

The role of the body in Kalahari San healing dances

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Abstract: Despite extensive interest of both scholars and the wider public in the Kalahari San healing dance, there has been little analysis of the dance that begins with the biological human body. In this paper I explore the role of the body in the dance by drawing on my own KhoeSan healing experience, professional knowledge as an osteopath and acupuncturist, wider anthropological work on possession dance and a tentative neurophysiological interpretation. My starting point is Bradford Keeney's identification of shaking as a critical mechanism for 'opening the body up to spirit' (Keeney 2008). By contextualising San shaking in osteopathic and neurophysiological terms I develop the idea that San healers are applying the same sensory disposition that serves them so well as hunters and gatherers to their shamanic healing strategies. Using habits of 'body listening' San healers apply sophisticated techniques of manipulating the body and mind towards defined goals including the ability to heal, experience of extreme empathy, feelings of transcendence and the experience of transforming into animals. I suggest that the remarkable similarities between San healing and treatments found in osteopathy and acupuncture are not so surprising if we recognise that the human body provides not only the foundation of our experiences and definitions of sickness but our modes of therapeutic intervention.

Keywords: San, healing, dance, shamanism, hunter-gatherer

In 2008 psychotherapist, shaman and San researcher, Bradford Keeney, published a 6-CD audio instruction course, *Shaking: the original path to ecstasy and healing*. The sleeve notes of *Shaking* explain that the course uses 'full body interactive learning' as a means of participating in the kinaesthetic world of the southern African Kalahari San and thereby learning something of how San healers construe the world. Further still, through this kinaesthetic interaction, Keeney promises to 'reveal the ancient use of spontaneous motion and vocal expression as a path to spiritual ecstasy and healing'. Put another way, Keeney is claiming that the way the body is used in San healing dances profoundly informs San cosmology and by using our body in the same way we might get a

glimpse at, not only the San art of healing, but a more widely found religious phenomenon, 'shaking medicine', the original medicine.

Based principally on his work with Ju/'hoansi San, Keeney recognises the San as the strongest shakers out of all the healers and shaman he has encountered. Keeney believes the aim of their healing dance is to use shaking to open up to 'spirit', or to work with the manifestation of god, which he terms the 'Big Love' (Keeney 2004:67). By drawing on archaeological arguments for the longevity of the San healing dance and genetic arguments for San as our oldest common living ancestors, Keeney frames San shaking medicine as our birth right, the original medicine in which we all can share.

Like Keeney, I have approached San healing dances from a background rich in 'bodywork'. I have been researching healing amongst the hunter-gatherer San, or Bushmen, and the culturally related herders, the Khoi (collectively known as 'Khoisan' or 'KhoeSan') since 1999. Prior to my academic life I spent nine years training and working as a registered osteopath and acupuncturist. From my first encounter with Keeney's work I was struck by the complementarity of his findings with my own. On this basis, in November and December 2011, I decided to explore Keeney's claims by undertaking his course and then returning to dance with Ju/'hoansi healers. Despite initial ambitions to dance more, on this occasion I participated in six healing dances, finding this enough for both my body and mind. I had previously danced and participated in a wide range of healing strategies amongst a range of KhoeSan peoples, particularly including Damara, Hai//om, !Xun, Ju/hoansi, Naro and ≠Khomani. I have subsequently undertaken a number of further dances with Ju/'hoansi healers.

What follows represents how Keeney's course shifted my analysis of San dancing, particularly in terms of the role of shaking, alongside a wider enquiry into the role of the body in San healing as informed by my experience, my professional 'alternative' medical training and an exploratory biomedical perspective. Following these avenues of enquiry raises novel questions regarding not only how we think about San dancing but about cross-cultural continuities born from our shared physicality.

Theoretically my analysis starts with biologist Rene Dubos's observation that 'irrespective of origin people are much more alike than they are different' (Dubos 1976:57). In earlier work with medical anthropologist Elizabeth Hsu (Hsu and Low 2008) I drew on Ingold (2000; 2008) to explore cross-cultural relationships with wind in ways that bridged the cultural relativism of sensual anthropologists, notably Classen (1993) and Howes (2005) and socio-biology as pinned to Wilson (1975). In this analysis I continue to draw on Ingold for insights regarding human ways of being in the world but I link practice

to feelings and ideas by relating neurophysiology and endocrinology to San use of the senses and relationships with 'memorate' knowledge (Ingold 2011; Low 2011). Following Paterson (2009), my analysis employs a range of 'haptic ethnographic' techniques as a means of moving meaningfully from personal experience to broad interpretation. At its core this article addresses a question raised by Winkelman regarding continuities found across shamanic peoples. Winkelman asks whether these are consequences of independent inventions or derivatives from a common neuropsychology (Winkelman 2002). Although I recognise cross-cultural commonality between mental states, my position is very different from old claims that shamans are psychotic (eg, Stephen and Suryani 2000). What I am working towards is identifying a human toolkit that orientates ideas of spirits, health and healing.

Despite post-1990s' sensuous anthropology being the primary background to this study, the underlying themes of phenomenology and culture/body relations that both sensuous anthropology and this article share are fed by a very broad range of disciplines, from geography to ecological psychology to dance and movement studies (Reed 1998; Paterson 2009). Downey's ethnomusicological examination of Capoeira and the phenomenology of listening provides a particularly relevant baseline. Downey stresses the fallacy of thinking of listening in terms of raw sense data that is biologically processed and then given meaning in a further cultural step. Alternatively, Downey emphasises that sensing is a dialectical process that 'conjoins the sensory capacities of the 'subject' with the sensory qualities of the 'object', both present meaningfully only in the perception'. In ways that are highly relevant to San dancing, Downey then follows Stoller (1989) in recognising that culture teaches people how to listen and, further still, not just an ear but a body can be culturally prepared to hear. Quoting Blacking's (1985) analysis of trance, Downey affirms that any sensory experience is partly a skill and habits of assimilating sensory experience can cultivate that skill (Downey 2002:489–500).

The heart of my analysis lies in thinking of the dance as a series of techniques learnt by San principally in the dance and applied in subsequent dances to achieve specific outcomes. These techniques work with the sensory skills San healers have cultivated by living as San hunter-gatherers. The dance serves to stimulate feelings in a healer's body that San recognise and substantiate as 'potency'. At the same time healers experience an enhanced ability to detect sickness. Healing then entails the movement of this potency and sickness. Where my analysis veers away from Downey is in my turn towards universalism. This comes out of my recognition that the techniques employed by healers resonate strongly with healing techniques found throughout the world.

I attribute this phenomenon to the fact that we all have the same body and the body not only defines the nature of human sickness but is the locus and performative medium of therapeutic techniques. In order to explore this hypothesis I compare the dance to osteopathy and acupuncture treatment and spirit possession dancing. My discussion is informed by my own professional experience and the insights of dancer and anthropologist Yvonne Daniel regarding Haitian vodou (Daniel 2005).

In rock art studies of San and their ancestors, the archaeologists Lewis-Williams and Dowson have drawn attention to the shared nervous system of present and past anatomically modern humans as the root source and explanation behind geometric patterns found carved and painted on rock surfaces. These, the archaeologists believe, represent entoptics, or patterns that all people purportedly see when in certain altered states of consciousness (Lewis-Williams and Dowson 2000; Lewis-Williams 2002). On a similar 'universal' basis Keeney has located explanations of spirit possession in the spontaneous movement of limbs. Drawing on Gregory Bateson, Keeney describes how in San dancing, as in certain other forms of 'ritual' dancing, an arc of muscle synapses can become locked into a self-reinforcing cycle of stimulation and relaxation that leads to clonus, or shaking. As this shaking is apparently spontaneous, people who experience it, who are thinking outside of biological mechanisms, attribute the explanation to something, or usually, someone, else, moving their body or limb. Keeney proposes that this 'supernatural' third person movement lies behind ideas of spirits coming into bodies. Keeney interprets the shaking of the San as one example of accessing divinity through spontaneous body movement (Keeney 2007:890).

My interpretation pushes Lewis-Williams's neurophysiological commonality of entoptic experience towards a somatic neurophysiological basis for commonality of feelings, if not ideas. Just how close we can get to ideas is a difficult problem but some light is shed on the matter by Keeney's notion that if people are not analysing their body through a reductionist scientific lens, an overwhelming human response to spontaneous body movements is to attribute the movement either to an outside force or an inner 'spirit' possession.

Prior to Keeney's work a number of academics have considered San dance in some detail. Their legacy is a relatively homogeneous and well established interpretation of the dance that has little if anything to say about shaking. More remarkably still it has little to say about the body in contexts of either medicine or dance. The most prominent accounts of San dancing, principally from Marshall (1962; 1969; 1999), Lee (1967; 1968; 1979) and Katz, emerged from fieldwork undertaken in the late 1950s through to the late 1960s, with

Katz's *Boiling Energy* (1982) being read by many as the definitive account of San healing dances. Marshall's approach was more descriptive than theoretical but nonetheless highly valuable. In contrast the interlinked work of Lee and Katz was rooted in Lee's cultural ecology approach to which Katz added insight from his background in psychology. Despite their differences the overwhelming legacy of all three ethnographers is that the healing dance is less about medicine and more about an egalitarian ritual that encourages social cohesion and co-operation and provides hope to a self-reliant and highly vulnerable group of hunter-gatherers.

