



Published in final edited form as:

Transcult Psychiatry. 2001 December ; 38(4): 403–432. doi:10.1177/136346150103800401.

Kyol Goeu ('Wind Overload') Part I: A Cultural Syndrome of Orthostatic Panic among Khmer Refugees

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Abstract

Certain cultural syndromes seem to increase the risk of panic attacks by generating catastrophic cognitions about symptoms of autonomic arousal. These schemas create a constant anxious scanning of the body, hence facilitating, maintaining, and producing panic. As a case in point, a Khmer fainting syndrome, 'wind overload' (*kyol goeu*), results in dire expectations concerning the autonomic symptoms experienced upon standing, thus contributing to the high rate of orthostatically induced panic observed in this population.

Keywords

cultural syndromes; Khmer; mental health; panic disorder; traditional healing

Introduction

A previous article reported an extremely high rate of panic disorder among Khmer refugees attending a general psychiatric clinic (53 of 89 patients surveyed, 60%), as determined by a SCID-based interview (Hinton, Ba, Peou, & Um, 2000). That study also demonstrated the high frequency of orthostatically induced panic attacks in this group (26 of 89 patients surveyed, 29%). The horrendous trauma that Khmers endured during the Pol Pot period would be the most obvious cause of high rates of panic disorder in this population (Falsetti, Resnick, Dansky, Lydiard, & Kilpatrick, 1995). One study revealed that 92% of the Cambodian patients attending an out-patient clinic either presently suffer or have previously suffered from post-traumatic stress disorder (PTSD; Kinzie et al., 1990), whereas another demonstrated an 86% current prevalence of PTSD in a community sample (Carlson & Rosser-Hogan, 1991).

However, even given the role of trauma in generating panic disorder, the question remains as to why the rates are so much higher in the Khmer group than in other populations exposed to extreme adversity. For example, in a study of veterans, Orsillo et al. (1996) found that 63% met current PTSD criteria, and of those surveyed, 25% of those suffering PTSD had comorbid panic disorder, whereas 9% of the veterans not suffering PTSD had panic disorder. One must also ask why the Khmer group suffers panic subtypes not found among Americans (e.g., 'sore-neck panic'; Hinton et al., 2000) and extremely high rates of panic types that are not common among Americans (e.g., orthostatic panic). I hypothesize that cultural syndromes mediate the

experiencing of autonomic arousal. As a case in point, another article discusses possible reasons for the high rate of postural-shift panic attacks among Khmers, postulating that catastrophic cognitions generated by several different cultural syndromes play an important role in causing this striking incidence of orthostatic panic by producing hypervigilance regarding autonomic arousal symptoms (Hinton, 2001a; Hinton et al., 2000). A culturally acute study of panic disorder must describe the syndromes that lead to a worried scanning of the body for symptoms signaling imminent demise.

Cognitive-behavioral theorists propose that catastrophic cognitions generate panic attacks (Otto & Deckersback, 1998). According to this view, the greater the number of dire cogitations of possible immediate death due to commonly perceived bodily sensations (in particular, arousal-reactive symptoms, that is, sympathetically amplified symptoms; Taylor, 1994), the greater the risk of panic disorder (Rachman, Levitt, & Lopatka, 1987). By way of contrast, in hypochondriasis, a bodily symptom causes the patient to fear slow death due to a disease (e.g., a brain tumor or stomach cancer), whereas in panic disorder the sufferer detects a bodily symptom causing acute anxiety about possible immediate death due to some corporal dysfunction (e.g., a heart attack or a stroke). Panic disorder cognitions tend to center on arousal-reactive symptoms (that is, symptoms made worse by anxiety), such as palpitations or dizziness, for then an escalating cycle may be triggered (Taylor, 1994). In keeping with this theory, one of the most commonly used instruments in panic-disorder studies, the Anxiety Sensitivity Index measures the number and severity of catastrophic cognitions regarding bodily arousal; the higher the score on this scale, the more likely the experiencing of panic attacks (Schmidt, Lerew, & Jackson, 1997; Taylor & Cox, 1998).

Given the substantial cognitive-behavioral literature documenting the importance of catastrophic cognitions in generating panic, I hypothesize that the greater the number of cultural syndromes indicating that commonly encountered bodily experiences of autonomic arousal may result in rapid death, the more likely it is that members of that society will suffer panic disorder.¹ Accordingly, if various groups suffer the same amount of trauma, the resultant autonomic arousal will result in different rates of panic disorder depending on the degree to which the cultural syndromes of that society lead to an anxious reading of autonomic arousal (and, of course, as another variable, specific trauma types lead to certain cues and patterns of autonomic arousal, particular cultural and social groups being more vulnerable to these cue-and-symptom constellations).

Owing to a history of prolonged and severe trauma, Khmers frequently experience autonomic arousal/lability, as indicated by high rates of PTSD, for example. As argued above, these corporal events will not leap directly to awareness but rather will be highly mediated; that is, the plethora of sympathetic symptoms will be processed, amplified, and elaborated according to the local understanding of the body. In fact, Khmers have multiple cultural syndromes generating fears about autonomic arousal. Some of these schemas cause the Khmer to survey with considerable trepidation bodily zones that an Anglo-American would not consider of major concern. For instance, because of the syndrome of 'sore neck' (Hinton, in press-a; Hinton et al., 2000), Khmers worry that musculo-skeletal tension in that area indicates imminent neck-vessel bursting; this results in many Khmers suffering 'sore-neck' panic attacks (30% of a sample of 89 psychiatric out-patients). A sufferer of this disorder experiences acute episodes of neck soreness (attributed to a sudden rising of wind into the neck vessels), fearing neck-vessel rupturing and enduring various neck and head symptoms, such as dizziness and blurred

¹In the ultimate sense of the concept, 'anxiety sensitivity' is the person's total level of concern about sympathetic arousal in the body; hence, a 'true score' of this construct must summate the degree of fear about arousal in all 'bodily zones of surveillance.' Thus, the more zones of bodily surveillance, the degree of concern about each of the bodily zones, and the frequency of experiencing of perceived perturbations in those bodily zones, all combine to determine the probability of panic.

vision, as well as symptoms of general arousal (palpitations, shortness of breath, and so on). Of note, neck ‘stiffness’ is a strongly ‘arousal-reactive symptom’ (Taylor, 1994); that is, when a certain neck stiffness is noted, the patient then becomes more anxious for fear of neck-vessel bursting, this increased anxiety exacerbating musculo-skeletal tension and thereby worsening neck discomfort and fears of the disorder.

