MUSCLE MEMORY AND THE SOMAESTHETIC PATHOLOGIES OF EVERYDAY LIFE

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ABSTRACT
Memory is a cherished cognitive skill that contributes enormously to human flourishing, yet it sometimes proves detrimental. Much of the memory we productively employ in everyday life is implicit memory that results from habit. The paper first demonstrates the important somatic dimension of implicit memory that gives rise to the popular notion of “muscle memory” by articulating six different forms of implicit memory in which the body plays a central role. The paper next focuses on some problems relating to these forms of memory and deriving from flawed habits of somatic perception and performance. I then explain how these problems of muscle memory can be treated by disrupting such memory through heightened, explicit consciousness involving methods of somaesthetic attention and reflection.

Key words: somaesthetics, muscle memory, implicit memory, habit, awareness

Muscle memory as implicit memory

Muscle memory is a term commonly used in everyday discourse for the sort of embodied implicit memory that unconsciously helps us to perform various motor tasks we have somehow learned through habituation, either through explicit, intentional training or simply as the result of informal, unintentional, or even unconscious learning from repeated prior experience. In scientific terminology, such memory is often designated as “procedural memory” or “motor memory” because it enables us to perform various motor procedures or skills in an automatic or spontaneous fashion, without conscious deliberation of how the procedure should be followed and without any explicit calculation of how one identifies and achieves the various steps involved in the procedure and how one proceeds from step to step. Paradigmatic of such muscle-memory motor skills of performance are walking, swimming, riding a bicycle, tying one’s shoes, playing the piano, driving a car, or typing on a keyboard. To be precise, these motor skills should be described as sensorimotor, because they involve coordinating sensory perception with the movement of action. Moreover, because these skills apparently rely on schema or patterns deeply embedded in an individual’s central nervous system, the core engine of memory in so-called muscle memory is not simply the body’s muscles but instead also involves the brain’s neural networks.

The term “muscle memory” is nonetheless deeply entrenched, perhaps because it serves some key rhetorical functions. Muscle suggests body in contrast to mind, as muscular effort is frequently contrasted to mental effort, or as muscle men are typically opposed to men of thought. Because of this common brain/brawn opposition, muscle memory conveys a sense of mindless memory.1 Such memory is mindless, however, only if we identify mind with mindfulness in the sense of explicit, critically focused consciousness or deliberate, reflective awareness. Procedural or performative tasks of implicit motor memory often require and exhibit significant mental skills and intelligence, as, for example, when a good pianist plays with spontaneity yet also with aesthetically sensitive mindfulness. In demonstrating that intelligent mind extends beyond clear consciousness, muscle memory also makes manifest the mind’s embodied nature and the body’s crucial role in memory and cognition.

The idea that our normal somatic skills of performative muscle memory are intelligently deployed without explicit thought or deliberation has played an important part in the cognitive rehabilitation of body and habit in contemporary philosophy, a project we can trace back to pragmatists like William James and John Dewey and to phenomenologists like Maurice Merleau-Ponty. In celebrating the body’s effectively purposive yet unthinking spontaneous performance in perception, speech, art,

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1 Here I should note that another meaning of muscle memory refers to the phenomenon that when a person suspends a sustained weightlifting program for a prolonged period and then resumes it, his earlier trained muscles are able to return to their previous levels of size and strength more quickly and easily than was necessary to reach those levels originally, as if the muscles recalled their prior levels.
and other forms of action, these philosophers recognize that such intelligent spontaneity is not mere uneducated reflex but rather the acquired product of somatically sedimented habit, which often goes by the name of muscle memory. Because the somatic self is essentially expressed through this purposive intelligence while the term body is too often identified with mere physicality, I use the term soma to designate the living, sentient, purposive, perceptive body that forms the locus of the transdisciplinary project of somaesthetics.2

The performative procedural skills of muscle memory comprise only one of the different kinds of implicit memory that are deeply grounded in the soma. Though the habits and skills of such memory are typically very welcome and useful, we also develop bad habits of muscle memory, many of which go unnoticed not only because of their implicit character but also because their detrimental effects are usually not so extreme as to call our conscious attention to them. Such habits of muscle memory (though undetected and seemingly benign) impair our somaesthetic perception and our consequent experience and performance. Their remedy requires a disruption of implicit memory so that it can be improved through reconstruction. After exploring the soma’s role in diverse modes of implicit memory, this paper analyzes a cluster of everyday problems that arise from such memory, and then suggests how such problems can be treated through methods of heightened body consciousness that render the implicit more explicit.3

Six forms of muscle memory

1. Perhaps the most basic implicit memory is that of oneself, the implicit sense of continuing personal identity. When I awake in the morning, even before I open my eyes, I have the implicit memory (as an implicit feeling) of being the same person that went to sleep the night before. I do not need to recall explicitly that I am the same person, nor do I even explicitly recognize or thematize the feeling of sameness; but this implicit feeling of being the same abides with me and provides a narrative ground or core for my sense of self and for my perception of the world. This implicit body memory or feeling of continuity was recognized by William James, who construed it as the foundational factor not only for personal identity but also for the unity of consciousness and thus essentially for the coherence of a person’s thinking.