Although Katz sought to supplement Lee's cultural ecology analysis of the dance by moving interpretation to a human experiential level, his analysis shows little connection with the wider world of San healing and worldview that must surely be taken into account when trying to understand a healing dance. In a later return to the field, Katz teamed up with a Native American researcher, Verna St Denis and folklore researcher and Kalahari activist Megan Biesele. This collaboration particularly emphasised the role of the dance as an important mechanism for dealing with change (Katz et al 1997). Building on Biesele's folklore research (1993) the team identified that new themes, events and social changes could be absorbed and dealt with in dance by applying structures, practices and conceptual reference points that related strongly to persistent themes of hunter-gatherer life (Katz et al 1999). Whilst this perspective identified a valuable link between recent practice to persistent, possibly ancient, hunter-gatherer practices and ideas, the focus remained on dance as social practice more than physical practice and medical strategy.

Keeney's research emphasises that shaking is a way that San open themselves to 'spirit' and the bliss and healing power of god. Katz (1982) emphasised that the healing dance was about individuals being so committed to their egalitarian community that they would undergo the terrifying ordeal of dancing in which they must overcome their fear of the dead people and the divinity they encounter in the dance, whilst dealing with the intense pain they simultaneously experienced in their body. In this interpretation the pain and fear stands as evidence of an egalitarian sacrifice for the good of the community. In Keeney's estimation, however, this misleading interpretation comes from Katz having worked with a few inexperienced healers whose dancing revolved around pain and fear (Keeney 2003:98). By contrast, Keeney claims, experienced healers learn to rapidly bypass these phases to experience sensations of bliss and empathy, which they then use to heal people (Keeney 2003).

I believe Keeney is right to play down both the role of the dead in San dancing along with the social significance of pain and fear. Alternatively, however,

I believe there is a profound link between shaking, pain and fear. Inducing pain and fear by shaking is a technique San use to achieve feelings of bliss. In the following I explore this hypothesis alongside two further techniques that become apparent when the dance is compared to aspects of osteopathy and acupuncture and vodou dancing. The first concerns how the San and KhoeSan physically and mentally change a person by stimulating specific parts and faculties of the body. The second concerns the importance of working with cycles of tension and release during the dance.

San dancing

In a clearing adjacent to a few domed grass huts and tin shacks, a large fire pushes back the darkness of a Kalahari night. Away from the fire it is cold and the stars are bright above. Around the fire is a warm space of safety and support, a human space in a vast bush and semi-desert landscape filled with –other than human people – giraffe, elephants, snakes, frightening lions, and tasty and beautiful eland. High pitched singing, almost a yodelling, of twelve women and girls floats across the bush. They sit in the sand in a circle around the fire, surrendering melodic lines to the stars with an insistence born from the joy and the pain of life and a will to survive. The women wear colourful cloth wraps, skirts and blouses and a number have children strapped to their backs or slumped on their legs. The women's hands make a complex clapping rhythm impelling the circulation of the song and the dance. Their vocal melody repeats round and round, spiralling upwards as the singers take turns to introduce minor variations. Voices emerge and dissolve.

Between the women and the fire move the experienced Ju/'hoan healers, two men, Kha//an /Kunta and /Ukxa Ghau. Kha//an, a man in his mid-50s has rolled up his trouser bottoms and, like /Ukxa Ghau, is stripped to the waist in anticipation of the work ahead. Despite the cold, the elderly /Ukxa Ghau wears only his ragged shorts. Both men are strung diagonally from shoulder to chest with colourful beads. /Ukxa Ghau wears a bead head band and a bead apron that rattles with the rhythmic sideways wobble of his hips. Kha//an /Kunta is down on the ground kneeling in front of a woman, his hands shaking astride her stomach, his head rocking back and forth. 'Aiee', he cries, 'aiee'. He suddenly pulls his hands away as if shot or burnt. Stumbling he gets to his feet and stands defiantly at the darkness. It is hard to make out his words but his actions are clear; he flings raised hands into the dark, like flinging off sticky honey.

Whilst Kha//an /Kunta is 'pulling sickness', /Ukxa Ghau walks within the

circle, sometimes breaking into a short stamping dance. He moves around as he feels who needs 'opening' or soothing, both of which he does by rubbing an application of a fragrant powder, *sa*, onto their chest, neck or head. 'Opening' is how the KhoeSan talk of being receptive to the powers of spirit. At times he rubs his own abdomen and at all times his entire body is shaking.

Their dance lasts about four hours, far short of the all night and sometimes longer dances that anthropologists recorded amongst Ju/'hoansi, or !Kung, in the 1960s and 1970s. The women called an early halt despite Kha//an /Kunta's pleading that he needed them if he were to cure the sick boy sitting amongst them. They continued singing for a little longer but gave up because they were tired, protesting that they must be up early the next morning to make crafts for the tourists.

This dance is one of the six I undertook within a period of nine days in December 2011. The basic ingredients of the dance resemble those found in dances recorded for well over two centuries among the KhoeSan (Low 2008b). Sometimes these dances involve healers encircling the women as the healers perform a shuffling stomping dance around them. At other times the healers work within the circle, as described above, or facing a semi-circle of singers. The singers may be sitting or standing. In the dance San men, and less frequently women, move to the singing and clapping of a small group of women in a stylised but idiosyncratic dance pattern that wakes up the 'supernatural' healing potency sleeping inside them. Their dance, like their music, has a staccato character to it. It flows in jerks with rhythmic punctuations. It is, again, like their massage, a flowing set of manoeuvres undertaken with powerful rhythm and punctuated by short sharp stretches of joints and muscles and spasm-like powerful applications of pressure.

Amongst the Ju/'hoansi the potency in the healing dance is called 'n/om'. N/om 'sleeps' in the //gabesi and n/om khomi regions of the abdomen and sometimes in the lower back. Ju/'hoansi healers use their favourite songs to inspire their dancing and 'wake up' their potency. //Kha'an /Kunta's dance is called n//oqi, which he describes as the dance for 'pulling sickness'. Better known recent dances are named after animals, particularly the elephant and the giraffe.

To wake up potency requires dancing more and more intensely. This progressively warms a healer's n/om to a boiling point. It is significant that to boil n/om effectively requires not just one long dance but intense dancing punctuated by short rest periods. As a healer warms up their abdomen grows hotter, their n/om boils and it begins to ascend the spine and dissipate down the legs. When a healer is 'fully cooked', n/om explodes into the head like an orgasm and the healer typically collapses onto the ground in a state known as 'half death'. In

order to both encourage and feed the *n/om*, healers sometimes head to the fire (often literally); they rub themselves with burning branches, walk across hot coals or briefly hold hot coals in their mouth. Healers are supported by helpers who massage them 'back to life' if they collapse or otherwise protect them from injuring themselves.

Once 'boiled' and 'cooked' healers use *n/om* to *≠hoe*, or pull out sickness from all participants at the dance. The healers work together to collectively build their *n/om*, sharing the healing power by applying parts of their body to one another or even shooting invisible arrows of *n/om* between themselves. Strong healers seek to dissipate uncontrollable washes of *n/om* as they manifest painfully and fearfully in less experienced healers. The stronger healers work their way round the circle administering to all present and focussing on those with special need, those from whom the god G//aoan has taken their heart. Healing the really sick means taking back the heart from G//aoan. Healers 'see' the sickness and many compare this to the ability of X ray machines they have encountered as part of Namibia's mobile anti-tuberculosis campaigns. Healers also smell the sickness, describing it like blood and rotting meat. The healing *n/om* they summon is described as arrows and sometimes thorns or nails. The sickness they pull out is also described as arrows although one healer described a healer's actions as more like 'a magnet that just pulls sickness'. Sickness pulled in by the healer must be expelled either by flicking the arms or hands vigorously away from the body or by allowing it to flow out from the region where the neck joins the shoulders (cervico-dorsal junction).

Making sense of the dance

Undertaking Keeney's course refocused my previous conclusion that to understand KhoeSan medicine requires recognising what is distinctive in KhoeSan relationships with knowledge and relationships with their senses. Similar relationships with knowledge are characteristic of a wide range of other hunter-gatherers who seem to be operating out of similar imaginative substrates (Low 2008a).