The present article describes another cultural syndrome (*kyol goeu*, that is, ‘wind overload’). This syndrome produces catastrophic cognitions regarding the autonomic symptoms, especially dizziness, associated with postural shift and hence might help to explain the high prevalence of orthostatically induced panic among Khmer refugees. The article is structured as follows: case vignettes, the viewpoint of two healers regarding *kyol goeu*, a delineation of the Khmer pathophysiology of wind, a systematic exegesis of the syndrome of wind overload, and a discussion of implications of the study for the cross-cultural study of panic.

Patient Examples of *Kyol Goeu*

The data in this and the following sections are based on ethnographically oriented interviews in two out-patient psychiatric clinics. The first author is the medical director of two Southeast Asian clinics near Boston (one in Lowell, a city with a Khmer population of about 25,000, the other in Revere, which has about 3000 Khmer) where he currently treats over 250 Khmer patients. He is a psychiatrist who has trained in ethnography and medical anthropology and conducted fieldwork for three years in northeastern Thailand (Hinton, 1999). He is nearly fluent in both spoken and written Khmer. The author acts as both psychotherapist and psychopharmacologist for many of the clients featured in this article, most of whom he has known for several years. A typical appointment occurring approximately every two weeks, lasted anywhere from fifteen minutes to an hour. During most of the interviews, a bicultural staff member was present (one of the co-authors of the present publication). The patients were selected as being typical presentations of the disorder in question.

Case 1: Uy

When I first started treating Uy, who had a severe Pol Pot trauma history, she suffered from both PTSD and panic disorder. Her orthostatic panic episodes occurred about three times a week, these events being accompanied by palpitations, headache, dizziness, blurred vision, and fears of *kyol goeu* (literally, ‘wind overload’). When she suffered a panic episode, Uy used a traditional healing method called ‘coining’ (literally, ‘scratching wind,’ *gaoh kyol*); the attack would slowly come to an end within about an hour. After starting therapy and medication (clonazepam and selective serotonin reuptake inhibitors), Uy had been doing well, with one orthostatic panic episode every two months, and these episodes were mild and did not cause her to fear a *kyol goeu* event.

On the day to be recounted, when I arrived at her home [the author often does home visits to facilitate treatment], Uy immediately showed me red tracks running down both arms and told me that she had almost died that morning. After recovering from the acute episode, Uy visited her general physician who assured her that his examination and laboratory tests revealed no abnormality. The normality of the findings calmed her considerably. [Of note, Khmer patients visit general physicians after a severe panic episode to ensure that there is no heart, blood pressure, or other abnormality; many patients go the general physician several times a month for this reason.] Uy then described her *kyol goeu* episode.

Immediately upon awakening at five that morning, Uy felt nausea, accompanied by the sensation of wind hitting upward from the abdomen; and so she quickly stood up, intending to go to the bathroom and vomit. Upon rising to the upright position, Uy felt multiple symptoms: dizziness, palpitations, cold hands and feet, and body trembling. To describe her palpitations

(literally, in Khmer, a ‘shaking of the chest’ [*nyou daeum trung*]) and trembling of the body, she compared the heart, chest, and limb movements with the jerky motion of a rice milling machine (*maasiin geun sreuw*); to illustrate the vibrations, and implicitly the movements of her chest (and heart) and limbs when beset by anxiety, she oscillated her hand in front of her body and simultaneously articulated a repeating triple rhythm with the sound ‘*geu, geu, geu,*’ the stress on the first ‘*geu,*’ this meter-like pulse intended to mimic such a machine. Uy stated that her whole body shook like an old car. Also, she felt tight in the chest, unable to breathe; her body was pale and numb; and wind was shooting from her ears, making it difficult for her to hear. In immediate response to the myriad symptoms experienced upon standing, Uy shouted out to her family members for help, as she fell limply back onto the bed.

When four family members arrived, they immediately pulled at the fold of flesh at the arm pit and also bit her ankles; they pounded with their fists on her chest (both to stimulate her heart and also to loosen her chest muscles to ease breathing) as well as pounding, massaging, and coining along her extremities (to promote normal wind movement). Uy emphatically reiterated that she nearly died; it was almost an episode of *kyol goeu*. Uy further averred that if someone were in a near-*kyol goeu* state such as this, having fallen to the ground, trying to stand again would cause death. You must administer these treatments until the sufferer yells out, indicating a regaining of verbal powers. Uy explained that all the bodily ministrations aim to allow wind and blood to flow normally in the body. Uy attributed her near-*kyol goeu* episode to not eating well, resulting in a weakened body and ‘wind being born in her body’ (*gaeut kyol*). She said that *kyol goeu* causes shortness of breath (*steuh doo danghaeum*) and heart arrest (*geaung beh doun*).

Uy went on to comment on the Khmer pathophysiology of wind. She explained that if she feels ill or does not eat well, this increases body wind; so, she prophylactically coins lest a phenomenon called ‘ripe wind’ (*kyol tdum*) develop. Ripe wind can be discerned by the characteristics of the skin marks left by coining: the streaks are darker red, a black red, and often bumpy. The bumpiness results from the rapid exiting of pressurized wind from the body. If only a slight excess of bodily wind exists, then coining results in pale red streaks. One must cover the body after coining, for coining widens the skin pores located at the hair follicles. If one does not cover the body after coining, wind may flow into the skin pores and *kyol goeu* may result. She says that *kyol goeu* means both ‘the wind piles up’ and ‘the wind mutes one.’ Even if one simply feels unusually tired, it would be prudent to coin, for tiredness may indicate excessive wind in the body. If one fails to coin when wind lurks in the body, this wind may become ripe wind and ultimately cause *kyol goeu*. One day one might stand and then collapse in *kyol goeu* due to ripe wind.

