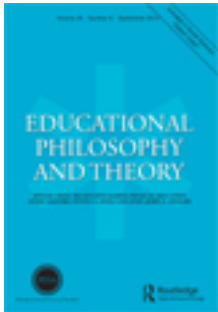


This article was downloaded by: [Macquarie University]

On: 12 October 2013, At: 21:00

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Educational Philosophy and Theory

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rept20>

Yoga From the Mat Up: How words alight on bodies

Doris McIlwain^a & John Sutton^b

^a Department of Psychology

^b Macquarie Centre for Cognitive Science, Macquarie University

Published online: 15 Apr 2013.

To cite this article: Doris McIlwain & John Sutton, Educational Philosophy and Theory (2013): Yoga From the Mat Up: How words alight on bodies, Educational Philosophy and Theory, DOI: 10.1080/00131857.2013.779216

To link to this article: <http://dx.doi.org/10.1080/00131857.2013.779216>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

Yoga From the Mat Up: How words alight on bodies

DORIS MCILWAIN^a & JOHN SUTTON^b

^a*Department of Psychology and* ^b*Macquarie Centre for Cognitive Science, Macquarie University*

Abstract

Yoga is a unique form of expert movement that promotes an increasingly subtle interpenetration of thought and movement. The mindful nature of its practice, even at expert levels, challenges the idea that thought and mind are inevitably disruptive to absorbed coping. Building on parallel phenomenological and ethnographic studies of skilful performance and embodied apprenticeship, we argue for the importance in yoga of mental access to embodied movement during skill execution by way of a case study of instruction and practice in two related traditions, Iyengar and Anusara. Sharing a pose repertoire, they are based on distinctive philosophical systems with different teaching styles and metaphoric structures. To address relations between pedagogy and practice in embodied expertise, and to investigate the reciprocal influences of embodiment and thought, we explore in detail the linguistically mediated learning context where practitioners work with yoga teachers. Here, the mind/body problem comes to practical life. We demonstrate the effects of words on bodies, as knowledge is literally incorporated. We show why interpersonal influence on our movement capacities is sometimes needed to enhance expertise. We theorize and identify 'signature patterns of tension' among practitioners. These patterns have four sources: ghost gestures, innate differences in bodily form, functional fusing, and signature patterns of affective experience, modulation and expression. These patterns of tension produce 'silent zones', cognitively impenetrable actions, functional fusing of a skilful, compensatory form, and signature patterns of pain and damage. We show how instruction can disrupt these silent zones, enhancing mental and physical flexibility.

Keywords: yoga, ghost gestures, embodied cognition, psychology of yoga, skilled movement

Introduction

[There is] no other solution but to practice ... oneself, to become one's own informant, to penetrate one's own amnesia, and try to make explicit what one finds unstateable in oneself. (Favret-Saada, 1980, p. 22, cited in Smith, 2007, p. 31)

Skilled movement practitioners trust their established, grooved kinaesthetic routines. They know that in some circumstances thought, awareness, or the involvement of the mind in animated bodily flow can disrupt their ease in action. But they also know that embodied expertise is always open, that thinking and acting can in other circumstances work together.

The lore which sees thought as *inevitably* obstructive to absorbed coping, and expert skills as therefore *essentially* ‘mindless’, finds apparent support in some philosophical and psychological theory (Beilock & Carr, 2001; Ennen, 2003; Dreyfus, 2007; Flegal & Anderson, 2008). But if we see mindfulness as itself active and dynamic, we notice the pervasive interpenetration of thought and movement in a range of expert embodied performance. Expert thinking is not an inner realm behind practical skill, but an intrinsic and entirely worldly aspect of certain forms of real-time, on-the-fly engagement in complex, culturally embedded physical activities, a subtle application of embodied intelligence to the reflexes (Sutton, 2007; Downey, 2010; Kirsh, 2010; Montero, 2010; Sutton, McIlwain, Christensen, & Geeves, 2011). Mindful coping can be reflected in shifting attentiveness to basic or higher level cues that permit us to access procedurally automated and cognitively ‘chunked’ skills. Mindful coping includes the flexible roaming of attentiveness, as it shifts, on the fly, to the level of chunking required for smooth coping. The mind is required even in the most seemingly automated skill if that skill entails accommodating action to changing situational contingencies. This, we suggest, is keeping mind involved in body. We think this roaming, flexible allocation of mindful attention is itself a skill that may be honed through learning. Here we develop and apply this view in a case study of yoga practice in two related traditions, building on parallel phenomenological and ethnographic studies of skilful performance and embodied apprenticeship in other domains (Sudnow, 2001; Howe, 2003; Wacquant, 2004; Grasseni, 2007; Smith, 2007; Downey, 2008; Samudra, 2008; Allen-Collinson & Hockey, 2009; Legrand & Ravn, 2009; Bicknell, 2010).

To address relations between pedagogy and practice in embodied expertise, and to investigate the reciprocal influences of embodiment and thought, we focus on the linguistically mediated learning context in which practitioners work with yoga teachers. What kind of flexible, shared or distributed intelligence can influence bodily habits which have become second nature? We do not wish merely to invoke improvisatory movement skills as an example of embodied cognition. We seek to study in their own right distinctive and intrinsically fascinating culturally embedded activities like yoga (or, in other contexts, sport, dance or music) with their own ideological, affective and motivational force. People voluntarily invest years of extraordinary physical and emotional work in such practices, devoting themselves to long hours of training, weaving the bodily routines into daily life, often in search of personal and physical transformation. In these history-dependent skills, the mind/body problem comes to practical life, as the sedimented legacy of embodied experience is made manifest in everyday enactment and practice, for others to interpret and influence. And because some participants themselves come to reflect on how embodied history is revealed and opened up to new influences and possibilities in the apprenticeship process, they can

potentially become their own informants, lending a new dimension to an already mindful experience.