This implicit feeling of being the same self as one was before (even if only a split second before), James argues, is essentially a bodily feeling. As he puts it in The Principles of Psychology, our thoughts are united as being ours because “as we think we feel our bodily selves as the seat of the thinking. If the thinking be our thinking, it must be suffused through all its parts with that peculiar warmth and intimacy” with the implicit memory of being the same body, “the feeling of the same old body always there,” even though the body is, strictly speaking, always changing [8]. This implicit memory of feeling the same body, James insists, helps “form a liaison between all the things of which we become successively aware” and thus serves to organize and unify the complexity of experience through its relation to “the objective nucleus of every man’s experience, his own body,” which he feels implicitly as “a continuous percept” [9].

2. If one basic mode of implicit memory is the self-memory of being the same person, of remembering implicitly who one is, a second crucial mode is remembering where one is; and very often this memory includes implicitly recalling how one gets from where one is to where one wants to go. We have all had experiences of walking a familiar route, say from one’s office to the bookshop a few blocks away, and suddenly realizing one has arrived at one’s destination without ever having thought about or explicitly remembered the path taken. Similarly when we arrive at the bookshop we implicitly remember its familiar feel and layout without consciously recalling it to memory. These implicit memories of location are, of course, deeply grounded in the soma, which essentially determines one’s location and sense of place, one’s perspective on the world and one’s coordinates of direction in it.

We know the world largely because we inhabit it through our soma. Because, as a body, I am also a thing among things in the world, that world of things is also present and comprehensible to me. Because the soma

2 For initial formulations of this project, see [1–2]. For elaborations and critical discussions of somaesthetics, see, for example, [3–6], and [7].

3 My account of these methods relies on my professional practice as a somatic educator and therapist in the Feldenkrais Method, from which I have also been able to study some of the somaesthetic pathologies I discuss in this article.

4 Such implicit memory of knowing who one is in terms of knowing one is the same person now as in the past does not, as implicit memory, require that one remembers who one is in terms of an explicit descriptive identity of being a certain person with a particular name, age, gender, and profession. The formulation of such descriptive terms involves, of course, explicit thought, but on the basis of implicit memory of self one could recall these descriptions if one were asked.
as subjectivity is affected by the world’s objects and energies, it incorporates and implicitly remembers their regularities, thus recalling features of spaces and places without needing to engage in explicit recollection or reflection. To see any place (or any thing), we must see it from some point of view, a position that determines our horizon and directional planes of observation, that sets the meaning of left and right, up and down, forward and backward, inside and out. One’s body, of course, supplies this primordial point, the center or origin of coordinates, by being what locates us in space and gives that lived space its directionality. Moreover, it also gives us our sense of the volume of space, since this sense relies on our experience of moving through space, an experience and ability that depends on the body’s powers of locomotion.

As a holistic sensorimotor subjectivity, the soma is essential to spatial memory in yet another way. Unlike some other perceptual dimensions, our sense of space does not directly depend on a specific sensory organ but is instead essentially the product of multisensory representations that build up a spatial map through a learning process, implicit or explicit. In the implicit learning process, where the forming of a spatial map does not involve special attention or explicit conscious effort, it is through the soma’s unreflective perceptions of space that a space is learned and remembered. Not only can we remember spaces we have inhabited and how to negotiate our ways through them through implicit memory without consciously reflecting on representations of those spaces in explicit thought. But we can also first come to know and learn to remember a space through implicit means, without consciously making an effort to remember, without engaging our explicit, voluntary attention to learn the space. Experimental studies have confirmed what we know from ordinary experience: that while explicit, focused attention facilitates the forming and stabilizing of a spatial map, such maps can be formed and stabilized (though not as powerfully) through the sort of unreflective ambient attention that an animal has just by moving through or inhabiting space [10].

The soma’s potent role in understanding and remembering space is highlighted and heightened by its asymmetries. The body’s front is different from its back, its top is different from its bottom; and these asymmetries are reflected in differential capacities of memory. Studies show that it is hardest to retrieve spatial memory of left and right (dimensions that are symmetrical in the body) than the asymmetrical dimensions of front/back and top/bottom. For the upright observer, the head/foot axis is the easiest for recalling spatial information, because it is also “correlated with the only asymmetric axis of the world, the axis created by gravity.” But when reclining, observers remember information fastest on the front/back axis, which roughly correlates with the axis of what can be seen versus not seen [11].

We sometimes distinguish place from mere space, to characterize the former as a particular landmark with value or meaning (a home, school, stadium, mall, or parking lot). Place in this sense helps define the more abstract concept of space as a general area through which movement is possible (and where places represent distinct points where one might pause in that movement). Similarly, we can distinguish memory of space and place, the latter being easier and very useful for the former. For example, we implicitly remember to turn right at a certain point because we implicitly remember the corner café as the place where we need to turn right. The body plays a central role in such memory through its remembered feel of certain places (the smell of the coffee, the need to navigate one’s path around the outdoor tables, etc.).

Certain places leave such strong somatic imprints of feeling that it is involuntarily evoked whenever we enter them. My life as department chair was so pressured that each time I entered that office, even during vacation, I shivered with memories of hectic work and stress so that it was impossible for me to relax or think about anything but my administrative duties, even when I was in principle free to do so. My muscle memory of that place was automatically triggered, shortening my breath and tensing my posture; though, it also provided implicit recall of where all the necessary tools could be found to perform my job. And while we’re in my office, it’s worth mentioning another sort of memory (implicit or explicit) that could be grouped with memory of space and place – situational memory.