Case 2: Pich

I had also long treated a neighbor and friend of Uy named Pich. A few weeks after Uy had her near-*kyol goeu* episode, Pich suffered a similar near syncopal episode. In fact, it was Uy who first related that Pich, like herself, had nearly died from an episode of *kyol goeu*. Uy furthermore asserted that if family members had not arrived on time to coin and perform other ministrations for Pich, then she would have died. Pich, who was 45 years of age and a single mother of five children, had long suffered PTSD (due to trauma suffered in the Pol Pot period) and panic disorder (both the orthostatically induced and sore-neck subtype). Pich often complained that her children did not help around the house and that they spoke disrespectfully to her; and she was burdened by continual financial problems. Almost every night, she felt as if the wind was not circulating properly in her body; and Pich entreated her children to step on her legs, back, and arms to facilitate wind flow in the vessels. The children coined and pounded with fists along the limbs, moving from a proximal to a distal location. These various limb treatments dislodge blockage – especially at the joints – and speed the wind along, thereby allowing it to

leave the body from the limb extremities and the pores at the hair follicles. Only then could she sleep.

When we arrived at Pich's house, she looked tired. Pich stated that if her children had not been home, she surely would have died. Her *kyol goeu* episode occurred directly after she had an argument with her ten-year-old daughter who was mentally retarded and psychiatrically ill. During the dispute, the daughter used very foul language, upsetting the mother deeply. After the argument, Pich proceeded to stand but was suddenly beset by multiple symptoms: a sense of wind rising from the abdomen, dizziness, a tightness in the neck, an ache in the limbs from poor wind circulation (*kyol mun daeu*), joint discomfort as if there were an obstruction in those locations,² the sensation of air blowing from her ears making the sound 'ngeung, ngeung, ngeung,' and blurred vision. Pich yelled out for help and then fell down to the ground. All her children rushed to help her. They bit her ankles, pulled on the vessels in her armpits, coined her, and massaged her limbs.

After a half an hour of such ministrations, Pich felt much better: wind no longer was rushing from the ears, signifying a decrease in internal wind pressure; the palpitations stopped; dizziness abated; and her neck relaxed again. When asked about the cause of this episode, Pich emphasized a sudden sensation of abdominal distension and sense of wind hitting upward from the abdomen. This rising wind in turn impedes breathing, blocks heart motion, distends the neck vessels, causes a swirling in the head (i.e., dizziness), and shoots out the ears resulting in a hissing noise. She said this was an episode of 'wind overload' (*kyol goeu*), of 'big wind' (*kyol thom*). Pich went on to say that she had not been sleeping or eating well. She had been too upset about her daughter, finances, and the difficulties of being a single mother with a toddler. Thinking of these problems, Pich often cannot fall asleep. Pich averred that this host of problems, along with poor sleep, and deficient diet, caused her to feel dizziness upon standing and to suffer a near-*kyol goeu* episode.

As described elsewhere (Hinton, 2001a), the image of spinning is often used by Khmers to convey a sense of mental distress, a master trope of emotion, far more utilized than it is in the American emotional lexicon. So in this case, Uy's feelings of dizziness upon standing simultaneously evoke all present life difficulties as well as fears of the cultural syndrome of *kyol goeu*.

The Healer's View of *Kyol Goeu*

Now let us consider how two cultural experts, one a former nurse and the other a monk, understand *kyol goeu*. These erudite exegeses are perhaps a little more systematic but entirely typical of the sort of explanations given by patients.

Expert Explanation 1: A Former Nurse, Khin

Khin, one of the co-authors of this article, is a sixty-year-old man who grew up in a village and was educated in the temple. He later became a nurse, educated by the French. For many years before the Khmer Rouge took over the country, Khin ran a general medical clinic and made daily home visits. According to Khin, when wind increases in the body, the person feels aches (especially at the joints), weakness, some anxiousness, and usually a little dizziness. This increase in inner wind may result from eating poorly (both in the sense of small quantity and inferior quality), from decreased or disturbed sleep, and from thinking too much about one's problems. All of these processes (i.e., eating poorly, decreased sleep, and excessive thinking) weaken the body in a more general way, causing the heart to beat less vigorously than usual,

²Literally, she says, 'corked at the joints of the arms, corked at the joints of the legs' (*cok seunla day ceung*), vividly conveying a sense of vessel obstruction at this location.

resulting in feeble circulation. Decreased cardiac power results in stagnation and hence further coagulation. Poor circulation also leads to less exiting of wind from the body. The resultant accumulation of inner wind causes blood hardening by two mechanisms: (i) the inner wind, itself, is said to be cold, causing thickening of the blood; and (ii) wind creates a darker blood that tends to coagulate. Because of these fears of decreased cardiac power and multiple types of wind accumulation and coagulation, Cambodians constantly visit Vietnamese physicians seeking injections of energy medicines;³ these injections invigorate both body and heart. In Cambodia, Khin routinely administered such medicines to his patients.