What Are We Looking at When We Look at a Body?

To the untrained eye, different styles of movement and different shapes are all that is seen when looking at a body. However, when a skilled observer sees a body, she or he sees the sedimented history of a dynamic coupling between body and world. The history of this structural coupling is largely offline and unconscious. Why would either theorists or practitioners bring such sedimented practices into awareness? Why render into declarative knowledge things that can remain happily procedural? Why open up to language what we can do? Why burden our working memory? Automaticity is often fine when things go smoothly, but most skills required continual adaptation to contingently changing environments. To play a sonata may require ignoring the mechanics of finger movements in order to focus on expressive cues, or points of transition in the musical score. But if a difficult fast-paced piece of fingering is approached, attention may revert to more basic cues before returning to higher level cues linked to automated chunks (Geeves, Christensen, Sutton, & McIlwain, 2008, pp. 169–170). In short, the mind roams in the course of performative skills, but it is not absent. This is markedly evident when one wishes to hone or shape skill. Experts sometimes resist automation and activate what they know to optimize skill deployment in new contexts (Macpherson, 2008; Ericsson, 2009). It is hard to change how we act if we have no phenomenological access to our body. Not everyone has the same access to inner bodily cues. Mentally colonizing one's body, truly to come to have a body that is phenomenologically present, is born of optimal experiences. It is a personal and developmental achievement which to many may remain elusive, and which is never complete.

Words Can Help Us to Inhabit Our Bodies Differently

Yoga is very optimistic about what words can do to bodies. This article addresses a number of interlinked issues:

- the role that language can play in the process of coming to inhabit our bodies differently, especially the language of skilled observers steeped in specific (sometimes ancient) metaphoric structures
- the effects that words have as they alight on bodies, as knowledge is literally incorporated
- why we need such outside, interpersonal influence on our movement capacities to discover what might appear to be a deep interiority of self.

Yoga as Case Study: Format of the Project and Methods

Yoga is a closed skill, in that it does not entail contingent responses to external stimuli, as is required when someone passes a ball to another player or negotiates a moving waveform while surfing. Yoga is unlike dance in that it involves no rehearsal: the performance and practice phases are merged. The transition between novice and expert is not readily demarcated. While learning to drive may only require explicit

instruction and attention until the skill is mastered, or comes to be applied in novel contexts like driving on the other side of the road, or on gravel roads, or in snow or in heavy traffic, in yoga explicit instruction and attention are required even for the expert practitioner. Some of that instruction derives from external guides, but personal mottos or maxims also feature, to prime attention and avoid the unthinking implementation of excessively proceduralized habits. Many retain the explicit use of such nudges even while driving, by revisiting helpful maxims to facilitate cornering fast, reversing with a trailer or braking in gravel. We suggest that thought is intimately related to skilled movement, attuning action to environmental tasks the whole time, allocating attention to the right level of performance cue. The expert does not inhabit a mindless body. Rather, the mind is there, ready to come online at any time.

We report participant observations: Doris McIlwain (DM) provides self-reflections on her yoga practice to illustrate theoretical points throughout the article. She has been involved in Iyengar yoga (1987–2003, doing teacher training in 2001–02) and Anusara yoga (2003–present). For this study, we worked with groups from these two traditions with whom we had ongoing relationships, because while the two share a pose repertoire the teaching styles differ markedly, and the traditions—based on distinctive philosophical systems, as we explain below—use different metaphoric structures in instruction. In the larger project from which this article springs, we also used focus groups and individual interviews, and we filmed and coded sequences from more expert and more novice practitioners from these two yoga traditions. (An article based on the quantitative coding comparing and contrasting the traditions is in preparation.) We observed students, and practice, demonstration and manual adjustments by teachers from both traditions. The Iyengar teacher is Melanie Sandford, and the teacher who was an Anusara teacher at the time of filming is Craig Sharp. Our video sequences do not include manual adjustment, but follow students through a set of *asanas* (poses) devised by DM with the help of Julie Taylor. On the basis of these studies, we can describe moments where words alighted on the body and promoted observable change.

This project traverses an unspoken notion in yoga that if one theorizes, one goes straight and predominantly to ancient texts (but see Smith, 2007). Yoga does not have a demarcated, recognizable psychology. In turn, it has until recently not been studied within psychology, even though evidence suggests that body-responsiveness in yoga is an antidote to the effects of self-objectification of the body (Daubenmier, 2005). We explore how practice allows a theory of yoga to arise. Can we theorize yoga from the mat up? Is there room in yoga both for a psychology of a personal sort and for reflection on it informed by such mixed methods? And is there room for yoga within pedagogical theory and cognitive science?

Seeking yoga to colonize my body—a body controlled, subdued and pushed to its limits, but rarely trusted, attended to or heard—the last thing I wanted to do was approach yoga intellectually. My head was too heavy for my neck already. So I set aside the books, listened to my teachers and to those signals arising faintly from within. (DM, 2004)

What Do Yoga Poses (Asanas) Teach?

Each practitioner engages with the *asanas*, first and foremost. Beginners start with foundational poses, usually standing poses to convey quickly a number of important things: the grounding of the pose, the use of large muscle groups to bring the skeleton into alignment using the breath, and following the breath as an intimate guide so that effort does not become strain. One learns to sense what is there first before attempting to change it, a process in embodied learning that Elizabeth Behnke (1988/1995) terms ‘matching’. This sensing what is there first before changing it is not always possible, because sometimes it is only in applying torque that one comes to access the ‘sedimented ways of making a body’ (Behnke, 1997, p.181).

