movements with a feeling as though a sphere tightly filled with energy is right at the body's center. "One of the secrets of Noh Theater is to know when to hold your breath. For example, to stand up from a sitting position, you should breathe in while sitting, then hold your breath and stand up without breathing out" (from "Der unsichtbare Schauspieler" by Yoshi Oida and Lorna Marshall, page 137).

Eugen Herrigel also describes this breathing technique in his classic "Zen in the Art of Archery": "Breathe in softly, then press your breath downwards gently until the abdominal wall tenses moderately and hold it there for a while. Then breathe out as slowly and evenly as possible and hesitate for a moment, before inhaling again rapidly. Continue breathing in and out in this manner, in a rhythm that will slowly begin to be self-determining... Inhaling... stabilizes and connects, everything important happens while the breath is held, and exhaling lets go and completes by removing all restraints."



In my courses it has proven helpful to practice this breathing technique without the bokken initially, standing still and walking. Firstly, the arms are raised, the body stretches and the exhaled breath is directed upwards (picture 1). At the position of maximum stretching the body is empty. Then a short breath is taken and directed deep into the lower belly. It is like eating air; it feels as though the air is flowing through the palms and falling vertically right down into the lower belly to fill the entire center of the body with a compact and stable feeling. While the breath is held and this feeling is maintained, the arms are allowed to fall, with the elbows leading the movement. The arms are allowed to fall with relaxed shoulders; there should be no particular emphasis on hitting or cutting. Energy should be projected forwards; the common downward woodcutting movement would tend to compress the body rather than opening it. Initially, practicing without the bokken makes it easier to coordinate breathing and movement and to project energy forwards and outwards rather than downwards. For emphasis, the index fingers can be stretched forwards as though they were laser pointers painting with light on the opposite wall (picture 2).

The exercise can then be repeated, beginning by raising the arms and exhaling, first standing then walking.

Although many participants are initially unaccustomed to this way of breathing, they nevertheless soon discover its energizing effect. Walking around the room like this and playing with projecting energy forwards helps to change participants' own image of aggression. Particularly trauma victims and those who have difficulty protecting their own boundaries begin to discover how to healthily express their energy and to be "aggressive" in a natural way.

Developing Resources: Individual Training with the Bokken

The bokken is a representation of the Japanese long sword (katana); the sword itself is in many cultures an archetypal symbol for the active, manly principle. It is associated with an upright and sincere outer and inner stance and implies clear, decided, cutting, distinguishing, dividing and defensive capabilities. It helps to draw boundaries effectively: "up to here and no further!" Training with the bokken enables participants to identify with this principle through experience, which particularly benefits those with the "body schema of anxiety".

The basic movements of raising the sword, cutting and the related breathing are already familiar from practice without the bokken. One difficulty often occurs at this stage: without the bokken most participants have succeeded in dropping their arms without forcing the downward movement, but merely holding the bokken often triggers an instinctive downward "chopping", which contracts the front of the trunk. This can be overcome with awareness and practice.