This former nurse further elaborated that if you fail to coin sufficiently or laxly observe the post-coining injunctions (e.g., covering the body with a blanket and avoiding going outside for a time), the wind inevitably accumulates in the body and is transformed into a more virulent form called 'ripe wind' (*kyol tum*). Khin asserted that if enough wind piles up in the body, severe dysfunction might suddenly occur. For one, the heart fails to work properly because wind is hitting upon it from the stomach; it cannot squeeze and thus fails to send blood to the rest of the body (*creubac chieum*). In addition, the already weakened heart has difficulty fighting against all the vessel blockages. If you try to stand up while in a state of inner wind excess, you will feel dizzy and experience an onslaught of other symptoms. You feel cold in the extremities; there is a sense of pain and blockage at the joints; an intense tightness of the jaw; dizziness; and often the sound of air shooting from the ears. If the wind pile up is not too great, you still will be able to sit down again, but if the wind pile up is too great, you will necessarily have an episode of *kyol goeu*. The impaired heart cannot meet the challenge of standing, and you will fall to the ground, paralyzed but possibly able to see or hear those around. If no one rushes to aid you when you faint, then you will die. A timely biting of the ankles, pulling at the armpits, and coining, will restore the flow of wind in the body.

Khin first learned about the cause of *kyol goeu* from his father who was a farmer in a small village in Cambodia. As his father explained to him, in the first stages of the disorder, wind starts to accumulate in the belly, until it pushes upward against the diaphragm making the person unable to breathe.⁴ Also, as the diaphragm is pushed upward, the heart has no room to expand; this results in feeble contraction of the heart. To illustrate this motion, Khin repeatedly opened and closed his hand, first with a motion of full opening and closing, then with a more restricted one. When such a person stands, he feels considerable dizziness; the heart cannot pump sufficient blood to the head. If a person accumulates much body wind in the belly, this will result in blockage at the vessels in the joints, especially at the knee and elbow (*sla day sla ceung*) owing to the heart's failure to beat well, thus causing yet more stagnation. His father told him that if a person has *kyol goeu*, sometimes biting the ankles, pulling the body vessels, and coining may not be adequate treatment. For recovery to occur, one must squeeze the wind from the body. This is initiated by encircling the belly with the fingers, placing the hands at the level of the diaphragm, squeezing down, and then pulling the hand downward along the sides of the body. Khin stated that, like his father, he had been able to save many people using this technique, especially during the Pol Pot period.

Expert Explanation 2: A Renowned Monk, the Venerable Saokhuan

The Venerable Saokhuan, a nationally esteemed Khmer monk who resides in Lowell, Massachusetts,⁵ offered the following comments regarding *kyol goeu*. He began by

³In the US, there are many Vietnamese physicians, but very few Cambodian doctors. Most Cambodian doctors were systematically killed during the Pol Pot period.

⁴frequent form of meditation in Cambodia involves observing the breath, often concentrating on the stomach as it rises and falls; this helps to create a sense of connection of abdominal distension and deflation and breathing.

⁵Lowell is home to a community of approximately 30,000 Cambodian refugees. The Venerable Saokhuan is the head monk of Lowell's main temple.

emphasizing that it is incumbent upon those suffering from excess wind to administer the traditional remedies quickly in order to avoid a full-fledged episode of *kyol goeu*. He then related that he considers the belly to play a key role: too much wind in the belly causes *kyol goeu*. The Venerable Saokhuan explained that the belly is a large space. He compared the belly with a rice field after the harvest. At that time, various winds blow together upon the dry field and cause small tornadoes. [Dust devils are a common experience for rural Cambodians. Khin, the expert informant mentioned above, told me that frequently as a boy, to entertain himself, he would throw his scarf into a whirlwind. He would then watch as the wind sucked it up, next swirling it upward in widening gyres, and then ejecting it at a distance.] Similarly, the monk Saokhuan revealed, various winds blow into the space of the belly where they collect, ultimately causing a sort of miniature tornado. Worse still, just as a tornado lifts up the dirt of the rice fields, so too the tornado in the belly sucks into itself all the bad elements of digestion that are found there. The newly formed whirlwind, a kind of inner dust devil, may then suddenly rise upward toward the lungs, heart, and head.⁶ He explained that ‘ripe wind’ is dark red, almost black, this color being caused by the debris that enter the blood when the tornado wind – containing digestive by-products – rises up from the belly. When the wind hits the lungs, it causes shortness of breath; when it hits the head – and it usually does so with such force that wind shoots out of the ears – dizziness and syncope result.

Here, in the monk’s explanation, the natural environment serves as an explanatory frame for commonly experienced disorder. There is no emotion in the abstract, wind as hypothetical element, but rather it is configured in terms of common encounters with the experientially known wind events; emotion is not only embodied but also en-landscaped. Both the body and the lived environment help to vivify affect and give a sense of luminescent and frightening naturalness (on landscaped emotion and models of pathophysiology, see Hinton, 1999). A spinning upward of wind from the abdomen takes on landscape associations. To give an impression of the emotive power of this image, consider someone who has read Yeats frequently, putting to heart the famous lines from *The Second Coming* that also show a sort of landscaping of dizziness:

Turning and turning in the widening gyre,
The falcon cannot hear the falconer;
Things fall apart; the center cannot hold;
Mere anarchy is loosed on the world....
The best lack all conviction, while the worst
are full of passionate intensity....

Finneran (1996)

But in the Cambodian case, the landscape event is in the body, wind as actually swirling upward from the belly, an inner tornado; also, spinning serves as the master trope of dysphoria in the Khmer language (Hinton, 2001a). I suggest that such a bodily experience would create a panicked state of concern, simultaneously conjuring images of bodily disorder and evoking a landscape image (as well as eliciting all the concerns and tribulations of the present life circumstance), a sense of an external landscape image insinuating itself as a homologous disordering of the body itself in a reverse image of Levi-Strauss’ (1974) famous discussion of cure (or also, the spinning of life as spinning the body).

The Venerable Saokhuan further explains that excessive wind in the belly moves upward to hit the lungs, impairing proper breathing, creating a feeling of light-headedness. He says breathing is like the movement of a car piston or the piston in a bicycle pump; excessive wind in the belly blocks the normal movement of the piston or pump of breathing.⁷ The wind hits the heart, compressing it, so it works poorly. The wind also goes further upward causing dizziness in the head as well as rushing out of the ears. The Venerable Saokhuan says that one

⁶Some patients state that they have heard people speak of wind rising in the belly as comparable with a dust devil in the hot month raising upward dirt and debris. Patients quickly endorse this nature comparison as accurate.

must strive to keep the wind flowing in the vessels so it can make its natural exit from the feet, hands, and head.