Signature patterns of tension are perhaps the greatest barriers to fully mentally colonizing the body. One becomes so accustomed to them that they are often not amenable to cognitive penetration. One becomes aware, first of all, of what we term ‘silent zones’. These form barriers to skilled movement. Within those silent zones, there are functionally fused areas which make impossible the required subtle, local shifts, because phenomenological access to these necessary shifts is precisely what needs to be acquired, by one means or another. The first challenge is to realize that the silent zones are *there*.

I realised that there was work I had to do that only I could do. If I couldn’t sense the placement of my shoulder blades in an *asana*, there was no other route to awareness. I couldn’t wire up my rhomboids and watch the sparks fly at muscle contraction. I became aware of vast silent areas in my body. What had initially felt like tension and pain—signature patterns of holding myself—instead came to feel like something left in place by equal and opposing forces so long as to grow numb and hard with the effort. Like a body storing old forgotten actions that now felt like stillness, like zones of inertia. It was as though I were a rag doll and some of the parts of my body had been filled with concrete instead of pliant stuffing, some areas stitched up altogether with no enquiring awareness passing through. It was like a psychic numbness. How had I not noticed? (DM, 2004)

Signature Patterns of Tension

Signature patterns of tension have four sources: ghost gestures, innate differences in bodily form, functional fusing, and signature patterns of affective experience, modulation and expression.

Ghost Gestures

Signature patterns of tension can arise from ghost gestures (Behnke, 1997), or the residue of patterns of bodily use. Some of us, for example, who spend our lives coupled to a computer abandon our body to adopt thoughtless postures as we struggle with ideas. Ghost gestures are our ‘tendencies towards movement’, the ‘persisting patterns of trying, bracing, freezing’ which Behnke calls an ‘inadvertent isometrics’

and a ‘tacit choreography’ (Behnke, 1997, pp. 181, 191). Concert pianists are sometimes quite asymmetric in their resting body poses, due to their habitual bodily positioning as they execute fast and expressive sequences of notes with rapid, localized finger movements, requiring in some a persistent bracing of torso and shoulders.

Innate Differences in Bodily Form

Innate contingencies of structure characterize individual bodies, giving them a remarkable uniqueness. A common example is the degree of rotation possible of the thigh bone in the deep hip socket joint owing to irregularities of the receptive bone cavity, and to the way it fits with the round head of the upper thigh bone formation.

Functional Fusing

Contingently coupled actions may become functionally fused. This fusing or chunking of actions results in the interlinking of compensatory movement, which leaves a residue of the patterns of bodily use. Functional fusing is sometimes skilful action. It results from the dynamic coupling of interconnected co-adjustments. In an open skill it may animate a coupled sequence in relation to an environmental contingency, like someone throwing a ball to us, or the shape of a wave break we intend to surf. In a relatively closed skill such as yoga, it can arise from a repeated attempt to produce a particular posture.

Such dynamic couplings of interconnected co-adjustments are sometimes compensatory, to bypass zones of muscle weakness, or to sustain balance in difficult poses where muscles are engaged to maintain a dynamic stasis. We may have dynamic couplings which have arisen as we unconsciously adjusted to avoid certain forms of effort, so that we can continue thinking about the sentence we are writing, or the pot we are throwing.

Dynamic couplings of interconnected co-adjustments which are sometimes compensatory may solve a short-term problem of balance, or optimize strength. But they may then mask differential muscular strength, by using the arm muscles if the shoulder is weak, or moving swiftly up out of a pose to avoid relying on thigh muscles which are underdeveloped. As short-term solutions, they may become habitual in ways that often do not serve us well in the long term. One may ‘get away with it’ in beginner’s poses, then need to open up these couplings to interrogation and uncoupling in more advanced poses. Learning bad habits can limit the reach of skilled action.

Signature Patterns of Affective Experience, Modulation and Expression

There is no performance in yoga. There is a sheer pleasure just in being attentive to the body. Cole and Montero (2007, p. 303) explore affective proprioception in relation to the conditions necessary for a voluptuous feeling of the ‘pleasure of, and being in, action’. Emotion also influences our embodiment prereflectively or, as Slaby (2008, p. 437) terms it, ‘pre-noetically’, where ‘the bodily feeling is part of the structure of the affective experience and thereby contributes to its content’. Colombetti

(2011, p. 305) suggests that ‘bodily feelings in emotion experience can be pre-reflective, non-objectifying modes of awareness of one’s own body’. She gives the example of being absorbed in playing the piano.

In my experience, this state does not go together with an inconspicuous body. Throughout the activity, my bodily posture, my facial expressions, and/or the way my fingers touch the keys come to the foreground; I feel my body resonating with the music, with momentary surges of physical tension, perceived in my viscera as well as muscles, and entangled with the affective quality of the music. These bodily feelings are not disruptive; on the contrary, they are part and parcel of the excitement, as well as of the enjoyment of the situation. They do not disturb the overall experience, but rather enrich it by adding texture to it. (Colombetti, 2011, p. 307)

But affective bodily clout is only part of emotional experience. We often know more than we show. In the prosocial use of active embodied skills, what Goffman (1955) termed ‘facework’ is a common form of skilled self-presentation, hard work that often goes unacknowledged (McIlwain, 2009). In such emotional labour, ‘people regulate or manage their emotions in exchange for a wage’ (Totterdell & Holman, 2003, p. 55). Hochschild (1983) studied airline staff coached in ‘feeling rules’ and ‘required to induce or suppress feeling in order to sustain the outward countenance that produces the proper states of mind in others’ (p. 7). She noted that such ‘work’ can alienate a person from their emotions: ‘feeling is thinner, less freighted with consequence’ (p. 13), disrupting the role of emotions in signalling environmental risks and inner experiences. Emotional labour is invisible work if outcomes are seen as work’s sole products. Its invisibility prevents easy elucidation of its nature or bodily costs. That it might be costly is evident from the bodily power of the affects being modulated or held back.