To understand San medicine requires recognising memorate hunter-gatherer relationships with knowledge. Memorate knowledge refers to contexts where knowledge is informal, has low status and is highly mediated by personal experience. Building on Ingold's interpretation of Gibson's 'education of attention', I envisage that being a hunter-gatherer requires being particularly awake and alive to the world in order to respond to very real opportunities

and challenges as they arise (Ingold 2000:166; Gibson 1986). As they read the environment and work with what it is telling them, San listen to their feelings because they reveal real truths about the world. To work 'nicely' in the world requires being sensitive to the natural environment in ways typically played down or absent in urban contexts that require different nuances of attention (Low 2014a). Whilst remaining pragmatic, San give freer rein and grant greater status to feelings and imagination across wider social domains, thoughts and actions than people typically do in urban, literate and 'Western' educated societies (Low 2008c). In Western contexts feelings, prophesies and dreams belong more to novels, sleep or chit-chat than to serious business.

In recent years it has struck me that there is considerable continuity between Ingold's 'education of attention', memorate knowledge habits and ideas I encountered in osteopathic college. Often we were told that you could not be taught osteopathy; you just had to do it and after about five years you might begin to understand – a prescription reminiscent of Ingold's (2000) 'enskillment', Stoller's (1989) apprenticeship of sensing, and Bourdieu's (1990) tempering 'habitus'. Where this relationship with learning really came to the fore was when we were students sitting with our hands around the base of a patient's skull waiting to feel the 'cranial rhythm', an elusive sensation of expansion and contraction so subtle that most biomedical practitioners refuse to recognise its existence. In order to feel the rhythm we were told not to push our search and questions inwards, but to withdraw our attention outwards, quietly asking, 'what is this body / person trying to tell me?'. Some teachers suggested that whilst learning cranial osteopathy, students should imagine themselves sitting on top of a mountain with their hands running down to the patient who is pictured far away in a valley. After working as a cranial osteopath for a number of years I began to appreciate that some of my best results manifested when my attention was not even on a mountain but somewhere else entirely. Some years later I encountered an almost identical approach of learning through 'emptying' one's attention when undertaking an animal tracking course in the US. It is this approach, an unfocussed focus that I have subsequently recognised in San techniques of hunting and gathering, although their method of learning is part of their every day practices and is not formally taught. I have previously called this a 'listening disposition' (Low 2008c). It is the difference between looking intently and surrendering to a receptive wide focus.

The further pillar in my reading of San medicine lies in linking this open receptivity to San habits of an open and active imagination. I have thought of this as San, and indeed KhoeSan, living in a 'world of possibilities' (Low 2008c). It is an idea that pulls together what other anthropologists, notably including

Guenther (1999:58), have long recognised as the slippery, fluid, flexible and inchoate nature of KhoeSan ideas, with Bieseles's 'imaginative substrate' and universal human cognitive functions of pattern recognition, all of which lie at the core of being a San hunter-gatherer who reads the environment in ways that map how things 'go together', whilst being flexible and open to opportunity (Bieseles 1993). Living in 'a world of possibilities' means being open to ideas that are known from personal experience and working from patterns of how San sense the world works. What my 2011 *Shaking* experiment alerted me to, is that this habituated way of behaving applies as much to San relationships with the body as it does to their subsistence strategy. More than this, San are so embedded in this way of being that they use the ritualised dance setting to listen to and work the healer's body in very specific ways that will 'open it' both sensually and imaginatively and this is what lies at the heart of the dance. Both the healer inducing his own potency and healers encouraging the arrival of potency in another, conspire to trigger a healer's body into certain patterns of behaviour, or actions and feelings.

A significant element of my insight stems from Yvonne Daniel's (2005) work on vodou and Condomblé rituals. Informed by her dance training, Daniel emphasises how highly skilled drummers establish a directional synergy with the dancers. The drumming is intensely rhythmic and repetitive but, like San singing, drum parts are introduced that wander off onto the edge of associated sound, right to the boundaries of rhythm. This has the effect of soaking a dancer in the moment but as they swim, currents start wandering and fracturing habituated ways of being, thinking and moving. Reading a dancer's body and performance, the drummers work them up, back, out and around, until, from nowhere, 'bam', they perform a 'feint'. When the drummers believe the dancer ready, they simultaneously slam flat hands to drum thereby calling a loud, shocking, exact and resounding halt to the dance. If they have worked well the dancer simultaneously collapses as if shot and their body is shocked, 'rewired' and 'opens' to receive the spirit.

Working the body

I was standing next to //Now, the recently deceased 'chief' of Duin Pos. Shirt off, in my shorts by the fire. It was raining and cold. A small group of women began clapping and singing. They start and stop until more join in. //Now is also in his shorts and adorned with beads. He rubs himself on his chest and abdomen, singing and speaking quietly to himself. Gradually he starts moving.

I am standing there self-consciously. Everyone is apparently oblivious to me. No one shows me what to do and it strikes me, I need a lead here, some ritual, a way in. But the way in must be appropriate, it must take me to the 'right place'. If I waltzed or pulled some disco manoeuvres this whole thing would not work. So what should I do? Because I was there to explore Keeney's course I went to the place in my body and mind that he took me to, although my thoughts were unavoidably backgrounded by years of interaction with KhoeSan peoples.

Katz (1982) describes that bringing on *n/om* requires healers to work through the pain barrier on their fearless quest, that boiling *n/om* required gross movements and exertions. Time and again I have seen this not to be the case. N//ow, like other experienced healers, awoke his *n/om* with small movements. Sometimes such healers will enter into more vigorous dance but for the older ones this is neither always possible nor necessary. How they achieve this relates to their body and mind training that sets up psycho-somatic and somaticopsychic circuits. The more the circuits are used the easier they are to access.

Amongst the Hai//om I had undergone rituals, although this is too systematising a term, that involved 'putting in' */gais* or spirits or the *oab*, wind, of certain animals or abilities. Seated around a fire two healers had spent about two hours 'checking me', looking 'nicely' inside me to see what I needed to work as a strong healer. They then agreed to put in the */gais* of the mamba so that I could walk freely in the bush and the */gais* to dance so that my legs would move. The process entailed being swatted, rubbed and poked in particular areas of my legs and body. Most powerfully, on two occasions, the healers blew short and sharply into my ears whilst holding my head firm. The shock is alarmingly intense. I shall return to the precise locating of */gais* within my body but what was a striking result of these collective processes was the muscle clonus I was left with. At the time, these techniques resulted in me becoming more and more lost in a swirl of singing, of firelight, of challenging assaults upon my body and the pungent aroma of *sa* perfume and the healer's sweat being rubbed over me. The analogy of an orgasm is the most appropriate way to explain the culmination of this process. 'Bang', like a tidal explosion my body toppled backwards and I lay on the ground with my abdominal muscles, hip flexors and leg muscles contracting violently. I was having a low level induced 'fit'. All healers agreed the next morning that this was just what they were after. A good result. The */gais* were in and they were 'lying nicely'. From this time on whenever I heard San music my legs would begin an involuntary jerking movement, up and down.

//Now danced the elephant dance in which he said he used the power of god. He could feel *n/om* awake as *!oh*, a term used equally for any achy pain

in the low back. What was striking about //Now's movement was his lateral sway. His entire body was involved in a finely tuned rhythmic and controlled clonus shake. This was a notably different movement to that installed in my legs. Standing near //Now I took my mind to a mountain and allowed the /*gais* to shake. I found that pressing into my pelvis through to the balls of my feet would draw out the clonus connection previously 'put into' my system by San healers. As the leg clonus grows, and indeed as I write about this, my abdominal muscles twitch. As I am moving with //Now a young man begins tapping a rhythm on an oil drum. My thoughts stretch inwards whilst another elderly healer comes forward and rubs fragrant smelling *sa* powder mixed with fat and soot into the base of my throat, between the collar bones (supra-sternal notch). He rubs it under my nose. The smell takes me to the Hai//om, the Damara, the !Xun. It takes me to healing rituals and imagery I have about the KhoeSan. It works like any smell that you know that comes from nowhere and tumbles you back years, maybe to disinfectant in a hospital ward or the musty smell of an elderly grandparent's home or the pine woods of childhood. How did you feel in the hospital? What do you feel now?

I am not sure what to do so I move like healers I have seen. On a number of occasions I have seen healers mimic animals and my memory is full of animal associations, from references to hunting to the story of a new healing song coming to a person in a dream of a galloping giraffe. I know the creation stories of the hooves and the rock art of half human half animal people. To be an animal seems appropriate. I initiate a sway in my arms. I hold the feeling of animals in me. I allow my arms to bend. I allow my arms to bend and they begin, slowly, to trot. The top of my neck feels tight. Then and now. I am a wildebeest – shall I let me be a wildebeest – let it go. Be a wildebeest, they don't care.

The next few hours follow a pattern. As mirrored in Keeney's CD sessions the singing and dancing builds. Dancing comes to a head and then, crescendo reached, it stops. We wait. I move around, it builds again. The cycle happens throughout the dance. The singing is both whole and broken. It is the same but constantly on a path of change. The clapping is sharp, insistent but cracking. Broken and whole it breaks and makes and flows. Like Keeney's music; fluid and jarring, just when your senses fix and relax, 'whack', it comes from nowhere; a change that destabilises your orientation.