My chairman’s office was a place of repeated situation types, for example, interviewing a job candidate or meeting individually with junior faculty members to discuss their progress toward promotion and tenure. Implicit somatic memory of such situations allowed me with smooth spontaneity (i.e. without the awkward hesitancy of deliberative thought) to offer the appropriate greeting and comfortable chair to my interlocutor, to assume the appropriate posture, tone, and demeanor that such situations call for, where one must be kind and encouraging but at the same time represent the impersonal authority and responsibility of one’s executive position. There are countless situations in which the soma enacts such implicit situational memory. Sports provide excellent examples; experienced athletes spon-
taneously recognize (through implicit somatic memory) those situations in which they should pass the ball and to whom and at what speed and trajectory they should pass it.

3. A third form of implicit memory with deep bodily grounding might be described as interpersonal or more broadly as intersomatic – so as to include non-human companions like animals. We develop ways of being with and reacting to certain other bodies, and these modes of relationship are incorporated into our muscle memory as habitual attitudes or schemata of action that are spontaneously recalled and repeated in the presence of those other bodies, with the appropriate contextual variations. Did you ever notice that though you have shared with your spouse or long-time lover countless beds in countless bedrooms, you always seem to lie together in the same orientation, on the same side? You do not have to think about which side of the bed you should take; and if, for some reason, you find yourself lying next to your lover on the non-habitual side, it will probably feel odd or perhaps even awkward. Similarly when walking hand in hand or with their arms around each other, couples spontaneously take up their habitual positioning. These habitual postures are assumed without thinking about them and they establish a feeling of comfortable familiarity that typically escapes explicit recognition but nonetheless pervasively influences one’s experience. The same sort of intersomatic attunement is developed between horse and rider or between a person and her pets.

Because emotions are grounded in the body, our implicit somatic memories have an affective dimension. We carry these implicit intercorporeal memories and corresponding somatic attitudes into our encounters with new people, which is why we often have an immediate, visceral feeling of comfort or discomfort when we meet someone new who is implicitly perceived as suggesting positive or negative memories. We develop such intersomatic patterns of interactions already from infancy, as Daniel Stern has shown in his extensive studies of infant interpersonal relations, and these early schemata of interaction powerfully integrate motor, cognitive, and affective dimensions [12]. By means of such somatic patterns and attunements we learn to understand and navigate our immediate interpersonal world (through embodied patterns of implicit relational knowing) even before mastering linguistic expression. Although such intersomatic memories are first developed with respect to one’s parents (in most cases, especially to one’s mother) and other significant others, they become generalized yet also modified by later experience; and they are unreflectively woven into a complex embodied structure of habits – of affective, cognitive, social, postural, and motor dispositions that are intimately intertwined and that essentially constitute one’s personality.

Such implicit affective intersomatic memories, I have argued, can help explain why ethnic and racial prejudices prove extremely resistant to rational arguments of tolerance. Because such prejudices are grounded in implicit visceral feelings and muscle memory of discomfort of which we are not fully conscious, we may not even be aware of them and of the prejudice they generate, though others will note it in our behavior. Parents can unwittingly instill such feelings in their children without saying a word and without any dramatic display of prejudice, but simply by subtle postural and facial expressions of discomfort that the sensitive child absorbs and responds to [13].

4. Our interpersonal relations take place within a larger social setting. But if interpersonal implicit memory in some way already implies the social, we can also distinguish a more distinctively social form of implicit memory, in terms of inhabiting, recalling or re-playing distinctive social roles. These roles very often involve a distinctive form of embodiment. One example I remember from military service in Israel is that of the drill sergeant major at our unit’s headquarters. Though typical Israeli military posture is rather relaxed reflecting a general somatic (and more general military) ideology that advocates the supple, fluid, and flexible, our drill sergeant major had instead learned to incorporate the rigidly erect posture and very stiff, mechanical movements that define the more traditional conventions of military drill and thus of his special social role. Even when he was not performing his official duties, we could always easily recognize him on the base by his stiff posture and gait, even if we could only view him from the back and at a great distance.

Other roles have their characteristic embodiment. A policeman, a judge, a doctor all possess different forms of authority in their roles, and they display distinctively different forms of embodying those forms of authority. Success in their roles requires incorporating the right bodily attitudes and comportment, whose mastery involves implicit muscle memory in spontaneously performing them. Moreover, we deploy implicit memory in transitioning from one role to another.

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5 In these roles, distinctive uniforms that are worn on one’s body serve as bodily cues or tools to help individuals incorporate the proper somatic dispositions and comportment.
When the female police officer comes home to assume the role of a tenderly loving mother to her infant son, she does not need to explicitly remind herself to generate the different somatic dispositions and feelings appropriate to her maternal role. Muscle memory instructs her how to transition without her needing to remind herself explicitly what it means to be a mother. Just thinking of her baby while she is driving home may initiate the proper somatic changes, even before she actually sees him and removes her uniform so her badge won’t scratch him.