Darwin (1872) suggests that affects once were actions: rage the destruction of an opponent, fear the freezing in the face of that which might destroy us, so that we at least do not move towards it, or a taking flight. Hejmadi, Davidson, and Rozin (2000) explored Hindu Indian emotion expressions by way of dance gestures from the *Natyasastra* by Bharata (first or second century), which spells out how emotions are expressed with special attention to the face and hands. They used the emotions of anger, disgust, fear, heroism/valour, humour/amusement, love, peace, sadness, wonder and shame/embarrassment/shyness. They found that students from the USA recognized correctly as many emotional expressions as students from Orissa, India. In these exquisite cultural forms, there is evidence of a deep shared understanding of the embodiment of emotion.

Affect programmes are not the full story of what emotions are: they can be transformed with the developmental suite of competencies they modulate and are modified by as we grow. But they do have a signature grasp on the body, breath, glands and action-tendencies (Tomkins, 1962; Tomkins, 1963; Panksepp, 1998; Lambie & Marcel, 2002). Fear inhibits the breath, closes off the upper body, bringing the shoulders forward, lengthening muscles on the back, inhibiting the use of the upper lungs: the shallow panicked breathing before flight. The legacy of fear is a rigid cage-

like chest which moves like a single entity, rather than a fragile mobile assemblage which uses all of the diaphragmatic possibilities of respiration (Kaminoff, 2007).

What Do Signature Patterns of Tension Produce?

Signature patterns of tension produce ‘silent zones’ where patterns of bracing and freezing have created cognitively impenetrable areas of the body. They also produce cognitively impenetrable actions created from the habitual coupling of movements which become functionally fused in a skilful but compensatory form. There are at first signature patterns of pain which can be highly diagnostic of suboptimal bodily action (such as managing weakness or bypassing stiffness), and predictive of possible avenues of remediation and treatment (Gauchard, Gangloff, Jeandel, & Perrin, 2003), before damage ensues. ‘Silent zones’ frequently involve articulated bodily parts initially capable of independent movement which are no longer so because they have become either fused functionally or literally interconnected. A common example is the ‘butterfly pattern of tension’ where a lifted positioning of the shoulder blades on the back is no longer readily sensed, producing tension in the upper spine and neck region.

These attributes can form a troubling *hidden order of ghost gestures* which, if perpetuated (and if they become a sedimented part of our repertoire), will lead to predictable patterns of damage and pain. Before they do that they will limit movement range and skill. Granted, they will accord *character* to our way of moving, such that one can discern a lover in the crowd by movement before other features emerge. But they can compromise our ability fully to inhabit the body, fully to bring our awareness and attention to these reflex-like sedimentations. They seem cognitively impenetrable. But we suggest that they need not remain so.

How Signature Patterns of Tension Can be Reached and Changed

Minding the body involves finding ways of becoming aware of zones and ways of moving. Calling this a quest to ‘penetrate one’s own amnesia’ may be to overstate the case, as much of what is there may never have been in explicit memory in the first place. Like Bollas’ notion of the ‘unthought known’ (1989), many procedural sequences of movement or stillness have never been thought, neither available in language (there may be none) nor amenable fully to conscious reflection. Yet it may be precisely these sequences that we have to become aware of to undo their inter-linked, chunked status. By ‘chunked’ we mean that clusters of responses are formed based on relatedness or co-occurrence. If these sequences have been known at all, they have been unconsciously known, a kind of untaught procedural knowledge. Finding the language for that which is idiosyncratic and has never been in language is not like learning to drive, when someone else’s language guided us to skilled action that then became embodied. It is more like the way that someone may be able to tell a cabernet from a shiraz without having been taught. The teacher’s words may produce differences in our movement into an *asana*, but if in that process we have to gain access to a contingently coupled sequence of adaptations that has never been in language, we then have to find a way to render it mental, perhaps to name it.

Such discerning and doing is minding the body. It does not mean that one can give a verbal account of the entire procedural sequence. Success is contingent not on finding words, unless one wishes to teach, but on being able to do something one could not do before: an action or a discerning of a difference. In yoga, development hinges on being able to do something—and do it differently.

Yoga permits us learned sensitivities whereby unconsciously expressive movements become perceptible or sensed, consciously accessed, potentially named, and shared. At last, subtle, discrete regions can be moved independently to named instructions. There are many influences in this process, as we discuss below.

What Is the Point of Rendering Verbal Ineffable Skills?

Minding the body helps us to colonize silent zones, disrupt functional fusions, interrogate ghost gestures and jostle with the ghosts of feeling as we try out novel genres of movement, depending on the degree of localized access to segments of the body and the capacity for localized movement (for inventive displays). We can influence ourselves in novel ways, become open to improvisation from an intersubjective source. Access to the hidden order of ghost gestures may require our receptivity to instruction, our capacity to ‘incorporate knowledge’, literally.

Influencing Ourselves: Self-Generated Instructional Nudges

Along the way people find words, as they struggle with idiosyncratic ways of accessing the previously unstateable. Sharp observation necessarily shades into metaphor, often a synaesthetic borrowing of other senses which support a richer vocabulary than the kinaesthetic. Idiosyncratic maxims and imagery may or may not align with or latch on to existing systems of analogy or metaphor. For example, DM devised an ‘instructional nudge’ (Sudnow, 2001; Sutton, 2007) that helped with triangle pose. She tried to stay between ‘two panes of glass’, rather than breaking the plane of alignment and grabbing her toe. Again, she devised a nudge which she called ‘that zig-zag’ which helped to align leg or arm by focusing on vital points. This involved grounding the foot by focusing on the ball of the foot, then the outer knee, then the inner thigh, then the outer hip in a dynamic mental traversing of her leg.