The Venerable Saokhuan describes a way to prevent *kyol goeu*; one can recover from an episode of *kyol goeu* using the same method. If one has abdominal distension and discomfort due to gas, one should put the thumb on the xiphoid and recite a certain incantation;⁸ then, while pushing down, the sufferer should pull the thumb along the middle of the belly down past the umbilicus and onward to the pelvis. This rids the body of wind by causing it to re-enter the vessels of the legs and flow out the feet, and by allowing it to exit the body as flatus as well.⁹

Moreover, the Venerable Monk Saokhuan has two methods to prevent the accumulation of inner wind. As a prophylactic against inner wind piling up, the monk frequently uses the wind-dispelling incantation mentioned above, for example, when drinking a carbonated liquid such as cola. After reciting the incantation over the drink, he blows forcefully outward, this a kind of prophylactic ridding the body of wind. The Venerable Saokhuan can then drink the liquid without any ill effect. In fact, every morning he recites this same incantation over water and then drinks it. He quite literally ingests the beneficial, protective powers of the chant, making him immune to accumulations of inner wind. As a second technique, if feeling anxious or ill, the Venerable Monk Saokhuan lays down, and as he inhales and exhales, he visualizes the unobstructed traversing of wind as it repeatedly moves up and down through the vessels of the body, in continual motion, from foot to head and then head to foot. As he imagines the air flowing downward, he envisions a prominent exiting of wind through the feet. This meditation technique allows the wind to flow smoothly and without obstruction in the body and helps it to exit the feet as it should.¹⁰

The Khmer Pathophysiology of Wind

In order to better understand ‘wind overload’ (*kyol goeu*), the Khmer pathophysiology of wind – and the associated elaborate mode of bodily surveillance and treatment – must be outlined. For other discussions of wind in Khmer culture, see Eisenbruch (1991) and Lambert (1986). Wind is an extremely important element in the ethnophysiology of Southeast Asia. Interestingly, it is construed primarily as a positive force in the Malay context (Hinton, 1999; Laderman, 1991) although seen to be mainly pathogenic in the Laotian (Hinton, 1999), Northern Thai (Muecke, 1980), and Vietnamese (Barrett, 1997; Eisenbruch, 1983; Hinton, in press-b) countries of Southeast Asia. Although seldom discussed, during the Renaissance

⁷Cambodians conceive of breathing as an up-and-down movement comparable with the movement of a piston in a bicycle pump or that of a car. The act of inhalation is called ‘pulling the breath in’ (*doo donghaeum coul*), and exhalation is called ‘pulling the breath out’ (*doo danghaeum jeumy*). When describing inhaling, patients often drag the finger down along the sternum; when describing exhalation, patients pull the finger upward along the xiphoid and toward the mouth. When relating shortness of breath, patients make the finger descend less far down along the sternum. If I jest by saying, ‘your hand going up-and-down is like the movement of a piston or a bicycle,’ the patient laughs and often says that this is the image he has in mind. Frequently patients speak of the heart as a kind of engine that drives the piston of breathing. Bicycle pumps and car cylinders are familiar images to the Cambodians, images of daily life used to understand the body.

⁸This incantation speaks in images of mastery and threat, trying to assert control over ‘wind,’ and commands the gaseous vapor to leave the body.

⁹Not surprisingly, given the Khmer emphasis on bodily wind excess and abdominal distension, such habits as flatus and bowel movements are closely observed.

¹⁰Those familiar with typical Theravedan breathing meditation (in which one observes the breath as it moves in and out at the nostril or as it repeatedly fills and then deflates the belly) will observe a clear homology of the two techniques. In the ridding-the-body-of-wind technique of the Venerable Saokhuan, he creates a sense of an ebb and flow of all the bodily wind. This would seem natural and experientially true to Cambodians, almost all of whom are well familiar with the inhaling and exhaling (or alternatively filling and deflating the belly) meditation techniques described above. Here Buddhist meditation becomes localized and appropriated as an ethnophysiological intervention. Even the usual Theravedan meditations on the breath have this special local resonance; that is, full breathing as a kind of moving to vigorous movement of the winds of the body, analogous to the motions of a piston or bicycle pump. The affective resonance and sense of efficacy of Buddhism in local contexts can only be deciphered by an explanation of such ethnophysiological dimensions. Sometimes meditation and the mundane activity of filling bicycle tires with a pump are not so distant operations.

period in England, an elaborate pathophysiology of wind figured prominently, as in hypochondriacal melancholy (Jackson, 1986) – also called ‘windy melancholy’ – in which vapors and windy blasts hitting upward from the abdomen result in shortness of breath, palpitations, dizziness, and tinnitus.¹¹

An Anxiety Idiom: Blocked, Increasing, and Rising Bodily Wind

Wind is the key element of the elaborate Khmer psychophysiology. Khmers imagine the body to contain small hollow vessels – most importantly, in the limbs and neck – that carry blood and wind throughout the body. In the healthy state, wind and blood flow along without interruption, but when the body is in disorder, blockage occurs. In a typical scenario, excessive worry (in the Khmer idiom, ‘thinking too much’), poor appetite, and irregular sleep, all combine to weaken the body and heart. A fatigued heart causes poor circulation, leading to a tendency to ‘clot’ at the joints; furthermore, poor circulation results in less exiting of air from the body at the hands and feet. Such perturbations result in increased bodily wind and vessel blockage, which in turn gives rise to a variety of bodily symptoms.¹²