5. Putting on and taking off clothes are typical examples of the most obvious type of muscle memory: performative or procedural memory. Normally we do not have to think about how to dress or undress ourselves. We typically do not notice which sock or shoe we put on first, which arm or leg is first inserted into a sleeve or trouser, which button is first buttoned, and whether in buttoning we use the index or pointer finger with the thumb. On many occasions, one decides to get ready for bed, and suddenly finds oneself in pajamas without remembering the various stages of undressing and then dressing for bed. Other skills of experienced mastery in performing sequential tasks range from the most common functions of walking, running, tying one’s shoes, or eating with utensils to more complicated skills like swimming, dancing the tango, riding a bicycle, touch typing, driving a car, shooting a turn-around jump shot, or playing a piano sonata. These tasks include distinctively cognitive ones such as speaking, reading, and writing. We perform such skills with such effortless unthinking spontaneity that we can understand why philosophers like Merleau-Ponty describe such somatic performance in terms of “marvels,” “miracles” and “magic” [see 14 and 15; for more discussion of this point, see 13].

This sort of muscle memory is certainly most efficient by allowing us to direct our always limited resources of explicit consciousness to other places that need it. We can thus concentrate our attention on the ideas we are writing rather than thinking of the location of the letters on the keyboard which we want to type. I can look down the basketball court to see if a teammate is open near the basket, rather than having to think about how I handle the ball to dribble and then pass it to him. By freeing our consciousness to engage other things, muscle memory extends our range of attention and perception, and thus enhances our freedom of action. With many complex motor skills, moreover, it is often claimed (by philosophers, psychologists, and movement experts) that if we tried to perform them explicitly recalling and deliberating at each step, we would awkwardly stumble. As the great choreographer George Balanchine would tell his dancers, “don’t think, dear; just do.”6

6. The last kind of implicit muscle memory I note here is an unhappy one of unfreedom – traumatic memory. Pain is implicitly remembered in the body and projected through it into future attitudes, as proverbs like “once bitten, twice shy” suggest. Many forms of education involve painful disciplines of training, an approach that may have helped prompt Nietzsche’s overstatement that “only what does not cease to cause pain remains in memory.”7 In productive forms of disciplinary education, if pain is deployed it is carefully controlled and framed in relationship to positive meaning and value. Traumatic memory, in contrast, is characterized by its inability to connect positively to meaning and value. Because of trauma’s intense shock and pain, the victim cannot properly integrate it into a clear, conscious, meaningful memory, since the experience overwhelms one’s normal sense of self, rupturing the narrative continuity that gives meaning and stability to experience, including remembered experience. Instead, as the explicit narrative memory of trauma is significantly blurred or even lost in many of its details, so the traumatic memory thrives in implicit behavioral form – in terms of somatic complaints such as flashbacks (that repeatedly relive the trauma); physical symptoms such as sweating or a racing heartbeat; frightening dreams; behavioral reactions of avoiding things that might recall the traumatic experience; being easily startled, tense, or edgy; or contrastingly emotionally numb. Such traumatic memory forms the crux of what is diagnosed as posttraumatic stress disorder (PTSD). Because traumatic memory withdraws from explicit consciousness while implicitly working through the body to preserve, reinforce, and spread its painful effects, it is very difficult to treat and overcome its devestations. Therapy thus often involves making the implicit me-

6. This frequently quoted saying of his can be found even in mass-media dance articles, such as this review from the San Francisco Chronicle [16]; and this interview from New York’s Timeout [17]. Some renowned masters of dance, notably the most influential theorist and composer of Nō theater and dance, do not share this view, for reasons I explain in [18], where I also explain more generally the limits of arguments that claim explicit attention to one’s action is always detrimental to effective performance after the actions of performance have been learned and habituated into muscle memory.

7. “Man brennt Etwas ein, damit es im Gedächtniss bleibt: nur was nicht aufhört, weh zu thun, bleibt im Gedächtniss” [19].
memory more explicit in some way so that it can be more clearly identified and treated [for more on this topic, see 20].

If traumatic memory is one form of implicit somatic memory whose implicitness is not entirely advantageous, I shall now consider how the other forms of implicit or muscle memory also can prove problematic, albeit in a generally milder way. When I first spoke of such problems (in a paper in French) I called them petites pathologies [see 21] but here I wish to explore them under the category of somaesthetic pathologies of everyday life, alluding to Freud’s book on the Psycho­pathologies of Everyday Life which also deals with problems far less severe than trauma, such as slips of the tongue or other minor lapses.

Somaesthetic pathologies of muscle memory and their treatment

There is not space here to treat all the different ways that insufficient somaesthetic awareness (i.e. inadequate perception of our somatic comportment and feelings) leads to minor everyday problems of dysfunction, error, discomfort, pain, or decline from proper efficiency. They include unnecessary self-induced accidents like biting one’s tongue when eating; tripping over one’s own feet; choking by swallowing food or drink down the wrong “pipe”; hurting one’s back or knee by lifting or turning in the wrong position; straining one’s lower back by not noticing the discomfort experienced in having sat too long at one’s workstation. Then there are everyday somaesthetic pathologies involving a variety of malfunctions in sports-related skills – like failing to hit a ball properly (in tennis, golf, or baseball) because one is unaware that one’s eyes, hands, and other body parts are not in the right position for making proper contact. We also find similar motor malfunctions in work-related activities, such as mistakenly clicking on the mouse when not really ready to send one’s message or others errors arising from not being sufficiently aware of one’s handling of the computer keyboard or one’s cell phone touch screen. Other common somaesthetic problems include not being able to sleep because one is not aware that one’s breathing is too short and one’s body too tensely held to induce a condition of repose that can induce sleep.

