What Is Somatics?

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1. The Distinction between Soma and Body

Somatics is the field which studies the *soma:* namely the body as perceived from within by first-person perception. When a human being is observed from the outside—i.e., from a third-person viewpoint—the phenomenon of a human *body* is perceived. But, when this same human being is observed from the first-person viewpoint of his own proprioceptive senses, a categorically different phenomenon is perceived: the human soma.

The two distinct viewpoints for observing a human being are built into the very nature of human observation which is equally capable of being internally self-aware as well as externally aware. The soma, being internally perceived, is categorically distinct from a body, not because the subject is different but because the mode of viewpoint is different: it is immediate proprioception—a sensory mode that provides unique data.

It is fundamental to recognize that the same individual is categorically different when viewed from a first-person perception than is the case when he is viewed from a third-person perception. The sensory access is categorically different as are the resultant observations.

The categorical distinction between these two viewpoints establishes the ground rules for all studies of the human species. Failure to recognize the categorical difference between first-person observation and third person observation leads to fundamental misunderstandings in physiology, psychology, and medicine.

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Physiology, for example, takes a third-person view of the human being and sees a body. This body is an objective entity, observable, analyzable, and measurable in the same way as any other object. The universal laws of physics and chemistry are brought to bear on this body, because—as an observed body—it richly displays universal physical and chemical principles.

From a first-person viewpoint, however, quite different data are observed. The proprioceptive centers communicate and continually feed back a rich display of somatic information which is immediately self-observed as a process that is both unified and ongoing. Somatic data do not need, first, to be mediated and interpreted through a set of universal laws to become factual. First-person observation of the soma is immediately factual. Third-person observation, in contrast, can become factual only by mediation through a set of principles.

It should be understood that this difference in data is neither a difference in truthful accuracy nor of intrinsic value. The difference is that the two separate modes of recognition are irreducible. Neither mode is less factual or inferior to the other: they are coequal.

Psychology, for example, takes a third-person view of the human being and sees a body of behavior. This bodily behavior is an objective datum that is observable, analyzable, and measurable, as is any other behavioral datum. The universal laws of cause and effect, stimulus and response, and adaptation are brought to bear on the behaving body, because—as an observed body—it richly displays these behavioral principles.

But, from a first-person viewpoint, quite different data are observed. The proprioceptive centers communicate and feed back immediate factual information on the process of the ongoing unified soma—with the momentum of its past, along with the intentions and expectations of its future. These data are already unified; they have no need to be analyzed, interpreted, and later formulated into a unitary factual statement.

Medicine, for example, takes a third-person view of the human being and sees a patient (i.e., a clinical body) displaying various symptoms that—when observed, analyzed, and interpreted according to universally known clinical principles—can be diagnosed, treated, and prognosed.

But, from a first-person viewpoint, quite different data are observed. The proprioceptive centers communicate and feed back immediate factual information on the continuous and unified past of the soma and its expectations for the future. The somatic appreciation of how this past led to ill health and how the future may restore—or not restore—health is essential to the full clinical picture. Ignorance of the first-person viewpoint is ignorance of the somatic factor that permeates medicine: the placebo effect and the nocebo affect.

Thus, the human being is quite unlike a mineral or a chemical solution in providing, not one, but two irreducible viewpoints for observation. A third-person viewpoint can only observe a human body. A first-person viewpoint can only observe a human soma—one's own. Body and soma are coequal in reality and value, but they are categorically distinct as observed phenomena. Somatics, then is a field of study dealing with somatic phenomena: i.e., the human being as experienced by himself from the inside.

Interlude: How This Distinction Affects the Sciences

Apart from the requirement that it have a methodical discipline, science has validity in both its research and theorizing exactly to the degree that all data are considered. To ignore essential data, either willfully or innocently, automatically calls into question what one claims to be factual, as well as what one speculates to be so.

The fact that two modes of cognition on the same generic subject will lead to two distinct sets of data has no bearing on the validity of the physical sciences, whose subjects are inanimate and lack the proprioceptive awareness that the scientist himself possesses. But this fact does bear directly on those sciences dealing with subjects who are just as consciously observant as are the scientists who are engaged in observing.

The life sciences in general and the sciences of physiology, psychology, and medicine in particular lack valid grounds for what they assert to be established fact and sound theorizing exactly to the degree that they ignore, willfully or innocently, first-person data. To avoid evidence that is "phenomenological" or "subjective" is unscientific. To dismiss such data as irrelevant and/or unimportant is irresponsible.