Being Influenced by Others: The Role of the Testimony of Trusted Observers

Yoga relies on the testimony (*agama*) of a trusted observer (*apta*), a neglected source of epistemological warrant in the West. The *apta* has to have ‘a means of valid knowledge (perception and inference) as well as being skilled and compassionate in the passing on of knowledge’ (Coward, 2002, p. 12). This is a unique source of knowledge, not accessible by any other means, and it forms one basis of the student–teacher bond. ‘Guru–disciple devotion’ arises for some people. In this relationship it seems at times (as in psychoanalysis) that any problems are the student’s (analysand’s). There has to be complete trust in the method of conveying the information and the rightness

of the insight. The student of yoga is expected to work with whatever he or she is given. The guru notion is perhaps imperfectly applied in the West.

There is vulnerability in having one's ways of doing things taken as the object of analysis, and decoupled in public. One's assumptions and limits are seen. One's emotions and attitudes are apparent when one encounters limits and cannot move past them. As an encounter with the bodily sedimentations of one's psychoaffective history, this is a zone ripe for shame. The importance of insight into that vulnerability on the part of the teacher at these points is crucial. In the guru–disciple tradition, yoga lacks a psychoanalytic notion of transference, whereby former relationship patterns could act as templates for present, new relationships on the part of both teacher and student. Yoga has in place instead a series of recommendations so that such moments are not taken personally. However, in transposing systems of thought and relationship from East to West, a few things that can be taken as present in Eastern cultures, such as trust in the wisdom of the teacher and his or her manner of conveying that wisdom, are not always in place (or warranted) in the West. Students cannot always trust that the teacher is (or even could be) aware of how certain instructions impact upon them in a public place. There are breakdowns in student–teacher relationships, many silent tears and solitary, confounding emotions which have, in an odd way, nowhere to go within yoga systems as they are currently practised in the West, despite the efforts of yoga scholar Carlos Pomedá to accommodate the emotions. Going to one's limits entails negotiating the unthought known, emotional and procedural knowledge. The emotions that arise in thus having templates from one's past on display can be powerful. Many people are accessing things that have never been in language and may be beyond language.

Disruption of Signature Patterns of Affective Experience: Jostling with the Ghosts of Feeling

On assuming a pose to approximate the required initial formation, one usually does so in ways that retain unconscious ghost gestures. There are inevitably zones where the necessary, discrete, subtle and often highly local adjustments cannot be made. These can be rendered more accessible by minding the body, and interpersonal intervention is often required to disrupt old patterns. This is no simple process when the experience not only is outside language now, but may have never been in language. Certain ways of moving are precluded because they are not part of the hidden order of ghost gestures that have come to make up our personal repertoire. There is a felt vulnerability in trying to move outside that repertoire; it is an immensely baring experience. Not since infancy have we tried in the presence of experts to move in ways that we could not achieve, with a body that escapes full cortical control. We will doubtless experience this again with age.

The vulnerability of going to my limits showed in unexpected ways: a shyness at demonstrating a limitation, or a way of working. Reaching a point where my bodily awareness petered out, where a necessary local adjustment, suggested by the teacher's voice, couldn't be made—my body unable to

turn the words into subtle shifts and actions. The teacher's hands-on help at that moment effecting skilled adjustment with timely words led to, quite literally, an incorporation of knowledge, a personal discovery of new pathways of accessing movement. And when with a good teacher it is done with clarity, focus and a sense of kindness, vulnerability becomes openness, a willingness to reach and surpass limits again. Yoga, on the mat or off, is for me about learning to breathe in impossible places. (DM, 2004)

The role of the teacher is replete with requirements of skilled observation and insight, seeing patterns of functional fusing that ramify throughout the body. Very fit men frequently have very tight hamstrings, and this places strain on their lower back if they attempt forward bends without sitting on some height and keeping their legs active. Instruction helps. The teacher apprehends the patterns, and uses timely language to get the performer to sense those patterns and to work with and against them, disrupting them to form new skilled movements. Where the words cannot be incorporated by the body into new action, demonstration helps. One can see what one is doing by observing it as demonstrated by the body of another (perhaps a student with the same ghost gesture pattern), or by the teacher showing what you are doing, and showing that subcomponent of the action that you lack or that is needed to do the pose otherwise.

Or, if seeing the salient difficulty in demonstration still does not permit one to move differently oneself, the teacher will physically constrain one part of the person's body while suggesting how the other part should move, or even manually adjusting another part of the body. A common example is helping a person to get height in their upper torso before they try to turn to the side in twists. Adjustment makes new sensations possible, since part of the body is put into an alignment that is outside the range of self-initiated movement. One reaches positions that cannot be commenced via instruction. It may be that words cannot be attached to chunked perceptions of body parts if the different aspects cannot be sufficiently differentiated.

Different Metaphorical Traditions: Anusara and Iyengar

Iyengar yoga is inspired by the sutras of Patanjali. Patanjali's dualist system aligns body/mind with the ephemeral *prakriti* (matter), as against *purusa* (spirit). The physical poses, the *asanas*, anchor mind, finding ways to still, to step aside from or eradicate longings and clinging attachments that promote perturbations in conscious awareness, so that we can find release from mistaking ourselves as physical and separate. Iyengar yoga is a vastly influential systematization of ancient practices of *asanas* (poses) and *pranayama* (meditative breathing) devised by Mr B. K. S. Iyengar. Pedagogically, this system commences with rigorous attention to the details of alignment of discrete, external, visible parts of the body. One increasingly becomes able to discern the parts of the body from within, with the help of verbal tags such as the 'four corners of the feet' and 'lifting the knee caps', 'pressing down the seam of the outer foot' and 'keeping the skin on the inner thigh lifted'.