The various somaesthetic pathologies of everyday life could be grouped in different ways, but rather than proposing a general taxonomy here, I will discuss a few examples drawn from the five positive forms of implicit memory noted earlier, while suggesting how they may be remedied through heightened somaesthetic aware­ness. Organizing this discussion in terms of these different modes of muscle memory should give greater clarity and unity to this paper, though I can imagine better ways of classifying the wide variety of everyday somaesthetic pathologies or even the few we shall presently consider.

1. In affirming an implicit abiding memory of self that provides our sense of personal identity and continuity of consciousness, James insists that it is essentially somatic, a muscle memory of feeling oneself as the same person. Even in our moments of pure thinking, “we feel the whole cubic mass of our body all the while, [and] it gives us an unceasing sense of personal existence” [8]. If James describes “the past and present selves” as unified by “a uniform feeling of ‘warmth,’ of bodily existence… that pervades them all… and gives them a generic unity, he insists that “this generic unity co-exists with generic differences just as real as the unity” [8].

James’s language here is not entirely clear, but I think he is not (and should not be) asserting that there is one single, isolatable, constant and unchanging somatic “me” feeling that accompanies all my other bodily feelings and that defines my sense of unity. Rather, one’s sense of being the same person is an emergent, holistic feeling of sameness based on a whole network of feelings of “warmth and intimacy” [8] between the generic pattern of one’s present somatic feelings and that of one’s remembered counterparts. One’s actual body feelings will always change with changing conditions though the generic pattern can remain stable while also expressing significant differences. Not all somatic feelings, according to James, have the same weight in determining one’s sense of self. In The Principles of Psychology, he identifies the crucial somatic feelings of the core self (the innermost self of active conscious­ness which he calls “nuclear self” “the Self of selves”) with various “muscular adjustments” – “for the most part taking place within the head” or “between the head and throat” [by which he means to include adjustments of the cephalic sense organs associated with thinking such as pressure and orientation of the eyeballs, as well as muscular contractions of the brow, jaw, and glottis [8]. It is understandable to highlight feelings in the head and neck area, which not only houses the brain, the organs of vision, hearing and taste, and the vestibular system of the inner ear (that provides stability of posture and gaze) but also the first two cervical vertebra (the atlas and axis) whose articulations and attached ligaments and muscles are what enable us to raise, lower, and rotate the head, thus affording greater scope for the head’s sensory organs.
James later particularly emphasizes the bodily feelings of breathing as what gives felt unity to one’s “stream of thinking,” locating those feelings of breath too narrowly in the nose and throat. Without insisting that feelings in the head and neck area are what defines our inner self-feeling, we can recognize that those feelings could be very important to one’s sense of self, so that even when we do not explicitly notice these feelings they form a familiar perceptible background to our more explicit objects of consciousness and foci of attention. Such feelings can become so habitual and pervasively familiar that they form part of one’s implicit sense of self. This can happen even if these particular feelings in the head and neck are neither necessary (i.e. alternative feelings are equally possible) nor beneficial.

Many individuals suffer from a somaesthetic pathology that exemplifies this situation. They have a condition of chronic excessive tension in the neck, caused by habitual reactions of muscular contraction to repeated situations of stress. Because this condition of excessive tension is habitual, it also becomes familiar as a background feeling. The affected individuals typically do not even know that they have this problem because the excessive tension feels familiar (and in that sense normal) to them; indeed it forms part of their core feelings of who they are, even if such tension results eventually in the noticeable discomfort of headaches, neck aches, and backaches. We can recognize such people by the way they always have their shoulders quite tensed and elevated closer to the upper neck and ears than one’s shoulders should normally be in a proper, adequately relaxed posture. The pressure of the raised shoulders involves muscular tensions that in turn put excessive pressure on the muscles of the neck and the cervical vertebrae; we thus could describe this pathology as the chronically pinched neck. Besides the pain and damage to the cervical spine that this chronic contraction can eventually cause, such posture hinders the efficiency of our action, since its tensed posture inhibits movement in the neck, shoulders and ribcage. Nonetheless through its habituated incorporation into a familiar bodily feeling, the pinched-neck posture feels normal to those who suffer from this somaesthetic pathology, which is thus a pathology of perception (aesthesis) as well as of posture.

Clinical experience has taught me that when such a person is asked to relax his shoulders to ease his neck, he will happily assent to the request but essentially fail to comply, though he thinks he is complying (very often by making a sort of shrug that just raises the shoulders further before letting them subside to their habitual raised position). Not only does he not realize that his elevated shoulders and neck are excessively tensed (because they feel normal to him), but he also does not know how to lower or relax them because he no longer knows what that relaxed posture feels like. When, after some hands-on work with him, I induce a relaxation in his neck and shoulders, he reports that it feels a bit strange to him, that he feels somehow lazy or soft and not quite himself. He confuses the release from chronic hypertension with a loss of the familiar sense of his forceful dynamic self that has become habitually linked to his chronic feelings of excessive muscular contractions. This change of posture may thus not be psychologically comfortable for him, even though it is physiologically more comfortable and can be behaviorally more advantageous.