The idioms regarding pain, fatigue, and numbness, reflect the Khmer understanding of the body, configuring these states as tubal occlusion. These tropes potentiate the experiencing of anxiety as a kind of dolorous fatigue and agitation (note the similarity to mixed-anxiety depression; Kirmayer, 1997). For example, patients often complain of malaise, weakness, and pain in the limbs, a sense of fatigued and dysphoric restlessness, a rough equivalent of our ‘on edge’ and ‘having pins and needles.’ A frequently used term to convey this state is ‘*jok*,’ this word literally meaning ‘to plug up, as with a cork.’ Such limb blockages are generally thought to occur at the knee and elbow joints,¹³ and supposedly also cause weakness, coldness, and numbness distal to the joint. To give another typical use of this tube-occlusion idiom, Khmers often present with the following somatic-anxiety complaints: ‘plugged up, as with a cork’ (*jok*) in the arms, ‘plugged up as with a cork’ (*jok*) in the legs (*jok day jok ceung*). Also, in referring to bodily dysphoria, the patient may use the word ‘*sla*,’ which means ‘blocked as a windpipe is obstructed by a bone,’ the sufferer thereby articulating a condition of limb-vessel occlusion by analogy to the action of choking on a bone.¹⁴ When anxious, patients often complain that ‘the vessels in the leg are “blocked as a windpipe is obstructed by a bone” (*sla*), the vessels in the arms are “blocked as a windpipe is obstructed by a bone” (*sla*)’ (*sla day sla ceung*). Khmers also believe that aches and exhaustion in the limbs may result when a vessel becomes twisted and buried in the muscle (*sosai gop*), impeding flow. As can be seen, Khmers often configure somatic anxiety as limb discomfort, attributing this to vessel occlusion – especially at the joints – causing ache, weakness, numbness, and cold. According to the Khmer physiology, these occlusions may have other dire consequences.

For one, wind is considered a cooling substance; and if blockage occurs at a joint, then coagulation is even more likely to result. Khmers consider that blood coagulates when cold, for they commonly observe that blood extracted from an animal coagulates as it cools – for

¹¹The analogies to the Khmer case should be clear. In fact, my research on the Khmer and Laotian panic syndromes caused me to re-evaluate hypochondriacal melancholy from the perspective of an ethnophysiology of wind. To be discussed in another publication, the windy melancholy so often described in Renaissance England would seem, in many instances, to be a form of gastrointestinal panic with remarkable similarities to the gastrointestinal panic presentation of Khmer and Laotian patients.

¹²Typical of this model of pathophysiology, one patient claimed that if blood were extracted from someone suffering ‘excess wind,’ the blood would contain air bubbles.

¹³Khmers consider joints the locality where wind blockage occurs. The word for ‘joint’ (*seunla*) is derived from the word ‘*sla*,’ this seemingly identifying the anatomical locality in terms of its role in pathophysiology, as the place where blockage occurs, this etymology furthering the idea that vessel occlusion typically occurs at the joint. This belief gives rise to a healing practice described below, called *relouh*, in which the arm is snapped outward, a crack then heard at the elbow, this representing the occlusion being removed. Khmers frequently crack joints to gain a sense of relief.

¹⁴That is, tracheal occlusion used as a source of metaphor. In fact, the Khmers called this inner area of the neck ‘the tube of the throat’ (*bampueng go*).

example, upon slitting the throat of a chicken or pig and catching the fluid in a bowl, after a few minutes, the blood cools and solidifies, later being cut into cubes to be added to different foods – this yet another instance in which daily lived experiences serve as models of pathophysiology; when a patient feels cold in the extremities, this image of coagulating blood is consciously or subconsciously invoked. By such mechanisms, peripheral blockage can result in permanent loss of the use of the limb.

In addition, when the wind becomes blocked at the joints, it cannot exit the limb extremities (i.e., the feet and hands).¹⁵ Prevented from descent through the limbs by obstruction at the joints, the vapors rise in a pressurized-like manner, causing multiple symptoms in the trunk, neck, and head. In the trunk of the body, the wind: (i) distends the belly, causing nausea; (ii) strikes upon the lungs, causing shortness of breath; and (iii) compresses the heart, causing it to pump less efficiently and also to beat irregularly, resulting in palpitations. As the wind moves further upward, it swells the neck vessels, causing soreness, and possibly neck-vessel bursting and death. Finally, having arrived at the head, the wind swirls in the cranium, causing: (i) dizziness, (ii) blurred vision, (ii) pressurized escape from the ears,¹⁶ and (iv) a feeling of imminent syncope.

At a time of an increase in inner wind (i.e., during a state of autonomic arousal and anxiety when the patient imagines wind to be hitting upward, causing, in particular, a sense of brain matter spinning) severe vertigo will result if the sufferer stands, for the individual already experiences dizziness, and the patient is also in a vulnerable cardiac status; wind is hitting upon the heart, thereby reducing cardiac power. Should the patient stand at such a time – this is an orthostatic challenge of the body's vigor¹⁷ – syncope and *kyol goeu* might result.

The reader will note the similarity of wind symptoms to those of general anxiety and panic disorder. Cambodians convey psychic and somatic anxiety using a wind idiom; anxious states are ascribed to an excess and/or blocking of wind in the vessels of the body. When not feeling well in a psychological sense, patients describe this dysphoric state as 'increasing bodily wind' (*kyol gaeut*), 'the wind has begun in the body' (*kyol cap*), and 'wind illness' (*rook kyol*). One symptom of autonomic arousal, dizziness, holds a key place in the local understanding of the body. The degree of dizziness registered upon standing reveals the degree to which the body has been weakened by the anxious state; it indicates the remaining 'strength of the body and heart.'¹⁸ That is, an upward postural shift serves as a test of the body's vigor, revealing the degree to which anxiety, 'thinking too much' (*geut caraean*), and disturbed habits (e.g., poor sleep and appetite), have weakened the system.¹⁹

Anxiety Treatment: Removing Vessel Blockages and Excess Bodily Wind

As soon as a patient feels psychic and somatic anxiety (e.g., pain, malaise, nausea, palpitations, fatigue, soreness of neck, or dizziness), she or he will use several different methods to remove air from the body. These treatments are interpersonal. Cambodians frequently state that such ministrations represent a very important way to express affection towards each other.