Anusara yoga is informed by Kashmir Shaivism, which is non-dualist. All is seen as part of spirit. Attitude is as critical as alignment from the start. In Anusara yoga a vast

metaphoric structure synthesizes years of yoga scholarship initially by John Friend and Doug Keller in partnership, then by John Friend on his own, to make those principles accessible to practitioners. The vocabulary of loops and spirals informs instruction, outlining dynamic linkages potentially sensed in the body. The attitude to the actions that produce alignment is conveyed by terms such as ‘lifting your heart’ to denote an opening of the chest and an embracing of the possibility of change right now, or ‘inner body bright’ denoting a positive, committed attitude to effort in making a pose, complementing attention to external detail.

Standing Poses

These two different metaphorical traditions are apparent in the distinctive pedagogical styles and instructions of the teachers, as we show in some examples. The metaphorical differences in the traditions’ instructional vocabulary were readily observable. We emphasize that both promote change. Melanie Sanford, the Iyengar teacher, instructed DM as she performed a foundational standing pose (*Parsvakonasana* or revolved side angle pose) to have her ‘mind in the back heel ... lifting your chest to ceiling’, while Craig Sharp (at that time an Anusara teacher with a history of Iyengar training) instructed Sara Barry as she moved into the same *asana* to ‘inner spiral your back leg and scoop the tailbone’ (Figure 1).

The teacher needs to be skilled at seeing where it is perhaps the student’s attitude to action, rather than a straightforward physical limitation to her movement, that is precluding the kind of effort that might open out the repertoire. Instructing Sara in



Figure 1. Sara responding to instructions in *Parsvakonasana* (revolved side angle pose).

the chair pose (*utkatasana*), Craig asked her to ‘settle into the breath for a moment, inner body bright’ and then took her forward into the pose.

Disrupting Ghost Gestures

Disrupting ghost gestures, the ‘tendencies towards movement’ and the ‘persisting patterns of trying, bracing, freezing’, requires a teacher’s keen observation and a skilled use of instructional nudges. The aim is to bring about capacities to sense what is there, access the discrete movements required to change alignment, and effect that movement without other compensatory movements distorting the pose. Melanie picked up on DM’s marked ghost gesture in the chair pose. DM’s ghost gesture consists in a hyperextension in the lower spine, linked to inborn flexibility in that area and acquired tight shoulders (which are thus not required to move owing to accentuated, compensatory flexibility in the lower spine), to patterns of high effort regardless of fatigue, and to a rapid breathing pattern where the ribcage moves as a single unit (Figure 2).

Melanie addressed this pattern by highly accessible anatomical nudges, requesting that the lower ribs be brought back and that the tailbone be moved down. In contrast, Sara does not have a ghost gesture of this sort. However, the tendency to hyperextend the lower ribs in this pose was still addressed by Craig, as he gave the markedly differ-



Figure 2. Doris revealing ghost gesture of hyperextension in lower back, doing chair pose.

ent Anusara-informed instructions for Sara to ‘puff the kidneys and open the heart’ (Figure 3). ‘Puff the kidneys’ means allowing the back of the body just below the ribs to remain full rather than squeezed forward in hyperextension and effort. The hyperextension in the lower back also has the effect of stimulating the adrenals, affecting the organic body and thus the mental effect of the pose. So, attention to alignment prevents over-effort which would quite literally over-stimulate the body further. ‘Open the heart’ enhances breath intake, referring to an opening and lifting of the chest, with the shoulders broadening and softening down rather than lifting up to the ears. The shoulder blades remain on the back, supporting the pose. Thus, these different, coupled instructions together address and counter a tendency to lose alignment by tightening and compressing certain zones of the pose.



Figure 3. Sara in chair pose, responding to the instruction to ‘puff the kidneys and open the heart’.

Disrupting Functional Fusings

The teacher needs to be able to break down fused macro-chunks into ever-finer elements. The skill is in dismantling chunked sequences of action that might have served us well in other contexts. We can return to them as chunked habits or skills, but we need to render them less modular in the short term. They may present as cognitively impenetrable zones of the body. There was no response at all when Melanie gave DM the instruction to broaden the sacrum in the backbend pose (like an inverse spider). In such instances, verbal instruction may need to be supplemented by manual adjustment, by being moved physically, so that one can feel differently in a pose and gain the afferent feedback from that different positioning. In contrast, some functional fusings do respond to verbal intervention. While in backbend, DM received the quite literal instruction from Melanie to ‘let the head go’ (Figure 4). The arched involvement of the neck was actually inhibiting the kind of openness that would bring the pose to its fullest.

We can jostle with the hidden order of ghost gestures, rendering silent zones cognitively penetrable, minding our body in ways that are revealed through our receptivity to instruction, through our capacity to incorporate knowledge. This is the kind of openness that is paramount in yoga. It operates at a physical and a mental level and produces a profound sense of transformation.

The discipline of yoga is for me about an openness that undermines every assumption. It is not the steely discipline of ‘go for the burn’ of the Jane Fonda workout—of reinterpreting as desirable signals of pain and anaerobic respiration in tired muscles. Neither is it a sleekly staying well within a personal comfort zone. It was, and is, about learning to breathe in impossible places—on the mat and off. It is about how to stay at one’s limit long enough and calmly enough to find out if that truly is one’s limit. It is to explore how to be there with the breath finding quietness, dissolving the



Figure 4. Doris revealing functional fusing in locking of neck, doing backbend.

mind-closing panic, listening to the body. ‘What can you see in backbends?’ That is my friend Melanie’s gem. One need not drown in effort. How can you find space in the body to move into a pose, in time with breath, rather than jamming, pushing, forcing? (DM, 2004)

Finding Words So Others Do Not Pay the Price

Psychoanalytic writings on trauma attest to the difficulties of minding the gap between what bodies are capable of experiencing or doing and the hard work of finding the words to say it (Bromberg, 1998). Where there is no possibility of giving voice to something, we find ingenious ways of conveying it to others: we make them have our feelings for us, putting them in our state so they enactively understand (Ogden, 1979). When what Anzieu (1989) calls a reflective encounter with our desire is not possible, we communicatively convey it via enactment (Gabbard, 2007), or more explosively via acting out.