2. The Soma Is Self-Regulating as well as Self-Sensing

When you, as a scientist, are looking at a subject who, unlike a rock, is looking back at you, it is not easy to pretend that the subject is merely a complicated rock. If one insists on doing so, it is certain that no valid scientific conclusions will be reached, nor will they have genuine applicability to anything at all—unless, perhaps, to a complicated rock.

Thus, the first step in understanding somatics is to recognize—and never cease to remind oneself—that somas are not bodies and the objective scientific verities concerning the latter are not *ipso facto* applicable to the former. To do so would be what logicians refer to as a "category mistake."

The second step into the somatic realm is just as significant: it is the recognition that the factor of self-awareness is only the first of several distinctions of the human soma. The human is not merely a self-aware soma, passively observing itself (as well as observing its scientific observer), but it is doing something else simultaneously: it is acting upon itself; i.e., it is always engaged in the process of self-regulation.

When we play the role of scientist and observe a rock, nothing thereby changes for the rock (except, as Heisenberg reminded us, there are minute changes caused by our body heat, shadow, etc.). But the soma that is being observed is not only aware of itself through self-observation but it is also simultaneously in the process of modifying itself before the observer's eyes.

A fundamental finding of physiological psychology is that humans perceive a sensory impression only of that for which they already have an established motor response. If we cannot react to it, the sensory impression doesn't clearly register; it is shunted away from perception. This happens because in the perceptive process the sensorium never operates alone, but always in tandem with the motorium.

The indissoluble functional and somatic unity of the sensory-motor system is testified to by the obvious structural and bodily unity that is built into the human spinal column. The column is composed of descending motor nerves and ascending sensory nerves which exit, respectively, to the fore and aft of the vertebrae. This fore and aft

schema continues all the way up the spine to the top of the brain where, just to the fore of the central sulcus of the cerebral cortex, lie the motor tracts and just to the aft the sensory tracts are aligned. It is a schema that is at the center of our being.

The sensory motor system functions as a "closed-loop feedback system" within the soma. We cannot sense without acting, and we cannot act without sensing. The indissoluble unity is essential to the somatic process of self-regulation; at all times, it allows us to know what we are doing. And also—as we shall presently discuss—it is at the core of our unique way of learning and forgetting.

It is not possible to have a distinct sensory perception of any external objective situation without having a distinct motor response already established. This also happens to be the case with the internal sensing of somatic perception: *to sense what is happening within the soma is to act upon it*, i.e., to regulate it.

When, for example, we focus our awareness internally on some portion of our body—our right knee, for instance—the sensory perception of the knee is, indeed, more distinct. But this distinctive highlighting of a bodily part takes place only by selectively relaxing the cortical motor neurons of all the muscles attached to the right knee while contractively inhibiting all the other motor areas of the body. This is to say that focused sensory awareness occurs through focused motor inhibition as a negative "ground" against which a "figure" stands out. Thus, the sensing is not passively receptive but is actively productive, involving the entire somatic process.

This interlocking reciprocity between sensing and moving is at the heart of the somatic process—a process that constitutes its own unity and continuity by constant self-regulation. The externalized "body" seen by the third-person observer is the living product of this continuous somatic process. If that process ceases, then the human body—quite unlike a rock—ceases to be: it dies and disintegrates.

It is the soma's internal process of self-regulation that guarantees the existence of the external bodily structure. Hence, the dictum that is universally valid in somatics: function maintains structure.

The second step in understanding the distinctiveness of the human soma is, then, that it is both self-sensing and self-moving and that

these interlocked functions are at the core of somatic self-organization and adaptation.

The soma has a dual talent: it can sense its own individual functions via first-person perception, and it can sense external structures and objective situations via third-person perception. It has the distinctive talent of possessing two modes of perception.

When a human soma looks at itself in a mirror, it sees a body—a third-person, objective structure. But what is this same body when looked at from an internal, somatic perspective? It is the unified experience of self-sensing and self-moving. From the mode of first-person perception, the soma's "body" is a body of functions.

Descartes was not sufficiently thorough. *To think* is not merely "to be" passive; it is *to move.* "I am self-aware, therefore I act," is a more accurate description of first-person perception. *Cogito, ergo moveo* is a statement accurately reporting the data of first-person experience, which always perceived "mind" and "body" in an indissoluble functional unity.

In passing, it should be noted that, by concluding his famous phrase with "... therefore I am," Descartes was incorrectly depicting himself as a passive observer, whereas he was—like all humans—an active observer: a sensing-moving self. It is insufficient to say, passively, "I *am* myself." Inasmuch as "being" is a self-organizing, self-regulating activity for all living beings, it is sufficient to say actively, "I am *being* myself."

Interlude: Human Somas and Other Somas

The phrase, *all living beings,* used in the preceding paragraph implies that more is being referred to than human beings alone. This merits a comment.