Throughout the evening I am attended to by the San doctors, //Now and Martin. //Now holds me just below the diaphragm and shakes me rapidly. He makes small 'karate' chops on my sides and below my ribs. I recognise where he is chopping as my //gabesi, it is where *n/om* is said to live in the body. Sometimes he works his hands up and down my sides. On three occasions

Martin rubs *sa* into my neck; he rubs his sweating head firmly up and down my front. Martin faces me, hands on my abdomen and pulls me towards him. I am not sure what to do with my hands but I want to hold him because he is pulling me. I hold him. 'Ai, ah' he shouts and the shaking stops. The shaking goes to a charge, like a bolt through my body. Both healers keep at me through the hours of the dance. //Now pushes the finger-tips of his firm straight hand into my flanks. It shocks me again and I jolt back. Martin swats my back with a whisk. Keeney suggests these flywhick actions are used to heat up and move arrows of *n/om*, or to clean dirty arrows (Keeney 2003:99). Other healers claim it makes the arrows or spirits sit 'nicely'.

Over the subsequent dances a similar pattern is repeated with these and other healers. Over the sessions the places where *sa* is rubbed are increased. All healers focus on my abdomen and lower back, chopping and shaking until I find the clonus pattern shifting from my legs. The up and down reflex is being liberated. My body performs a new action. Accustomed muscle-use patterns have been broken and reset. My torso can shake, my shoulders can shake from side to side. My body wants to shake when I smell the *sa* and hear the song. During the dance my body and mind feel assaulted, re-coordinated. One healer came at me with a flaming branch as if to rub it down the front of my torso. I thought he would. Another went back to back with me, clasped my arms and pulled hard. A shaking backward stretch. He finished his work by scraping a stone across my back to make track marks. They would keep my road straight with my new healing gifts.

Osteopathic theory dictates that emotional patterns and feelings are embedded in the body. The idea relates to the well-recognised phenomena of habituated stress leading to stomach ulcers or deep memory of burning leading to a withdrawal reflex. Osteopaths, however, think of structure –function-memory patterns in a much broader manner and they work with layers of those patterns stretching from prenatal life to birth trauma, to chronic and acute events accumulated across the life of a person. One technique for relieving pain and dysfunction entails readjusting neuromuscular spindles.

If, for example, a patient experienced a car accident and twisted violently to one side to avoid the impact, osteopaths would recognise this as a possible cause for later presentations of body pain. The trauma of the event has set up its own readjustment of the body rooted in strained muscles and strained connective tissue sheets, or fascia. Fascia is the thin translucent silvery covering visible on pieces of fresh meat. Fascia enfolds the muscles, tendons and ligaments. To take out a strain pattern osteopaths will support the strained limb or body and 'listen' to the pull within it. It is like pulling open a spastically contracted

elbow joint and listening to the arm wanting to flex again, but far more subtle. Osteopaths will then allow the limb to contract into its strain pattern. The limb starts to 'spontaneously' move and reveals the position in which the body wants to hold it because of the inherent strain, inflammation, pain and a self-perceived need for support or protection. Significantly the patient thinks the osteopath is moving their body but taking the lightest of touches reveals that the patient is responsible. Like San singers and vodou drummers, the osteopath is providing a supportive substrate for spontaneous body reaction. They guide and tease as the body swims and swirls. The practitioner then follows the limb right to the point of the body injury that the body wishes to work around. For the patient the feeling is often of pain and tightness that builds and builds until, whoosh, the strain pattern melts away as neuromuscular spindles are reset. As the limb sits in the point of strain the body is confronting its record of the injury. The memory in the muscle and fascia must be reset. At this point it is not uncommon for the patient to be overcome with feelings bound to this traumatic event. The muscle relaxes and the patient remembers and releases in body, mind and emotion.

Working with this 'fascial unwinding' on patients and, as students, on each other, lends the osteopath an ability to unwind themselves. After all manner of injuries, I have played with my body's possibilities and self-unwinding has become part of my self-healing repertoire. During dancing sessions and on occasions, after having */gais* 'put into me', I have allowed my body to 'unwind' and found that my body will move, as if something else is moving it. As limbs contract they feel like animal limbs. As my back clenches and cramps I become small, I feel old, if it opens me up and I grow tall feelings of extreme height can manifest. Rather than spirit possession, my understanding of this phenomena is that I am listening to my body and allowing it to unwind and open. As I do so I am listening to feelings and physically and subconsciously casting about for memory patterns and the events, images, interpretations and expectations that underpin my activity.

During the dances there were times when my body closed physically, limbs contracted; I became bent over and a deep feeling of fear began to awake inside me. My body was shaking at a profound level, deep in its core. When we shake normally, it is generally because we are cold or nervous or afraid. In a converse manner I believe my shaking, like that of the San, opens up feelings of fear. Similarly there were times when a profound sense of peace overtook me and I literally felt as if a mass of golden honey like substance was pouring into my arms and chest and I could drink it and needed to drink it into me. On another occasion, when coming out of a closed fearful episode my body rose and opened

and I felt I was looking down at the ground far below, as visions of vastly elongated San rock art figures came to mind.

In this analysis I am not proposing that my experience is what San do, see and feel when dancing. I do, however, understand the dance as a place at which the body and mind are re-coordinated in deliberate, highly skilled and specific ways and, given the same body and similar biological effects of these actions, similar sensations and feelings will emerge regardless of who you are. The dancing is teaching a way of being, much like learning a new language encourages new ways of thinking and feeling (Chamberlin 2004:17). A key part of this process relates to shock and the disorientation induced by regularly irregular singing and clapping. In San terms this is not a physiological understanding of medicine but equates to a re-mapping of who a person is. Good and bad things go into a person and can be taken out of a person. A person's identity is an agglomeration of god given gifts, known through their experience. A person's experience includes what they notice happening around them, such as snakes fleeing when they walk in the bush, a whirlwind moving if they point their finger at it or that their arrows always strike well. Similarly, a person knows what gifts they have because they can feel them inside themselves. Dances are arenas for gift exchange and training grounds for new feelings and the awakening and application of established patterned feelings.

A core element of the dance is playing with the sensory orientation of a dancer and the person being healed. Not only light, sound and dramatic action come into this but smell. Rubbing *sa* perfume onto a person has a strong effect. Just as the smell of a Catholic church service aims to take people into a distinctive non-everyday place where they become receptive to the world of spirit. Like Keeney, I believe most San dancing healers do not experience dramatic visions. I did not experience dramatic visions when dancing but had feelings that sat on the borders of memory, expectation, received explanation and emergent imagery that I recruited to think about and explain what happened in the dance.

San healers I have encountered often talk of 'looking nicely' in order to 'see sickness' or of 'smelling sickness'. Although at first such skills may sound exotic, it is important that we recognise them as forms of intuitive knowledge and feelings or modes of expressing feelings that are not entirely unfamiliar; biomedical doctors read body signs both formally and informally or osteopaths might 'feel' when a patient has had enough treatment. In KhoeSan culture there is, however, a greater social space for such feelings, a greater truth attached to them and a greater freedom for the imagination to engage with them personally and publically. We should also not underestimate the way dance body training enhances capacity for such sensitivities.

Transformation

One key aspect of the dance that has received much scholarly attention is transformation. Ethnography from the /Xam to the recent Ju/'hoansi describes healers who tell of changing into animals, typically a lion, when they are dancing or sleeping. Similarly, images of San shaman changing into animals are a key feature in the archaeology of 'trance dancing' in southern African rock art. Although I have not witnessed people changing into animals, I have met many healers who 'tell' of their own transformation.

To unpack how the ontology and epistemology of the San relates to shapeshifting is a complex task that I have addressed elsewhere in contexts of potency. But, in terms of a broad explanation, I find Ingold's notions of *sentient ecology* provide a good way of thinking about this 'telling' whilst also capturing the relationship I envisage between feelings, the dance and San cosmology (Ingold 2000:24–25; Low 2014b). Ultimately, explanation requires juggling details of ontology and epistemology with a need for 'Western' readers to recognise that Western societies rely just as much on understanding the world through blurring truth, reality and imagination and working with contradictions as do the San, but we try to hive this truth off in the Arts whilst we fake it in Science (Chamberlin 2004:146). The key message for this context is that San ontology and epistemology is underpinned by experience and folklore. Collectively this experiential cosmology entirely permits the possibility that a person can change into an animal.

Since dancing with San and having /*gais* put into me, I have found that my body is very susceptible to unwinding in the face of both appropriate situations, such as a San dance, or less obvious triggers, such as the smell of oranges that is highly reminiscent of certain KhoeSan *sa* perfumes. As my body unwinds or twitches in such awoken states, if I allow it, it follows muscle and fascial memory patterns that trigger associated memories and feelings of transformation, ranging from animals to wizened old San healers. As these thoughts and images arrive they generate further reinforcing body movements and further feelings. I propose that this somatico-psychic process provides a strong blueprint for understanding San shamanic transformation.