Mental Promise of Yoga

As careful observation by others and our incorporation of their instructional nudges permit us to colonize the body afresh, we encounter a non-verbal, sedimented history of our transactions with the world. Unfreezing these couplings seems to cause emotional and mental changes. Each person negotiates this potential transformation with a different history and enters the process at a different point on the trajectory of being able to mind his or her body. There are vast personality differences in how much trust we come to place in the reality of inner experiences (McIlwain, 2007). Winnicott (1945/1988, p. 151) speaks of the developmental achievement of ‘the repeated quiet experiences of body care that gradually build up what may be called satisfactory personalization’, where one comes to feel the reality of one’s lived bodily experiences and inner needs. Phillips (1988, p. 80) elaborates: ‘There is a dawning experience of being a specific person whose particularity is rooted in the body, and which will be elaborated into the sentiment of being who one happens to be’. There are strong links here with cognitive and philosophical studies suggesting the role of human awareness of interoceptive sensations in the emergence of a feeling self (Damasio, 1999; Craig, 2002; Craig, 2004; Slaby, 2008). Many commence yoga for physical reasons, but the encounter is with an embodied mind.

I hadn’t counted on this mental effect. Hadn’t counted on the fresh discovery of rhythm—a time for effort—the guiltless repose. A rhythm of working replaced ‘going to the max’. I was over my own heels more in life, more balanced, more expansive. There was more trust in my inner sensations, and more of them to be trusted.

When I started it seemed obvious to me that yoga was about flexibility, and I celebrated the parts of me that could move like cooked spaghetti. Until I realised that a gymnastic flexibility almost got in the way of grasping what yoga is. The fleeting temporality and changes appeared in what I had

stolidly called ‘my body’; the morning body—so different from the evening body, left from right, post-deadline body quite different from holiday calm; the multiplicity of ways of being in what before had been ‘my body’ astounded me. I could no longer clearly state what it could do, because some days it could do far more, some days would stop short of that. The variability of the lived body revealed to me how much I had imposed a conception of body on my fleshly, changing, breathing one. The unthinking imposition of ‘what I can do’ reeled back; I found a pliant, shifting, asymmetric responsive body that had much to tell me about how I was living.

It feels a perfect antidote to my urban, western mode of achievement. Gymnastic endpoints forgotten, I discovered process in the most signature form. What pattern of breath, what quality of mentality does this pose give at first? How does a change in attitude to the strong sensations of one’s limits make it possible to stay there, to listen? The ends of my former opposites, no longer paradoxes, enfolded as readily as my legs and spine: active stillness, detached immersion, effortless effort, powerful calm. (DM, 2004)

Acknowledgements

We are very grateful to the editors of this special issue, and especially to Sara Barry, Melanie Sandford, Craig Sharp and all the yoga practitioners who participated in this study. Thanks to Sally Bongers for her expert filming and to Nina McIlwain for assistance with the still images. Earlier versions of this article were presented at Macquarie University at Memory Day and in the Anthropology Department seminar series, at the SEAM conference at the Seymour Centre and the MMM-CCC conference at Coogee, and to our research group on the phenomenology and psychology of sport and skilled movement. Thanks to everyone who offered feedback on these occasions: Charles Wolfe’s commentary was particularly helpful, while Wayne Christensen and Andrew Geeves have deeply influenced our thinking.

References

- Allen-Collinson, J., & Hockey, J. (2009). The essence of sporting embodiment: Phenomenological analyses of the sporting body. *International Journal of Interdisciplinary Social Sciences*, 4, 71–82.
- Anzieu, D. (1989). *The skin ego: A psychoanalytic approach to the self*. New Haven, CT: Yale University Press.
- Behnke, E. A. (1995). Matching. In D. H. Johnson (Ed.), *Bone, breath, and gesture* (pp. 317–337). Berkeley, CA: North Atlantic Books. (Original work published 1988).
- Behnke, E. A. (1997). Ghost gestures: Phenomenological investigations of bodily micromovements and their intercorporeal implications. *Human Studies*, 20, 181–201.
- Beilock, S. L., & Carr, T. H. (2001). On the fragility of skilled performance: What governs choking under pressure? *Journal of Experimental Psychology: General*, 130, 701–725.
- Bicknell, K. (2010). Feeling them ride: Corporeal exchange in cross-country mountain bike racing. *About Performance*, 10, 81–91.
- Bollas, C. (1989). *The shadow of the object: psychoanalysis of the unthought known*. New York: Columbia University Press.
- Bromberg, P. M. (1998). *Standing in the spaces: Essays on clinical process, trauma, and dissociation*. Hillsdale, NJ: Analytic Press.