¹⁵Wind also exits the body through the hair follicles.

¹⁶Khmer patients often experience tinnitus-like symptoms during anxiety; this is said to be caused by the pressurized escape of air from the ears.

¹⁷Note that orthostatic dizziness is common in chronic fatigue syndrome. In that context, it does not trigger panic attacks but similarly is taken as evidence of bodily weakness. Hence, both the Khmer patient and the sufferer of chronic fatigue syndrome are acutely sensitive to dizziness sensations upon standing, this leading to a hypervigilance for, and amplification of, these somatic events.

¹⁸As elaborated in a separate article on 'weak heart' (Hinton, 2001b), Khmer believe that a person is like a car; without gas, the engine halts; so too, if the body becomes weak enough, all energy is depleted, the heart stops and the person dies. Palpitations, like the knocking of an engine, indicate a low energy state of the body.

¹⁹Of note, palpitations constitute both a major aspect of anxiety states as well as a normal reaction to certain situations (i.e., exercise). In addition, dizziness is both a major aspect of acute anxiety states as well as a normal reaction to certain situations (i.e., standing). Hence, it is not surprising that events such as exercise and postural shift can be potent inducers of panic.

The most popular method consists in ‘coining’ (*gaoh kyol*, literally, ‘to scratch wind’). To do this, the Khmer first grasps a coin between thumb and forefinger and then dips it in special oil (one of the most popular is called ‘wind oil’; *preing kyol*). Next the sufferer, or the person coining for the sufferer, presses one edge of the coin down upon the skin – usually on an arm or leg – and proceeds to rub it along that body part, subsequently lifting the coin up and repeating the motion. This results in linear marks along the limbs. The coining movement is proximal to distal, displacing the wind outward to exit through hand and foot, removing vessel blockages by a kind of mechanical pushing along of the blood and wind, analogous to how squeezing an occluded tube may result in the dislodging of an obstruction. Once the air moves normally again, it can exit from the feet and hands. Moreover, coining allows some air to leave the body directly both via the linear marks made by the coin itself and from the hair follicles, which are said to be expanded by coining.

Another popular method of wind removal is ‘cupping.’²⁰ Typically, a candle is placed on some part of the body; and a glass jar – about the size of a hand’s grasp – is then placed over the candle. The flame quickly extinguishes itself, and the resulting vacuum draws skin and flesh into the jar. It is thought that this suction removes wind from the body. When feeling poorly, patients ask family members or friends to place some twenty or so of these cups over the surface of the back. When suffering a headache or dizziness, the patient may cup directly on the forehead.²¹

Patients often perform various maneuvers that result in cracking and popping at the joints, these dramatic noises representing the sound of air and blood running downward in a pressurized release as blockage is removed from a vessel at the point at which it runs through a joint. Similarly, pulling at the hair or skin creates a ‘pop’ sound that indicates the alleviation of excess wind at that location. Some of these sonorous body manipulations include the following: cracking the knuckles of hands, feet, and spinal vertebrae; pulling in a quick jerk on fingers, arms, and legs; tugging in a saccadic movement upon head-hair clumps and ears; and swinging-out the arm in a quick jerk from a fully flexed position to an entirely extended one. Patients tell me that when they are feeling well and therefore not suffering from ‘wind,’ these multifarious manipulations (e.g., snapping, jerking, pulling, and extending) yield no sound, for there is insufficient blockage and back up of wind to create the popping ‘*phoh*’ or ‘*proh*’ sound.²²

Family members often massage the limbs and walk along them in order to cause the obstructed wind and blood to flow freely again. Warmth and feeling then return to the extremities. As another way to mechanically remove limb blockages, a patient will tie a string around the proximal part of a limb for a minute or so, then release the knot, this said to cause a sudden flow of blood and wind along the vessels that dislodges blockages at the joints below.

Finally, most patients apply ‘wind oil’ on the face and other parts of the body when they suffer ‘wind illness.’ Many patients believe that this helps the wind to move more smoothly within the vessels and also to directly exit the skin; for example, if the belly is distended, wind oil is applied directly to the abdominal skin surface to cause the vapors to course outward along the alimentary canal as flatus or a burp, to go outward through vessels, and to escape directly through the epidermis.

²⁰The more literal translation of this technique being ‘to suck up wind’ (*jup kyol*).

²¹Also, to reduce the sense of pressure in the head, patients may jab with a needle in a circular area on the head, then cupping over this section, thereby allowing the more rapid removal of wind and blood.

²²The reader will not be surprised to learn that chiropractors are popular among the Cambodian population, for American chiropractors also use cracking of the joints as an important treatment measure. Khmers call chiropractors ‘doctors who treat the vessels’ (*kruu pbee tweu sosai*); this follows from the fact that nerves and not the spinal column are the area of concern to the Khmer, the loud sounds that result from limb and back manipulation considered to indicate a relief of nerve obstruction rather than a realignment of the spine.

Worried Self-Surveillance for Evidence of Excess Bodily Wind

Multiple sources of excess wind exist, as described above. But how can one know if dietary indiscretions, certain anxious cogitations, or other such missteps might not have resulted in an inner zephyr? And, even if one does remove vapors from the body, accumulation of inner wind may occur when the ministrations are not timely or are inadequate in vigor. For example, such ‘piling up’ occurs for the following reasons: if one does not coin or cup long enough to sufficiently extract the wind from the body (*gaoh mun ooh*); if one allows the wind to remain too long in the body (*gaoh mun tdoeun*; the wind then turns into ripe wind,²³ a sort of chronic state that requires ardent coining over several days); if one does not cover the body well after coining (*loop kyol*; for coining is said to open the pores of the skin creating a state in which wind may enter the body); or if one goes outside too soon after coining (*pah kyol*; wind may blow into the pores of the body).