All members of the animal kingdom are somas, because all animals are self-organizing beings with sensory-motor functions. Many of the things said in this essay about human somas are applicable to all other living beings—with increasing quantifications as one descends the evolutionary scale.

We must not ignore the fact that plants are somas. One needs only to observe the daily opening and closing of petals or the determined

striving of a cloistered plant toward the open sun in order to recognize the sensory-motor functions busily in operation.

What does not—as far as anyone knows—occur in any living creature other than man is the ability to focus awareness volitionally, i.e., without an external stimulus being necessary to cause this focusing. This ability, plus the immense learning capacity of the unique human cortex, is the foundation for the extraordinary sensory-motor capacities of the human species, not the least of which is the ability to recognize and actively replicate symbols through vocal speech and manual writing.

3. Consciousness and Awareness

What has been said already about "consciousness" and the focus of "awareness" shows them to be prime somatic functions. Consciousness is basic to the human soma: it designates the range of voluntary sensory-motor functions acquired through learning. Humans learn these functions from birth onward, the motor skills expanding sensory recognition and greater sensory richness potentiating new motor skills.

Consciousness is "voluntary," because its range of skills are learned and, therefore, available for use as familiar patterns. To learn a skill is to learn to employ it at will. Consciousness should not be misunderstood; it is not a static "faculty of the mind" nor a "fixed" sensory-motor pattern. To the contrary, it is a learned sensory-motor function. And the range of this learning determines 1) how much we can be conscious of, and 2) how many things we can voluntarily do.

Involuntary somatic events—such as autonomic reflexes—are not necessarily subject either to conscious sensory recognition or to conscious control. But these involuntary functions can become included in the repertoire of consciousness by the human learning to recognize and control them. This, for example, is the established procedure of biofeedback training, just as it is also the practice of those who teach sensory awareness techniques.

Human consciousness is, therefore, a relative function: it can be extremely large or extremely small. As the soma's achieved state of

sensory-motor learnings, consciousness cannot perform beyond its self-imposed limits. The states of consciousness lurking within individual somas is variable and unpredictable: it can range from an animal level to a godlike level and, in either of these cases, cannot be made to perceive or respond beyond its achieved level.

Because it involves accumulation of voluntary sensory-motor skills, the greater the range of consciousness, the greater will be the range of autonomy and self-regulation. Human consciousness is, in fine, the instrument of human freedom. For this reason it is important to remember that it is a *learned* function, which can always be expanded by further learning.

By insisting that consciousness is not a fixed mental faculty, we are making it clear that it is not an empty "lens" that focuses on outside objects—this is obviously a third-person conception. Rather, consciousness is the soma's available repertoire of sensory-motor learnings that springs into action when provoked by external stimuli or when caused to act by internal needs.

"Awareness," on the other hand, does function somewhat like a lens that can be pointed and focused. Awareness is a somatic activity that is exclusionary: it uses motor inhibition to exclude any sensory recognition other than that upon which it is focused—which could be something external in the environment (third-person awareness) or internal within the soma (first-person awareness).

The activity of awareness is, one might say, ninety-nine per cent negative and one per cent positive—a "nothing-but-this" function that is the only way for the soma to isolate perceptive events. It is a most useful way of exercising voluntary control over one's repertoire of sensory-motor skills.

Awareness is the function of isolating "new" sensory-motor phenomena in order to learn to recognize and control them. It is only through the exclusionary function of awareness that the *involuntary* is made *voluntary*, the *unknown* is made *known*, and the *never-done* is made *doable*. Awareness serves as a probe, recruiting new material for the repertoire of voluntary consciousness.

The upshot of this is that *somatic learning begins by focusing awareness on the unknown*. This active focusing identifies traits of the unknown that can be associated with traits already known in one's conscious repertoire. Through this process the unknown becomes known by the voluntary consciousness. In a word, the *unlearned* becomes *learned*.

4. Somatic Learning and Sensory-motor Amnesia

Somatic learning is an activity expanding the range of volitional consciousness. This is not to be confused with conditioning, which is a bodily procedure imposed upon a subject by external manipulations. Conditioning deals with the human as a object in a field of objective forces, and thus it is a form of learning reflecting the typical viewpoint of third-person science, notably of psychology.

The Pavlovian and Skinnerian models of learning are manipulative techniques of forcing an adaptive response on the body's involuntary reflex mechanisms. Conditioning is an engineering procedure that opposes the function of somatic learning by attempting to reduce the repertoire of voluntary consciousness. Conditioning neither requires focusing of awareness nor does it result in the learning of conscious somatic actions. Rather, their aim is to create an automatic response that is outside the range of volition and consciousness.