- Cole, J., & Montero, B. (2007). *Affective proprioception*. *Janus Head*, 9, 299–317.
- Colombetti, G. (2011). Varieties of pre-reflective self-awareness: Foreground and background bodily feelings in emotion experience. *Inquiry*, 54, 293–313.
- Coward, H. (2002). *Yoga and psychology: Language, memory, and mysticism*. New York: SUNY Press.
- Craig, B. (2002). How do you feel? Interoception: The sense of the physiological condition of the body *Nature Neuroscience*, 3, 655–666.
- Craig, B. (2004). Human feelings: Why are some more aware than others? *Trends in Cognitive Sciences*, 8, 239–241.
- Damasio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. New York: Harcourt Brace.
- Darwin, C. R. (1872). *The expression of the emotions in man and animals*. London: John Murray.
- Daubenmier, J. J. (2005). The relationship of yoga, body awareness and body responsiveness to self-objectification and disordered eating. *Psychology of Women Quarterly*, 29, 207–219.
- Downey, G. (2008). Scaffolding imitation in Capoeira: Physical education and enculturation in an Afro-Brazilian art. *American Anthropologist*, 110, 204–213.
- Downey, G. (2010). Practice without theory: A neuroanthropological perspective on embodied learning. *Journal of the Royal Anthropological Institute*, 16, S22–S40.
- Dreyfus, H. L. (2007). The return of the myth of the mental. *Inquiry*, 50, 352–365.
- Ennen, E. (2003). Phenomenological coping skills and the striatal memory system. *Phenomenology and the Cognitive Sciences*, 2, 299–325.
- Ericsson, K. A. (2009). Discovering deliberate practice activities that overcome plateaus and limits on improvement of performance. *International Symposium on Performance Science*. Retrieved March 26, 2013, from <http://www.legacyweb.rcm.ac.uk/cache/fl0020313.pdf>
- Favret-Saada, J. (1980). *Deadly words: Witchcraft in the bocage*. Cambridge: Cambridge University Press.
- Flegal, K. E., & Anderson, M. C. (2008). Overthinking skilled motor performance: Or why those who teach can't do. *Psychonomic Bulletin & Review*, 15, 927–932.
- Gabbard, G. O. (2007). Unconscious enactments in psychotherapy. *Psychiatric Annals*, 37, 269–275.
- Gauchard, G. C., Gangloff, P., Jeandel, C., & Perrin, P. P. (2003). Influence of regular proprioceptive and bioenergetic physical activities on balance control in elderly women. *Journal of Gerontology*, 58A, 846–850.
- Geeves, A., Christensen, W., Sutton, J., & McIlwain, D. (2008). Critical review of Roger Chaffin, Gabriela Imreh, & Mary Crawford, *Practicing perfection: Memory and piano performance*. *Empirical Musicology Review*, 3, 163–172. Retrieved from <http://hdl.handle.net/1811/34109>
- Goffman, E. (1955). On face-work: An analysis of ritual elements of social interaction. *Psychiatry*, 18, 213–231.
- Grasseni, C. (Ed.). (2007). *Skilled visions: Between apprenticeship and standards*. New York: Berg-hahn Books.
- Hejmadi, A., Davidson, R. J., & Rozin, P. (2000). Exploring Hindu Indian emotion expressions: Evidence for accurate recognition by Americans and Indians. *Psychological Science*, 11, 183–187.
- Hochschild, A. (1983). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.
- Howe, L. A. (2003). Athletics, embodiment and the appropriation of the self. *Journal of Speculative Philosophy*, 17, 92–107.
- Kaminoff, L. (2007). *Yoga anatomy*. Champaign, IL: Human Kinetics.
- Kirsh, D. (2010). Thinking with the body. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, 2864–2869. Retrieved March 26, 2013, from <http://adrenaline.ucsd.edu/kirsh/Articles/Interaction/thinkingwithbody.pdf>

- Lambie, J. A., & Marcel, A. J. (2002). Consciousness and the varieties of emotion experience: A theoretical framework. *Psychological Review*, *109*, 219–259.
- Legrand, D., & Ravn, S. (2009). Perceiving subjectivity in bodily movement: The case of dancers. *Phenomenology and the Cognitive Sciences*, *8*, 389–408.
- Macpherson, S. L. (2008). Tactics: Using knowledge to enhance sport performance. In D. Farrow, J. Baker, & C. Macmahon (Eds.), *Developing sport expertise* (pp. 155–171). London: Routledge.
- McIlwain, D. J. F. (2007). Rezoning pleasure: Drives and affects in personality theory. *Theory & Psychology*, *17*, 529–561.
- McIlwain, D. J. F. (2009). Living palely: On the rationality of a certain fullness of feeling. *Art-link*, *29*, 15–23.
- Montero, B. (2010). Does bodily awareness interfere with highly skilled movement? *Inquiry*, *53*, 105–122.
- Ogden, T. H. (1979). On projective identification. *International Journal of Psycho-Analysis*, *60*, 357–373.
- Panksepp, J. (1998). *Affective neuroscience: The foundations of human and animal emotions*. Oxford: Oxford University Press.
- Phillips, A. (1988). *Winnicott*. London: Fontana.
- Samudra, J. K. (2008). Memory in our body: Thick participation and the translation of kines-
thetic experience. *American Ethnologist*, *35*, 665–681.
- Slaby, J. (2008). Affective intentionality and the feeling body. *Phenomenology and the Cognitive Sciences*, *7*, 429–444.
- Smith, B. R. (2007). Body, mind, and spirit? Towards an analysis of the practice of Yoga *Body & Society*, *13*, 25–46.
- Sudnow, D. (2001). *Ways of the hand: A rewritten account*. Cambridge, MA: MIT Press.
- Sutton, J. (2007). Batting, habit, and memory: The embodied mind and the nature of skill. *Sport in Society*, *10*, 763–786.
- Sutton, J., McIlwain, D., Christensen, W., & Geeves, A. (2011). Applying intelligence to the reflexes: Embodied skills and habits between Dreyfus and Descartes. *Journal of the British Society for Phenomenology*, *42*, 78–103.
- Tomkins, S. (1962). *Affect, imagery, consciousness: Vol. 1. The positive affects*. New York: Springer.
- Tomkins, S. (1963). *Affect, imagery, consciousness: Vol. 2. The negative affects*. New York: Springer.
- Totterdell, P., & Holman, D. (2003). Emotion regulation in customer service roles: Testing a model of emotional labor. *Journal of Occupational Health Psychology*, *8*, 55–73.
- Wacquant, L. (2004). *Body and soul: Notebooks of an apprentice boxer*. Oxford: Oxford University Press.
- Winnicott, D. W. (1988). Primitive emotional development. In D. W. Winnicott (Ed.), *Human nature* (pp. 99–160). London: Free Association Books. (Original work published 1945).