A patient’s identity may be so intimately linked to her handicap or problem that even when she complains about the problem, she may at a deeper level resist efforts to rid herself of it. [I knew a talented, beautiful, and wealthy Parisian academic who, for many years, complained to me about being miserable because of the man she lived with. But whenever I suggested she leave him, she replied that this problematic relationship had become a cornerstone of her identity and her psychological coping structure, supplying her with an excuse for being unhappy and for not writing all the books she thought she should write. Without this problem, she argued, she would have no adequate excuse for her failures and would thus be even more miserable and full of self-loathing.] With respect to the somaesthetic pathology of the pinched neck, if the chronic feeling of tension is felt as an important part of the person’s sense of self, then he must take the trouble of revising his familiar sense of self so that a more relaxed muscular tonus is not confused with torpor and can instead be associated with his resilient dynamism. For many individuals, to take the time and effort to make this transition may not seem worth the sacrifice, especially since

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8 My consciousness or “stream of thinking.” James argues, relying on his own introspection, “is only a careless name for what, when scrutinized, reveals itself to consist chiefly of the stream of my breathing. The ‘I think’ which Kant said must be able to accompany all my objects, is the ‘I breathe’ which actually does accompany them.” James concludes that “breath, which was ever the original of ‘spirit,’ breath moving outwards, between the glottis and the nostrils, is, I am persuaded, the essence out of which philosophers have constructed the entity known to them as consciousness” [9]. James surprisingly ignores both the feelings of inhalation and the fact that one very often feels one’s breathing not only in the head and neck but also down into one’s thoracic area, where the movement of the lungs interacts with movements in the chest or ribcage; and that same thoracic area provides the familiar background feelings of one’s beating heart.

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the advantages of the new posture and sense of self are neither very clear nor guaranteed in advance, while the problems they currently suffer from their pinched-neck pathology seem manageably minor and familiar. That is one reason why this somaesthetic pathology remains so prevalent.

2. Muscle memory guides us in spatial orientation but it can also misguide us. One space-related somaesthetic pathology of everyday life is orientational bias. Did you ever notice that whenever you go to a movie or lecture without assigned seats you tend to sit on one side (left or right) of the room rather than the other; did you ever notice that when you are standing or sitting your range of vision is greater on one side than the other? The reason is that one’s body frequently has an orientational bias; many people feel more comfortable turning toward one side rather than another, and this bias is also reflected in posture, as a tendency (when standing or sitting) to have one’s body or head not perfectly straight but slightly turned toward one direction. Perhaps you sit on the right side of the movie theatre because your left eye is stronger and thus sitting on the right puts the left eye more toward the center especially when tilting your gaze leftwards (which sitting on the right enables you more comfortably to do). Or perhaps your right-side seating habit is because you implicitly feel (for a variety of possible reasons relating to your somatic history) more comfortable with your body slightly turned or shifted toward your left.

There is nothing wrong with this sort of postural bias in itself, but if we fail to recognize it and compensate for its effects, it can lead to problems. For instance, a teacher or lecturer who has a left orientational bias will often unintentionally turn his side or even back to those people in the audience who are seated to his right, without even knowing that he is excluding them from eye contact. If he is aware of this bias, he can correct for it by readjusting his posture so that he is facing more of his audience (either by centering his orientation or by stepping further back to minimize the effects of the bias). A much more dangerous result of such orientational bias is reduced ability to notice oncoming traffic from the side somewhat blinded by the bias; experience indeed shows that many individuals tend to suffer accidents significantly more on one side than another. If orientational bias seems a likely cause for such accidents, then improved awareness of such bias through heightened somaesthetic perception is a likely remedy.

As orientational bias concerns issues of how we situate ourselves in space, so there are everyday somaesthetic pathologies of navigating our trajectories through space. Too many times my muscle memory directs my walking and driving through habitual paths toward familiar locations that are, however, not the ones I meant to choose; so I am forced to backtrack and consciously remind myself of the right destination and path. Muscle memory likewise induces everyday somaesthetic pathologies of inhabiting place, one of which was already introduced in discussing my implicit “chairman’s office” memory. It was pathological to be suddenly thrust into a state of breathless tension (and without even explicitly recognizing it) just by entering that place, even if I had nothing more urgent to do there than chat with an old friend who found it the most convenient place to meet. After somatic training improved my somaesthetic awareness, I was able to identify my pathological reaction, but also treat it by explicitly applying various strategies of breathing and muscle relaxation.

3. In my discussion of implicit interpersonal muscle memory I argued that racial and ethnic prejudice – an all too common everyday pathology – has roots in visceral feeling and that its incorporation in implicit memory makes it very difficult for the person with the prejudice to properly recognize it, let alone extinguish it by a mere conscious judgment that such prejudice is unreasonable. Sharpening a person’s awareness of her bodily feelings so that she can recognize the mild discomfort that certain races or ethnicities or other groups provoke in her can help her to identify the prejudice and its roots, so that she may try to contain it or even overcome it, if she wishes to, perhaps by trying to reeducate her somatic feelings. As we know from acquired tastes, visceral reactions or dispositions can be to some extent refined or transformed through sensory reeducation. Of course, if the person with prejudice has no such meliorative desire for reform, then heightening the awareness of visceral discomfort and its relation to the prejudice may not result in efforts to control or eliminate the prejudice. Indeed heightened awareness might even strengthen the feelings of discomfort, and in that way reinforce the prejudice in rendering it more conscious. Knowledge, including self-knowledge, is not always beneficial; it depends on how it is used. One could argue that knowing one is prejudiced is a cognitive improvement on not knowing it, even if positive ethical results of such knowledge are not forthcoming.