In the dance San condition themselves to allow clonus and other 'spontaneous' body movement. Dancing in a particular way, or even, for experienced healers, holding the body in a particular way, is enough to set off patterns of muscle and fascial response that are accompanied by situated feelings. In a hyper-stimulated dancing body that is moving into a seizure, or 'fit', strong muscle groups pull the body into flexed positions or possibly writhing movement

patterns where the arms, legs and the torso become bent. These muscle effects are graphically captured in San rock art where strong contractions of the psoas and abdominal muscles are responsible for the bent postures of San dancers. When arms, legs and fingers bend and lock these are sometimes forced open by a dance assistant helping the dancer out of 'half death'.

As contractions and 'spontaneous' movements 'take over' a dancing healer, their mind is casting about for reference points that culturally shape the way they make sense of their feelings. The images and explanations that arrive also provide healers with a way of telling about their experience after the dance. A dancing healer's semi-conscious engagement with their feelings then sets up a reciprocal feedback loop with the 'trance'/seizure/fit/unwinding process as it proceeds. Just as *n/om* potency awakes in a healer, in a shamanic transformation lion essence might also wake up. San cosmology frames this essence, or potential transformative power, as sleeping within the identity of a healer. Some healers less commonly describe transformation differently as *animal winds*, including that of the eland, 'coming into them' during the dance. The process of a healer feeling their limbs contract up as if they are a four legged animal is a powerful stimulant for accepting that they are being transformed into an animal or they have animal potency.

Although this analysis of transformation helps inform why people describe that they become animals it only goes some of the way towards explaining how people witness this phenomenon. Ultimately I suspect this witnessing means very different things to different people who describe their experiences in apparently similar ways. Rather than looking for exact explanations the important point, however, is that to ask if a healer *really* changed into a lion is not a San question (cf Chamberlin 2004:138–156) The question demands an inappropriately tight definition of reality that goes in the face of San thinking and orientation in the world.

Working the physiology

As a trained dancer and anthropologist Daniel recognises that dancing bodies 'accumulate spirit, display power, and enact as well as disseminate knowledge' (Daniel 2005:59). The carefully crafted dance ceremonies of Haitian vodou induce 'specific emotional and physical behaviors' (Daniel 2005:59; 78). In recent years it has become increasingly possible to underpin this sort of anthropological reading of embodiment by convincing turns in psychology, physiology and embodiment theory.

Whilst the articulation of symbols and mental representation has long been recognised at the heart of knowledge, the question that is pushing embodiment research is how representations derive their meaning or how symbols are grounded. The possible solution proposed by certain psychologists, notably Barsalou and Niedenthal, entails rejecting amodal for modal architectures. The long dominant paradigm of amodal architecture is based on notions of the mind being like a computer. The mind as computer articulates abstract symbols 'that bear arbitrary relations to the perceptual states that produce them' (Niedenthal et al 2005:185). In contrast to this stands 'grounded cognition' theory in which 'modal simulations, bodily states, and situated action underlie cognition' (Barsalou 2008:617).

Although grounded cognition remains to be fully integrated with more established psychology paradigms, its arguments are convincing and provide a promising route into understanding San dancing and the intuitive practices and theoretical models of osteopathy and acupuncture. Similarly promising is recent complementary research that seeks to locate religion, spirituality and emotion in biology.

Keeney's course is based on the idea that because we share the same biological make up as the San, if we treat our bodies in the same specific ways, we will undergo the same biological responses and feel similar emotions. In the following I begin to explore how San healing techniques seem to cross over with osteopathy and acupuncture because biology dictates a universality in how human bodies know, relate to and work upon other human bodies. My examples illustrate two basic arguments. Firstly, the San dance involves techniques which are part of a much wider repertoire of San healing strategies and knowledge. These techniques reveal intimate knowledge of the body and how to manipulate it to achieve psychological and somatic outcomes. The strategies prominent in healing dance and other shamanic contexts seem remarkably similar to acupuncture points used to treat symptoms and signs that are bound up in shamanic experience, ranging from 'spontaneous' body movement to collapse and manic behaviour.

The second argument develops the notion of the San healing dance as an arena for techniques of physical manipulation aimed at deliberately and predictably changing physical and mental states – 'doing medicine'. Comparing the dance to a particular sort of osteopathic treatment highlights how osteopaths have learnt, like San, that particular sorts of movement can bring emotional and physiological transformations. At the same time this example highlights the importance of an underplayed aspect of the dance: its *process* through increasing cycles of tension and release. The importance of such warm up was similarly recognised by

Baklanoff in contexts of African American church groups (Baklanoff 1987). Like osteopathic treatment and vodou dance, the San dance uses these cycles to 'open' the body and mind into a state of blissful reorientation.

My final proposition is that recent research in embodiment and psychology provides biological grounding for the intuitive and experiential knowledge of San healers. This research supports my hypothesis that working with cyclical shaking is a means of altering the brain chemistry and it begins with associations of fear and links to the biology of desire. My experience of KhoeSan healing has clearly demonstrated to me that my body and mind re-enacts movements, sensations, associations and sensitivities, learnt during previous healing sessions, if it subsequently reencounters the associated stimuli, be they music, smell or types of physical contact. This biological analysis not only locates such findings in physiology and psychology but raises the intriguing notion that the listening disposition and open imaginative substrate I have identified as an inherent feature of San hunter-gatherer lives is intimately bound up in the physiological changes they are manipulating in the dance.

Acupuncture and San dance

The techniques San use to open healers are not rigorously prescribed but are comprised of a flexible repertoire based on observation, experience, idiosyncratic habits, belief and feeling. Despite variation it is, however, possible to identify a core set of points that healers primarily work on or consider important. In the diagrams below I have mapped key San focal points of the body. These points are parts of the body that will be repeatedly stimulated by rubbing, pressing, application of fragrant *sa* and possibly blowing or sucking.

The use of these various points revolves around waking up 'wind' or 'spirits' or 'supernatural potency' in a healer. The points are also used to put in and take out these phenomena from the body. The wider context of use is a dance setting where healers dance into an altered state of consciousness and to a point of physical collapse or 'half death' from which they must be revived. In some contexts the dance leads to manic behaviour where a healer will rush off into the bush as if mad, or indeed possessed, returning perhaps hours later appearing dissociated and reporting that they have been 'beaten up' by god or a spirit. Sometimes, particularly amongst the Damara, such manic episodes are accompanied by blood pouring from the nose. Such epistaxis was a prominent feature of dance practices described by nineteenth century /Xam San.

It is highly intriguing to compare these key focal points and their roles to the

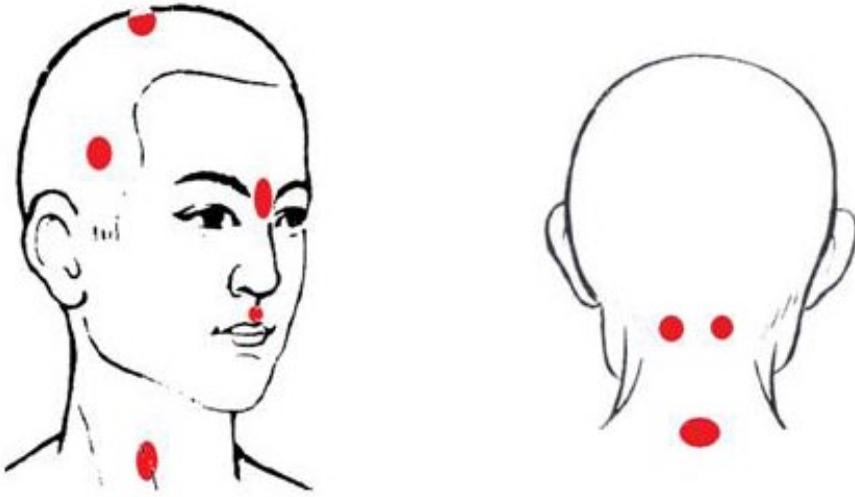


Figure 1 Points of San Healing Focus 1

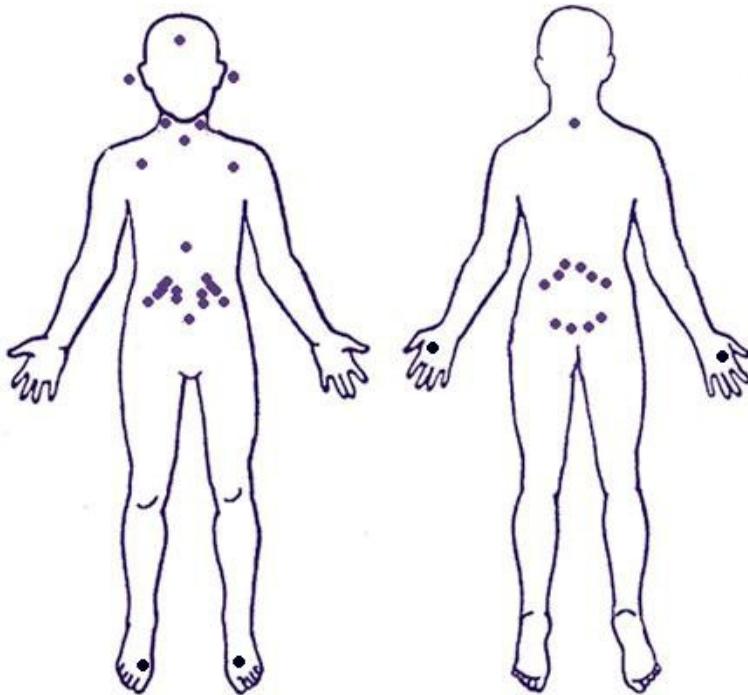


Figure 2 Points of San Healing Focus 2

use of acupuncture points. Although the scope of this paper does not permit a more thorough investigation, there is much to suggest that healing hands learn to focus on distinctive parts of the body and working on these parts leads in turn to recognition of similar functional associations across different cultures.