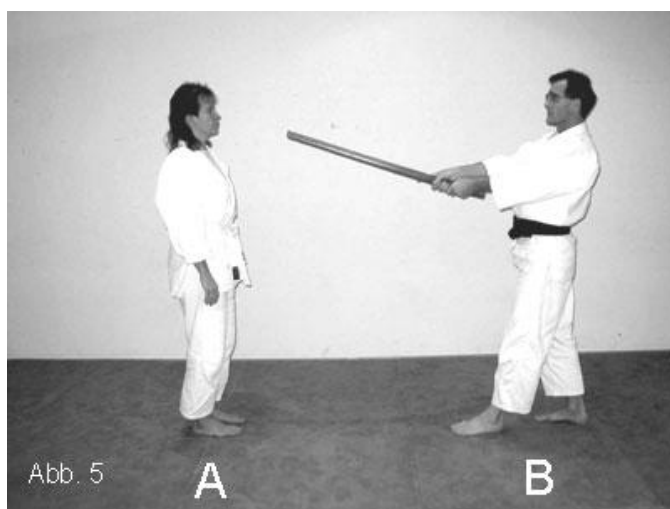


A significant step towards de-conditioning this "chopping", a reflexive contraction of the flexors, is often achieved by placing the emphasis on the lifting phase when the body stretches (picture 3), rather than (as is common) considering it a supporting movement for the following cutting phase (picture 4). My Aikido master says: "Put your energy into raising the bokken; to do that you need to stretch your bodies and to lift your arms and the bokken upwards against gravity. To cut, you don't need to do anything; you just need to allow your arms to fall with the bokken, because gravity will help you." Practicing this exercise individually is an excellent way to open the whole body, to enliven the thorax and inter-costal muscles, to deepen the chest and diaphragm breathing, to release accumulated tension from the shoulders and to improve awareness of the vertical axis of the body. If the bokken is often used in this way, the left and right hands should be alternately positioned at the front, to develop the shoulders and arms symmetrically.

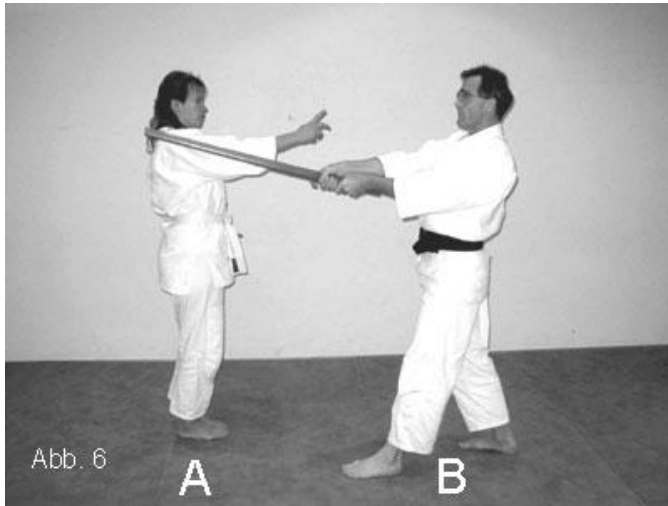
Using Resources: Working with the Bokken in Pairs

Participants can now experiment in pairs with situations that at least simulate a threat, taking both attacker and defender roles. It is interesting that the majority of course participants who exhibit the "body schema of anxiety" initially find it difficult to authentically attack their training partners with the bokken, without stopping their energy. It is important to introduce safety rules and to start slowly, particularly with beginners. As capabilities develop, the pace can be increased appropriately.

Two of the many possible partner exercises are represented here. In both exercises only one of the partners (B) has a bokken; the partner (A) is without.



In the first exercise (picture 5), A and B face each other with the point of the extended bokken as near to A's face as A can tolerate. This threat usually affects A's breathing and posture immediately; A experiences the defensive reflex. B then raises the bokken and cuts downwards while stepping forwards. To restore the original separation, A simultaneously steps back. Throughout, A breathes and stretches as previously practiced. A should so develop a feeling of sovereignty, safety and freedom to act, despite this threatening situation. Then, to reverse the direction of movement, A can force B backwards by projecting energy forwards.



The second exercise can be started farther apart. B advances on A with the bokken extended forwards, raising it to cut when nearing A. Instead of collapsing, A expands, inhales deeply into his lower stomach, steps sideways and enters B's attack energetically. The previously described hand and finger positions can also be used (picture 6). Initially, A will tend to step aside rather than into the attack, moving hastily, early and too far. However, in my experience with many non-practitioners of Aikido, almost everyone can improve their reflexes by gradually increasing the pace, to develop a new feeling of power and integrity in the face of threat.

My courses also contain diverse beneficial exercises in which both partners use a bokken, but to describe them would exceed the scope of this article.

Use of the voice is also an important way to resolve the "body schema of anxiety". In this context, the voice is primarily a carrier of energy, rather than of meaning. As a contracted body cannot breathe deeply, its vocal expression will also be inhibited. I therefore usually take several hours in my groups to free the voice. Most participants do not initially find it easy to experiment with the directional qualities of the vowels A-E-I-O-U and to fully extend their voices while training with the bokken, but then mostly find it to be a very liberating experience. How did my Aikido master put it? "In kiai you should destroy your face, then you will be beautiful again." Isn't it wonderful that methods from the martial arts can help us to resolve patterns of anxiety that are deeply anchored in our bodies and reflexes, in order to become truly and authentically vigorous?

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