Muscle memory can generate another minor pathology of interpersonal interaction. Some persons have characteristic postures that others find disturbing, even if the disturbing feelings remain rather mild and implicit. For example, some individuals have a way of engaging their interlocutors in conversation by coming
very close to them and then tilting or leaning toward them with a rather tensely contracted soma. The motivation for this posture is typically friendly but it often conveys a disturbingly aggressive stance to the interlocutor, who feels somehow threatened by this intrusion in her personal space, especially if the overly proximate body leaning toward her is considerably larger than her own. Her implicit reaction is to withdraw both posturally and psychologically from the friendly speaker with the aggressive stance, which tends to evoke in him a further implicit adjustment of looming still closer, perhaps with the feeling that his interlocutor is not a friendly person, even though she may indeed harbor friendly inclinations to him, at least initially, before this unfortunate dance of approach and withdrawal that results from his somaesthetic insensitivity to posture.

Such interpersonal problems are magnified when culturally different senses of appropriate distance come into play. Recall the joke about the international conference cocktail party where one can identify the Finns by the fact that they’re the ones gradually withdrawing toward the walls of the room, retreating while conversing with the Brazilians who are recognized by their constant forward-pressing, hands-on approach in the same conversations. Consulting intercultural guidebooks about the appropriate posture to adopt in various cultures will not solve the problem, if one remains insufficiently aware of the posture one is actually assuming, as well as the postural reaction of the soma with whom one is interacting. Somaesthetic awareness is necessary for both; and while many individuals spontaneously display such awareness, many others require an effort of conscious attention to cultivate and deploy this awareness.

4. Muscle memory’s incorporation of social roles can create its own somaesthetic pathologies of everyday life. Take the drill sergeant from my days as an officer in Israeli military intelligence. So fully had he absorbed his professional persona – with his body always held rigidly erect in hyperextension and his habitual stiff, jerky gait and sharp, mechanical hand movements – that he seemed incapable of shedding this attitude. We laughingly imagined how he returned home to make love to his wife in the same barking cadence, mechanical gestures, and jerky rhythms that defined his somatic behavior, without his even realizing that he was behaving like a drill sergeant rather than a lover and thus missing out on love’s more tender and fluid communicative pleasures. Although we never followed him home to see (or ask his wife) whether he indeed suffered from this somaesthetic pathology, I did indeed witness during my years in Israel a different form of incorporated role fixation that was implicit, unintentional, and unnoticed by the role player.

My then father-in-law, a Tel Aviv judge who dearly loved his family did not realize that he daily brought his courtroom habitus back to the dinner table, augustly allowing orders to family members as if they were bailiffs or accused criminals. He did not realize that his tone and body language were inappropriate, until his daughter and wife called them to his attention, and he apologized with genuine embarrassment. Fortunately, after his postprandial siesta, he awoke largely freed from his courtroom soma that had earlier been primed by a stressful morning in court. Because it often takes time, distraction, and relaxing substances to free oneself from a deeply embodied and labor-intensified social role and prepare a differently embodied persona, I understand why bars are so important on evening commuter trains and on the pedestrian’s and motorist’s way home from work.

5. Implicit performative or procedural memory is indispensable for getting us efficiently through countless everyday activities. By enabling us to perform so many familiar tasks with no explicit attention, it allows us to direct our limited resources of attentive consciousness to more difficult problems. As noted earlier, a writer can focus on how to express his philosophical ideas instead of how to position his hands and flex and move his fingers to perform the necessary actions for pressing the right keys to generate the letters of the words he wishes. A violinist can likewise concentrate on the expressive qualities she wants to produce rather than on the way she is gripping her instrument and positioning or moving her shoulders, torso, and arms when performing. In the same way, a DJ can concentrate on the songs or tracks he is sampling rather than on the posture of his ribcage and hips when he is spinning those records. In these and similar cases, their muscle memory performs the necessary sequential acts of muscular contraction, positioning, and movement without explicit consciousness. Unfortunately, however, as I learned from clinical practice, the habits of muscle memory formed to perform such spontaneous body adjustments often do so in ways that are not somatically advantageous and lead to unnecessary fatigue, pain, or injury. The writer develops carpal tunnel syndrome from holding his wrists too rigidly; the violinist suffers pain in the back, neck, and arms because she holds her shoulders and ribcage too tight, thus forcing her bow strokes to be more effortful. The DJ (who happened to be a graduate student at the New School for Social Research) fell victim to a very sore elbow, because his habit of freezing his hips and ribcage in mental concentration (a habit quite common in academic readers who
daily spend many hours in focused seated study) put extra pressure on the elbow joint its effort of spinning the records. But when he learned how to relax the hips and torso so they could rotate with the record-spinning arm, his elbow problem disappeared.

Let me conclude by noting some pathologies relating to a much more basic activity typically governed by performative muscle memory: eating. For all its natural or instinctive aspects, eating is a sequential activity that we learn how to perform, both through implicit and explicit forms of learning. We learn the sequence of cutting and chewing a large slice of meat before we swallow it; or the sequence of first lifting and then tilting the cup to one’s mouth to drink our water rather than lowering the mouth and extending the tongue to lap it up. We develop distinctive habits in the way we eat, and these go beyond the obvious examples of formal table manners and the handling of various eating utensils (knives, forks, spoons, chopsticks, cups, glasses, bowls, pitchers, salt shakers, etc.). There are different habits of how one deploys one’s lips and tongue, what part of the mouth one uses in chewing; how fast, how long, and how vigorously one chews; how fast, how often, and how hard one swallows; how often one pauses during eating in order to drink, to speak to one’s dining companion, or to reflect on the food’s taste, aroma, or texture or on one’s diverse feelings in eating including the feeling of becoming satiated. The performative muscle memory of eating is very deeply entrenched because it is a procedural skill we use daily. The result is that we typically eat without thinking explicitly about it.