Acupuncture points are attributed either to lines of energy or *qi* flow, mapped along body meridians, or located in potent non-meridial points. There are in the region of 70 meridial and 113 non-meridial points mapped from the base of the neck over the head. The table below matches up the dysfunctional signs and symptomatic association of points with feelings related to ‘half death’ collapse, dissociation and altered states of consciousness that are central to the healing dance. The acupuncture points are taken from Low (1985, 1988) and a Chinese publication, *Essentials of Chinese Acupuncture* (1980).

Meridial points:

	Insanity	Apoplexy	Psychosis	Epilepsy	Shock	Collapse	Hysteria	Coma	Palpitation
St									
Co									
SI									
TH									
GB		20		9, 13, 15					
BL				3, 5			10		
GV	16	16		12, 13, 14, 15, 17, 24, 26	25, 26	26	26	26	24

Non-meridial points

Yintang (FA1) ‘Seal Hall’	Insomnia, vertigo, infantile convulsions
Yiming ‘Shielding Brightness’ (HN2)	Mental Illness
Anmian 1 and 2 ‘Peaceful sleep’ (HN3 and 4)	Schizophrenia
Dingshen ‘Little Spirit’ (OFA 15)	Psychosis, fits
Tounie ‘Temple’ (OFA19)	Psychosis, fits
Huxi ‘Breathing’ (OHN11)	Diaphragmatic spasm
Fengyan ‘Wind’s Cliff’ (OHN12)	Insanity, hysteria
Sishencong ‘Four Intelligence’ (OHN26)	Feeling of vertex fullness, vertigo, seizures, insanity
Xingfen ‘Excitement’ (OHN19)	Bradycardia, hypersomnia

The acupuncture points listed are the only ones out of over 180 commonly recognised head and neck points that relate directly to body seizures and shifts in mental state.

Meridial Points

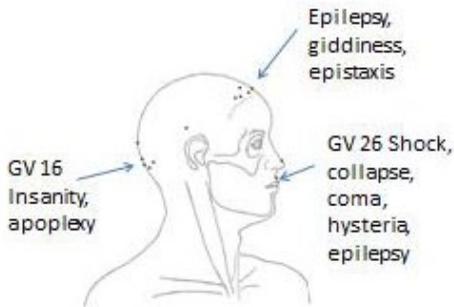


Figure 3 Meridial points A

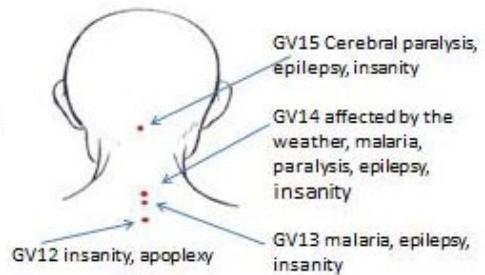


Figure 4 Meridial Points B

Non-meridial points

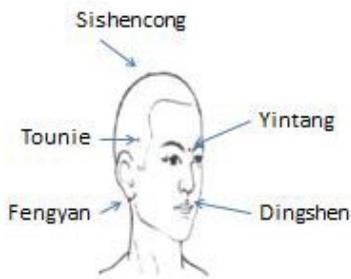


Figure 5 Non-meridial points A

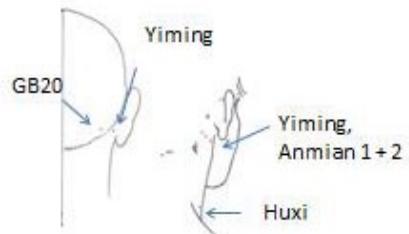


Figure 6 Non-meridial points B



Figure 7 Non-meridial points C

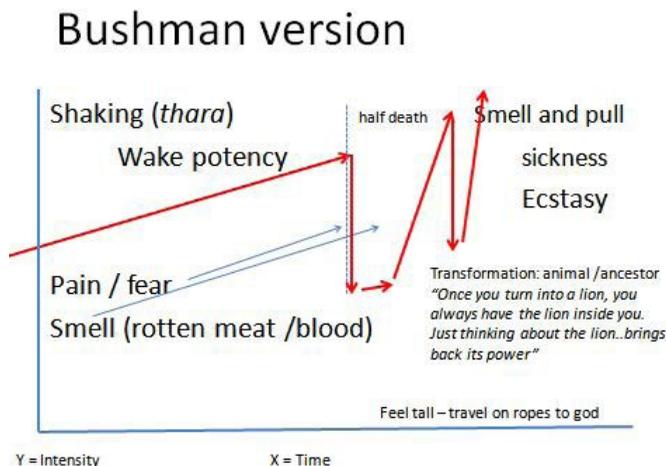
Although comparing San points of the head and neck with those of Chinese acupuncture is a far from a precise exercise, there is nonetheless a very striking cross-over between the sites San focus on to move wind or spirits or 'potency' and sites Chinese acupuncturists use for conditions associated with 'wind' and 'spirit', altered states of consciousness and the 'possession sickness', epilepsy. In cultures all over the world the spontaneous loss of control and seizures inherent to epilepsy are associated with forms of spirit possession.

The San shaking dance

Shaking is central to San dancing. Despite Keeney downplaying the role of fear in San dancing I suspect deep shaking registers at a traumatic level in the mind and body and consequently affects a dancer's physiology. This was certainly a prominent part of the feelings I encountered when learning to shake. As San shake they listen to their bodies and read the emergent sensations as manifestations of god and healing power. As feelings emerge these are thought of as woken healing power called by different names by different San groups (eg. *n/om* (Ju/'hoansi), *tso* (Naro). Some KhoeSan alternatively think more in terms of substantiated animal helpers lodged and woken within themselves, which they conceive as the wind or spirit or smell of the animal living inside them. To fully wake these powers requires dancing to a point of overload or rebirth. This is similar to the vodou feint. It is achieved by dancing cycles of increasing intensity until a dancer has peaked. A similar recalibration or half-death is practiced by some Damara who treat an infant who will not walk by burying them upright, up to their waist, in sand. As the infant tries to move, their body is completely locked. This forces the infant body to search for ways out of the predicament. This seems to affect a 'rewiring' of established mental and neuromuscular pathways for, once removed from the sand, the infant apparently moves differently and soon walks.

Feelings that come with San dancing include pain, extreme joy, an intense feeling of sympathy, feelings of extreme elongation, possibly flying and a radically heightened sense of smell.

Figure 8 Osteopathic 'unwinding' and the San Dance

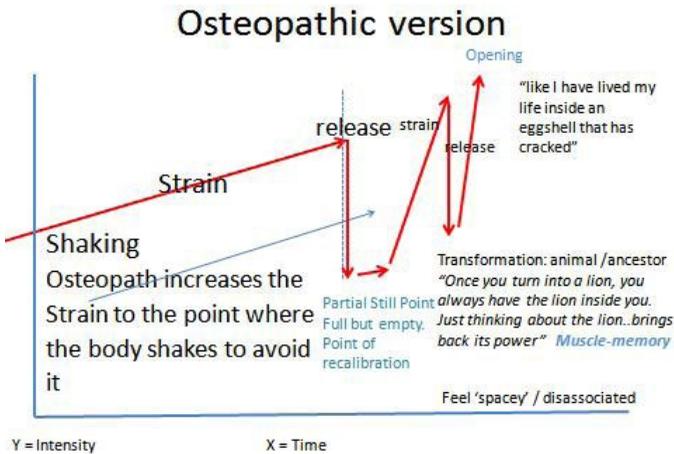


Osteopathic 'unwinding' and the San dance

To release a deep somatic trauma an osteopath listens to the muscle and connective tissue tension in the body and then follows the detected strain pattern by holding the affected part and encouraging the body to go towards the point of strain. As the body does so the mechanism fights for a way out and often shakes at a deep level. To get to the strain entails working through cycles of tension and release until the maximum point is reached, at which time the body will replicate the initial strain, often manifesting both considerable pain and emotional release as it does so. And then the body goes completely quiet, like a half-death. To describe this osteopaths have adopted the term 'still point'. The process feels like a shutting down. It is a paradoxical moment when all movement seems to cease but the body is undertaking its most radical remapping.