But we should be aware of the fact that this same form of conditioning can also take place in uncontrived ways by the fortunes of environmental forces that impinge upon our lives. Environmental situations that impose a constant stimulus on deep survival reflexes will, with sufficient repetitions, make them habitual—the reflex becomes learned and "potentiated."

Reflexes, like all other organic events, are both sensory and motor; and, thus, when they become habituated and involuntary, there is a dual loss of both conscious control of that area of motor action and conscious sensing of that motor action.

We should refer to this as a state of *sensory-motor amnesia*. It is a state that occurs universally in the human species as the predictably conditioned result of long-term stress conditions. Constant repetition of stressful stimuli will cause loss of conscious voluntary control of significant areas of the body's musculature, usually predominating

at the center of gravity, i.e., the musculature at the juncture of pelvis and rib cage.

Once sensory-motor amnesia occurs, these areas of musculature can be neither voluntarily sensed nor controlled. The victim can attempt to relax his amnesic lumbar muscles voluntarily, for example, but he no longer has the ability of doing so; both the sensing and movement of these muscles are beyond the reach of his voluntary control. The muscles remain rigid and immobile, as if they belonged to someone else.

Because such reactions to constant stress can build up over sustained periods of time, the resultant chronic muscular contractions are associated with aging. But age is not a causative factor. Time, in itself, is neutral. It is what happens during our lifetime that causes muscular reflexes to habituate. Accumulated stress and trauma are the causes of sensory-motor amnesia, and what we mistakenly ascribe to the effects of "old age" are the direct effects of sensory-motor amnesia.

There is no bodily "cure" for sensory-motor amnesia. The chronic muscular rigidities habituated during aging are impervious to medical remedies. Third-person manipulations are of no avail.

There is, however, a way of releasing the involuntary restrictions of sensory-motor amnesia: it is somatic learning. If one focuses one's awareness on an unconscious, forgotten area of the soma, one can begin to perceive a minimal sensation that is just sufficient to direct a minimal movement, and this, in turn, gives new sensory feedback of that area which, again, gives a new clarity of movement, etc.

This sensory feedback associates with adjacent sensory neurons, further clarifying the synergy that is possible with the associated motor neurons. This makes the next motor effort inclusive of a wider range of associated voluntary neurons, thus broadening and enhancing the motor action and, thereby, further enhancing the sensory feedback. This back-and-forth motor procedure gradually "wedges" the amnesic area back into the range of volitional control: the unknown becomes known and the forgotten becomes relearned.

In another writing it was remarked that "... all forms of somatic education use this human ability to enlarge and improve the degree of our somatic awareness. Like two knitting needles, the sensory system and motor system are made to intertwine, creating a greater sensory awareness of our internal activities and a greater activity of our internal sensory awareness."[1]

Somatic learning is evoked by the teaching methods of Moshe Feldenkrais, but it is of central concern in the methods of Elsa Gindler, F. Mathias Alexander, Gerda Alexander and a host of contemporary practitioners. The techniques of somatic education taught by these teachers are applicable to any form of sensory-motor amnesia, including motor paralysis.

Somatic learning could be a response to amnesia, or it could just as well be an activity that is practiced all one's life, so as to avoid the habituating effects of stress. In whichever case, it is a learning that expands the human soma's range of action as well as perception. As a consequence, the more that is learned in this manner, the greater will be the range of voluntary consciousness for the constant task of adaptation with the environment.

A soma that is maximally free is a soma that has achieved a maximal degree of voluntary control and a minimal degree of involuntary conditioning. This state of autonomy is an optimal state of individuation, i.e., one having a highly differentiated repertoire of response possibilities to environmental stimuli.

The state of somatic freedom is, in many senses, the optimal human state. Looked at from a third-person, bodily viewpoint, somatic freedom is a state of maximal efficiency and minimal entropy. Looked at from a first-person somatic viewpoint, somatic freedom is what I would term a "fair" state—the ancient English word *fair*, meaning a temporal progress that is unblemished and without distortions or the befoulment of inhibition.

The Fair State of the human soma is a state of optimal synergy, wherein any intentional action evokes the spontaneous coordination of the entire somatic process, without any unconscious, involuntary inhibition. This can also be expressed from the third-person viewpoint which would view the Fair State of the soma as a condition of optimal mental and physical health.

In summary, somatics is study of the soma, which is not only first-person perception of the living body but is its first-person regulation.

The involuntary functions can be incorporated into the volitional system by the selective use of awareness to isolate the unlearned function and, by association, to *learn* it—that is, make it part of the conscious functioning of the sensory-motor system.

Notes

1. Hanna, Thomas. *The Body of Life.* New York: Alfred A. Knopf, 1979, p. 198.