This is surely convenient because attention instead can be wholly absorbed on something more interesting or useful, such as reviewing the lecture notes for an ensuing lecture. But such muscle-memory automatism of eating can prove problematic if one’s dining habits are faulty; and they can be flawed in a variety of everyday ways. For example, there are people with habits of ugly, sloppy, or excessively noisy ways of eating that pose somaesthetic problems for dining companions who have to witness them. Besides the visual or auditory displeasure they experience, observing such unesthetic eating styles may rob them of their own appetite and enjoyment of food. Other somaesthetic pathologies resulting from habits of muscle memory can affect the problematic eater himself. One touted feature of habit is that its muscle memory increases speed of performance because no time is taken (or needed) to deliberate in action. So relying purely on muscle memory without attentive deliberation about how we eat enables us to eat more quickly, but those who habitually eat too quickly often suffer from poor digestion and a variety of related somatic discomforts (whose portrayal and medicinal remedies fill countless hours of television advertising). Many who suffer in this way know that part of their problem is eating too fast, but one reason they continue to eat too fast is that they do not notice how fast they are eating because muscle memory sets the rhythm and style of their eating. They thus pay no attention to how they perform this sequential, temporal activity; and without such attention they cannot monitor it so as to slow it down. Recent studies show, moreover, that eating fast also promotes obesity; and once again, if we are unaware of our speed of eating, we cannot know how to slow it down to avoid its negative consequences.

Another somaesthetic pathology of inattentive habit contributes to overeating. When food or drink is consumed rapidly and inattentively, we are less able to appreciate its taste. As our eating enjoyment is diminished by this inability to properly savor our food, so we tend to compensate by eating more. Unsatisfied by the flavors and textures of what we’ve already eaten (because they have gone largely unnoticed through our habitual hurried or inattentive eating), our quest for the satisfaction which we know should come from food drives us to continue eating in the hope that such satisfaction will eventually come. This unfulfilled hope often keeps us eating even after we’ve already had our fill. Such frustrations of satisfaction through inattentive eating habits that rely entirely on the swift efficiency of muscle memory may be one cause for the common pathology of overeating in America and other fast-food, rapid consumption societies. In any case, its failure of gustatory and hedonic appreciation constitutes in itself a regrettable somaesthetic pathology of everyday life.

These are not the only somaesthetic pathologies that contribute to the overeating and consequent obesity from which so many suffer in contemporary consumerist culture. Driven to consume through persistent and ever increasing stimulation that continuously strains and blunts our discriminatory sensitivities (in ways de-
scribed by the Weber-Fechner law), many people are unable to perceive that they have eaten enough until they have considerably overeaten [for more discussion of the relation of the Weber-Fechner law to issues in somaesthetics, see 13]. They have lost the somaesthetic discrimination of the proprioceptive feelings of having their hunger satiated or being comfortably full. They can only discriminate the stronger, discomforting over-stimulation of feeling “stuffed,” so they identify that unpleasant feeling with having reached satiety or eating satisfaction, and they thus continue to eat until they feel such discomfort. We thus have a vicious cycle of eating more but enjoying it less, because one is not properly aware of when to stop eating; and such awareness is a matter of somaesthetic discrimination.

These arguments regarding eating and obesity have a particular relevance to the ramified project of somaesthetics, an interdisciplinary field of theory and practice broadly defined as the critical study and meliorative cultivation of the soma as a site both of sensory apprehension (aesthesis) and creative self-fashioning. As creative self-fashioning suggests the aesthetic stylizing of the soma as an external object of attractive representations, so the focus on aesthesis concerns the soma’s perceptual acuity and inner experience, where cultivation of improved aesthesis means “feeling better” both in the sense of enjoying better feelings but also in the sense of perceiving what we experience more accurately and clearly.10 It is sometimes useful to emphasize the distinction between the perceptual or inner dimension of somaesthetics and the dimension of external body representations that so dominate our culture’s concerns with embodiment. But if deficient somaesthetic perception of our eating can be casually linked to problems in maintaining one’s external somaesthetic form, then there exists an important connection between somaesthetics’ perceptual and representational dimensions. It is common to say that how we feel affects how we look; happiness can give us a winning smile, while depression, pains of illness or fatigue can make us look unattractively dull and diminished. Our brief, closing arguments for deploying somaesthetic perception to overcome obesity from eating habits of inattentive muscle memory provides, however, a new meaning to this familiar saying.

References


Because of our culture’s fascination with advertised ideals of bodily beauty and pleasures (along with our unavoidable failures to achieve them), several philosophers presumed that somaesthetics’ focus must be the quest to have perfectly looking bodies and to enjoy those of others. They narrowly viewed somaesthetics’ concern with body consciousness as consciousness of the body as an attractive object; and thus they criticized the project as a servile reflection of society’s superficial body values, while I was equally interested in emphasizing the body as soma (or body-mind), i.e. as a perceiving, intentional, locus or subject of consciousness, whose powers of sensory perception (aesthesis) can be heightened through cultivation and reflection. Through such enhanced perceptual powers, we can improve our self-use (including the stylizing of our external somatic form) by overcoming problematic habits of muscle memory.


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