As muscular barriers are confronted and crossed during the unwinding, it is not uncommon for patients to feel very emotional and vulnerable, and mildly disassociated or 'spaced out'. After an unwinding treatment one Western patient described that he felt as if he had emerged from 'a cracked eggshell'. This represents a not uncommon reaction to feelings of being alive and awake that follow such treatments. The eggshell opening is a metaphor of reengagement with life, or rebirth common to cultures across the world. Keeney reports that amongst the San to dream of an ostrich egg cracking open is a mark of a very strong healer (Keeney 2003:60). Healers I have met were not familiar with this idea although it does resonate with the wider role of ostrich eggshell in healing (Low 2011:302).

Figure 9 Grounded embodiment and neurophysiology in dance



Grounded embodiment and neurophysiology in dance

A listening disposition is a habit of being receptive to, as Gibson (1986) put it, the affordances of the environment. It is a hunter-gatherer openness to the senses that is a subconscious technique essential to their subsistence and survival strategy. This technique is in turn tightly bound to what happens in the chase – calm, informed, open attention and then a focus followed by upping of the pace and spurts of excitement pocketed with calm. At a successful kill comes the sense of elation and completion, dancing with happiness and bathing in potency. To pin this 'way of being' down into one of either 'emotions', 'feelings', or cognitive and sensual orientation seems an unnecessary simplification of complex interwoven body processes. Fuller asserts that 'emotions exert powerful influences on attention, memory, perception and cognition' (Fuller 2008:153). In the light of this it seems reasonable to go simply as far as recognising a key role for emotional function in hunting and gathering practices and I propose that in the dance these habits of using emotion in hunting and gathering contexts, linked to increased perception and attention, seem to be developed as dancers become supersensitised by physical and mental assault. With enough stimulation the triggers on the body and mind ignite an overwhelming bodily response, 'half death', and release a flow of associated emotions and thoughts.

Convincing evidence now exists for a causal relationship between physical movement and higher cognitive operations (Fuller 2008:154). This seems reasonable grounds for asking what cognitive effect shaking might have on a

person. (Fuller 2008:154). Primary contexts of shaking are cold and fear. Fear is an emotion associated with the fight or flight reflex, enhanced levels of arousal and other core survival mechanisms. Niedenthal et al (2005:198, 205) recognise that perceptual motor and introspective experience underlie the representation and processing of knowledge. If mental representations are indeed so tightly associated with proprioception and motor movement, it seems entirely possible that shaking stimulates the key associated emotion, fear, and sets off neurological responses linked to pain, fear and survival in hunter-gatherer contexts.

Just as smells take people to certain feelings and thoughts, and osteopaths take patients into memories of trauma by moving a patient's body, shaking initiates feelings of stress and stress responses in a San dancer. Neurologically stress responses are associated with the brain's limbic system that consists of the hypothalamus, amygdala, hippocampus and limbic cortex. The limbic system is associated with functions that are of particular relevance to hunter-gatherer life and ones that are equally supersensitised in the dance. The limbic system concerns levels of arousal, self-preservation and the fight or flight reflex, heightened sensation, particularly including smell and control of dopamine. Dopamine is a neurotransmitter central to the brain's reward circuits (Sapolsky 2004:337–342). Dopamine is triggered by surges in anticipation and possibilities of reward – a key element in both the process of hunting and the cycle of the trance dance. As Fuller has observed, these plateaus of tension and release are common to both ecstatic movement, as found in many cultures, and the spasmodic tightening of body muscles associated with sexual orgasm (Fuller 2008:118). To describe the sensation of opening to spirit as 'orgasmic' does therefore seem entirely appropriate and is supported by anthropological observations of the role of sexuality in San dancing (Katz 1982:175; Lee 1993:120; Guenther 1999:184).

Fuller describes dopamine as the 'mystery and novelty' trigger of reward circuits in a way that highlights its possible role in both hunting and healing. Recognising such a link between hunting and dopamine is, however, nothing new. Hartmann first raised the dopamine-hunting connection in his 1997 'hunter versus farmer theory' (Hartmann 1997). But dopamine seems a likely significant factor in habits not just of hunting and arousal but also of the actual shaking process. This is indicated by its association with tremor and Parkinson's disease. Further still, as a neurotransmitter central to pleasure and elation, as Fuller recognises, dopamine sits at the heart of feelings of love and well-being (Fuller 2008:102–3).

Scholars have long recognised equivalences in San cosmology between the

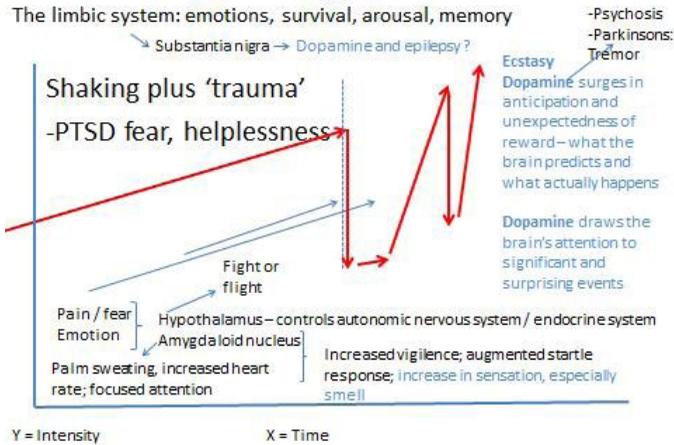


Figure 10 A model of neuroendocrinological change in San healing dances

'trance death' of a healer, hunting, animal death and blood and fertility (Lewis-Williams 1981:51–52; Guenther 2007; Keeney and Keeney 2013). Recognising that feelings may be similar in the dance and in a hunt adds further depth to the nature of this equivalence. In essence dancing San seem to be manipulating the limbic system in the dance in ways similar to how they experience it in the hunt. Both the opacity of the dance and the complexity of neuropsychology and embodiment theory make unpacking this behaviour a challenging task far beyond the remit of this brief summary. The overlap between limbic function and the dance remains, however, striking and surely worthy of closer investigation. By way of further example the dance is closely tied to smell which is used as a vehicle of potency and the capacity to smell sickness is central to shamanic diagnosis. The amygdaloid nucleus, part of the limbic system is associated with both supersensitisation and increased sensation, especially smell. At a still further level evidence of neuronal circuits and 'mirror neurons' also exists that gives physiological grounding for the dance as a transmitter of empathy and social co-operation, the starting point of older anthropological dance analysis (Niedenthal et al 2005:190).

Conclusion

The basic premise of Keeney's course, that recreating the experience of a San dance can inform our reading of the dance, seems supported by recent developments in neurophysiology and embodiment theory. If a person is exposed to specific types of environmental, social and physical stimuli there

is considerable predictability in their biological response (or biomedicine would not work universally). Despite cultural differences this predictability spills into the realms of shared sensations and very probably shared feelings. It might even run into similar images and ideas in cultures that share considerable social and environmental continuities, commonalities in subsistence strategy or similar relationships with knowledge. By comparing the dance to osteopathy and acupuncture my aim has been to draw out how particular sorts of healing relationships with the body, those founded in intuitive and experiential folk knowledge, are remarkably similar across different cultures. I recognise these cross-cultural healing similarities as only some of many, others of which commonly include overlapping ideas of spirit, smell and wind, massage strategies, notions of the role of the weather in health or the recognition of bitter plants as being especially medicinal (Hsu and Low 2008; Johns 1996).

Taking the comparison with acupuncture further, the overlap between what many KhoeSan say and think about healing and the ideas and practices found in ancient Chinese medicine is particularly striking. The shared notion of wind in the head causing madness does not, for example, seem to me an arbitrary cherry-picked coincidence. The medical historian Kuriyama (1999) proposes that the earliest forms of Greek and Chinese medicine shared strong similarities because their practitioners used their senses in similar ways. I suspect that the early use of the senses in ancient Greece and China relates to persistent ways of living in the open, using the senses, and common relationships with knowledge that are rooted in our hunter-gatherer origins. Recent research by psychologists is rapidly dismantling illusions that such 'ways of thinking and being' pertain only to history and hunter-gatherers. Human ways of making sense of the world include Wall Street traders as much as Kalahari San (Taleb 2007:58–69; Kahneman 2012). What needs nuancing is the sensual and cultural orientation. Modern hunter-gatherers are in no way primitive but amongst them scholars have emphasised a particular visibility of a pre-historically and historically persistent human physical and cognitive orientation to the world. Working with the senses has a place in science but it also has a specific history of displacement linked to the relatively recent emergence of Scientific medicine and wider habits of fixing knowledge, both of which are strongly rooted in an Enlightenment legacy. Despite the subsequent dominance of the biomedical paradigm this is not a story of wholesale replacement of sensual medicine by Scientific. The way osteopathy still privileges sensual appreciation of the body speaks of wider habits found across alternative medicine. Nor is this a story of a tightly homogeneous pre-scientific sensual medicine. Indeed the very essence of knowledge structures outside the strictures of modern literate society lies in greater room for nuance,

flexibility and individuality. Variety and lack of consistency is integral to knowledge systems operating beyond the written and authoritative text and these phenomena are particularly rich in egalitarian settings.

Fuller recognises that 'the slightest alteration in brain chemistry significantly alters the nature of consciousness' (Fuller 2008:154). The San demonstrate extraordinary knowledge of their environment and it is a knowledge acquired through a particular way of living in and working with that environment. It does not seem surprising that the same way of being or disposition and depth of knowledge underpins their healing strategies. The healing dance is a stage for techniques that manipulate the sensing person to a predetermined place of release and relief. Whilst anthropologists and medical doctors might recognise little biomedical efficacy in the dance, the complex connections being recognised in neurophysiology between motor function, sensation, emotion and physiological change strongly suggests that palpable physiological changes are being affected in the dance and we should be cautious of downplaying the power of these changes both socially and medicinally.

References

- Backlanoff, JD 1987. The celebration of feast: music, dance and possession trance in the Black, primitive footwashing ritual. *Ethnomusicology* 31(3):381–394.
- Barsalou, LW 2008. Grounded cognition. *Annual Review of Psychology* 59:617–645.
- Biesele, M 1993. *Women like meat: the folklore and foraging ideology of the Kalahari Ju|'hoan*. Witwatersrand: Witwatersrand University Press.
- Blacking J 1985. The context of Venda possession music: reflections on the effectiveness of symbols. *Yearbook of Traditional Music* 17:64–87.
- Bourdieu, P 1990. *The Logic of practice*, translated by R. Nice. Stanford CA: Stanford University Press.
- Chamberlin, JE 2004. *If this is your land, where are your stories? Finding common ground*. Toronto: Random House.
- Classen, C 1993. *World of sense: exploring the senses in history and across cultures*. London: Routledge.
- Daniel, Y 2005. *Dancing wisdom: embodied knowledge in Haitian Vodou, Cuban Yoruba, and Bahian Condomblé*. Urbana and Chicago: University of Illinois Press.
- Downey G 2002. Listening to Capoeira: phenomenology, embodiment, and the materiality of music. *Ethnomusicology* 46(3):487–509.
- Dubos, R 1976. *A god within: a positive view of mankind's future*. London: Abacus.
- Fuller, RC 2008. *Spirituality in the flesh: bodily sources of religious experience*. New York: Oxford University Press.

- Gibson, JJ 1986. *The ecological approach to visual perception*. New Jersey: Lawrence Erlbaum Associates.
- Guenther, M 1999. *Tricksters and trancers: San religion and society*. Indiana: Indiana University Press.
- Guenther M 2007. 'The return of myth and symbolism': articulation of foraging trance curing & storytelling among the San of the old way & today. *Before Farming* 3:1–10.
- Hartmann, T 1997. *Attention deficit disorder: a different perception*. Grass Valley CA: Underwood Books.
- Howes, D (ed) 2005. *Empire of the senses: the sensory culture reader*. Oxford: Berg.
- Hsu, E and Low C, (eds) 2008. *Wind, life, health: anthropological and historical perspectives*. Oxford: Blackwell Publishing.
- Ingold, T 2000. *The perception of the environment: essays in livelihood, dwelling and skill*. London: Routledge.
- Ingold, T 2008. Earth, sky, wind, and weather. In Hsu, E & and Low, C (eds) *Wind, life, health: anthropological and historical perspectives*. Oxford: Blackwell Publishing: 17–36.
- Ingold, T 2011. *Being alive: essays on movement, knowledge and description*. Oxford: Routledge.
- Johns, T 1996. *The origins of human diet and medicine*. Tucson: The University of Arizona Press.
- Kahneman, D 2011. *Thinking, fast and slow*. London: Penguin Books.
- Katz, R 1982. *Boiling energy: community healing among the Kalahari Kung*. Cambridge, Massachusetts: Harvard University Press.
- Katz, R, Biesele M & St Dennis, V 1997. *Healing makes our hearts happy: spirituality and cultural transformation among the Kalahari Ju/'hoansi*. Vermont: Inner Traditions.
- Keeney, B 2003. *Ropes to God*. Pennsylvania: Ringing Rocks Press.
- Keeney, B 2004. *San Shaman: awakening the spirit through ecstatic dance*. Rochester, Vermont: Destiny Books.
- Keeney, B 2007. Batesonian epistemology, San n/om-kxaosi and rock art. *Kybernetes* 36 (7/8):884–904.
- Keeney, B 2008. *Shaking: the original path to ecstasy and healing*. USA: Sounds true audio learning course.
- Keeney, B & Keeney H 2013. Reentry into First Creation: a contextual frame for the Ju/'hoan Bushman performance of puberty rites, storytelling and healing dance. *Journal of Anthropological Research* 69:65–86.
- Kuriyama, S 1999. *The expressiveness of the body and the divergence of Greek and Chinese Medicine*. New York: Zone Books.
- Lee, RB 1967. Trance cure of the !Khung San. *Natural History*:30–37.
- Lee, RB 1968. The sociology of !Kung San trance performances. In Prince, R (ed) *Trance and possession states*. Montreal: R.M. Bucke Memorial Society:35–54.
- Lee, RB 1979. *The !Kung San: men, women and work in a foraging society*. Cambridge, Massachusetts: Harvard University Press.

- Lee, RB 1993. *The Dobe Ju/hoansi*. 2nd edition. Fort Worth: Harcourt Brace College Publishers.
- Lewis-Williams, DJ 1981. *Believing and seeing: symbolic meanings in southern San rock art*. New York: Academic Press.
- Lewis-Williams, DJ 2002. *The mind in the cave: consciousness and the origins of art*. London: Thames & Hudson.
- Lewis-Williams, DJ & Dowson, T 2000. *Images of power: understanding San rock art*. Cape Town: Struik.
- Low C 2008a. Khoisan wind: hunting and healing. Hsu, E & Low, C (eds) *Wind, life, health: anthropological and historical perspectives*. Oxford: Blackwell:65–84.
- Low, C 2008b. *Khoisan medicine in history and practice*. Köln: Köppe.
- Low, C 2008c. Gatherers of Knowledge: Namibian Khoisan healers and their world of possibilities. In Johnson, D (ed) *The changing landscape of education in Africa: quality, equality and democracy*. Oxford Studies in Comparative Education. Oxford: Symposium Books:161–181.
- Low, C 2011. Birds and KhoeSān: linking spirits and healing with day-to-day life. *Africa* 81(2):295–313.
- Low, C 2014a. Locating /Xam beliefs and practices in a contemporary KhoeSan context. In Skotnes P, Deacon J (eds) *The courage of //Kabbo: celebrating the 100th anniversary of the publication of Specimens of Bushman Folklore*:349–362.
- Low, C 2014b. KhoeSan ethnography, ‘new animism’ and the interpretation of southern African rock art. *South African Archaeological Bulletin* (in press).
- Low, R 1985. *The acupuncture atlas and reference book: a definitive set of charts designed for quick and easy reference*. Northamptonshire: Thorsons Publishing Group.
- Low, R 1988. *The non-meridial points of acupuncture: a guide to their location and therapeutic use*. Northamptonshire: Thorsons Publishers.
- Marshall, L 1962. !Kung San religious beliefs. *Africa* 32 (3):221–252.
- Marshall, L 1969. The medicine dance of the !Kung San. *Africa* 39 (4):347–381.
- Marshall L 1999. *Nye Nye !Kung: beliefs and rites*. Peabody Museum Monographs. Cambridge, Massachusetts: Harvard University Press.
- Medicine & Health Publishing Co., 1980. *An explanatory book of the newest illustrations of acupuncture points*. Revised and enlarged edition. Honk Kong: Chung Lew Publishing Co. Ltd. Foreign Language Press.
- Niedenthal, PM, Barsalou, LW, Winkielman, P, Krauth-Gruber, S & François R 2005. Embodiment in Attitudes, Social Perception and Emotion. *Personality and Social Psychology Review* 9(3):184–211.
- Paterson, M 2009. Haptic geographies: ethnography, haptic knowledges and sensuous dispositions. *Progress in Human Geography* 33(6):766–788.
- Reed, S 1998. The politics and poetics of dance. *Annual Review of Anthropology* 27:503–532.
- Sapolsky, R 2004. *Why zebras don't get ulcers*. New York: St Martin's Griffin.
- Stephen, M & Suryani, L K 2000. Shamanism, psychosis and autonomous imagination. *Culture, Medicine and Psychiatry* 24:5–40.

- Stoller, P 1989. *The taste of ethnographic things: The senses in anthropology*. Philadelphia: University of Pennsylvania.
- Taleb, N N 2007. *The black swan: the impact of the highly improbable*. London: Penguin Books.
- Wilson, E 1975. *Sociobiology: the new synthesis*. Cambridge MA: Harvard University Press.
- Winkelman, M 2002. Shamanism and cognitive evolution. *Cambridge Archaeological Journal* 12(1):71–101.