Because myriad causes of wind accumulation exist – and the difficulty of adequate removal is so great – a Khmer constantly scans psychic and bodily state for signs of dysfunction that would indicate the need to coin, cup, and apply wind oil. Such fears – especially those regarding ripe wind – lead the Khmer patient to be extremely anxious about any indication of increased bodily wind. As described above, symptoms of excessive bodily wind are numerous; these symptoms correspond in many ways to what we would call psychic and somatic anxiety. To Khmers, a key indicator of increased body wind is dizziness, especially upon standing. Once excessive wind exists in the body, it must be removed promptly, or inner accumulation of wind may increase to the point of causing *kyol goeu* (a vertiginous–syncopal event) upon standing. For this reason, the patient constantly assesses the presence of disordered habits (such as thinking too much, poor sleep, or poor appetite) and psychic and somatic state (such as anxiety, nausea, joint pain, dizziness, palpitations, sweating, or coldness in the extremities) to determine if wind removal measures should be implemented. In particular, standing serves as a sort of ‘inner-wind test’ (as ‘true’ and ‘scientific’ to a Khmer as the treadmill test for a cardiac condition is to an Anglo-American). If a Khmer stands and detects slight dizziness, this indicates interior wind increase. And, in the case of a significant accumulation of inner wind, when a Khmer shifts to the upright, this will inevitably cause severe dizziness and even syncope (*kyol goeu*).

Dizziness (in Khmer, ‘*wul*,’ or literally, ‘spinning’), a rather nebulous term, may refer to any of a number of bodily sensations, such as a feeling of vertigo (i.e., room movement), light-headedness, faintness, giddiness, or gait instability (Yardley, 1994). There exists a constellation of related sensations, which Anglo-Americans have somewhat imprecisely lumped together under the term ‘dizziness’; this is equally true of the Khmer term for this sensation (*wul*). An anxious Khmer patient can easily interpret some bodily sensation felt upon standing as ‘dizziness’ (*wul muk*), the patient then becoming very concerned about inner-wind accumulation, there ensues a dual process of catastrophic cognitions (Otto & Deckersback, 1998) and somatic amplification (Barksy, Goodson, Lane, & Cleary, 1988; Barksy, Coeytaux, Sarnie, & Cleary, 1993).

The Cultural Syndrome of *Kyol Goeu*

This section of the article describes the following facets of *kyol goeu*: phenomenology and treatment, dictionary and lay explanations of the term itself, the conflation of the syndrome with other illness types (e.g., stroke, sore-neck syndrome, and seizure), and the pathophysiology of the disorder.

²³Khmers believe that if one does not promptly remove accumulated wind (generally by coining), then this excess wind will transform into a more pernicious entity: ‘ripe wind’ (*kyol tdum*). If a Khmer coins when he or she has ripe wind, then the coined area will turn black red and rise in bumps that resemble bubbles. Ripe wind is harder to remove by coining and also may result in more serious symptoms.

The Phenomenology and Treatment of 'Kyo! Goeu'

Kyo! goeu is a fainting syndrome. In the classic case, upon postural shift to the upright, the individual suddenly detects all the sequelae of wind accumulation: dizziness along with other dysphoric symptoms (e.g., a sense of blockage and pain at the joints, palpitations, coldness in the extremities, shortness of breath, a tight jaw, and a slight distension at the neck). Owing to the severity of the dizziness and other symptoms felt upon standing, the sufferer may fear 'wind overload' (*kyol goeu*)²⁴ and cry out for help. The person may be able to sit down and initiate coining upon his or her own body while waiting for others to arrive to assist in the wind removal. However, if actual 'wind overload' occurs, the sufferer will fall to the ground. While supine, the afflicted individual often retains the ability to see but cannot speak or control the body; frequently the sufferer loses consciousness.

According to the Khmer understanding, if certain ministrations are not performed immediately, the person will die. The main goals of these treatments are to 'awaken the body,' 'remove wind,' and 'increase circulation.' To 'awaken the body,' someone must bite the ankles and pull at the ears; this is said to have a rousing function. In the Khmer language, to be unconscious is literally 'not to know the body' (*mun dung khluen*); by this logic, causing the body to feel thereby removes numbness and awakens to alertness. One helper often pounds on the chest in order to spur the heart to more vigorous action. Some of the treaters will vigorously coin along the limbs of the supine victim; this helps to awaken the person, directly remove excess wind from the body, and cause the wind to run smoothly again (as in removing blockages). Others will pull the flesh in the armpits and the inner thighs, for it is believed that there are major vessels in these areas. Some patients explain that this 'flesh plucking' helps to straighten the major vessels that might have become twisted and buried in those locations, whereas others see the maneuver as a way of rousing the person. One of the treaters should massage along the limbs. This pushes the blood along and removes blockages; and once wind flows along normally, it can exit the body through the feet, hands, body pores, hair follicles, and coining streaks. Some family members may rub downward on the chest; this downwardly displaces the rising wind that is impinging on heart and lungs. Other treatment measures include putting the person near a fire in order to get the 'coagulated blood' to flow again, blowing vigorously into the ear (again, to stimulate wind movement), or putting wind medicine in the mouth. After about fifteen minutes of the above-described ministrations, the victim generally feels much better and has regained the ability to speak and control the body. It is believed that the person would have died if not immediately treated in this way.

The Khmer Dictionary Definition of 'Kyo! Goeu': 'The Wind Mutes'

According to the standard Khmer-to-Khmer dictionary (Institute Bouddhique, 1967), *kyol goeu* is an extreme case of '*kyol cap*' (literally, 'wind begins in the body,' that is, a state of excessive inner wind). The dictionary defines '*kyol cap*' in the following way: 'there is blockage of wind in the vessels of the body, especially the joints, and the wind does not run well, this causing the person to feel dizzy, to sweat, and to experience coldness in the body.' The dictionary goes on to explain that the phrase '*kyol goeu*' is derived from the words '*kyol*' (meaning 'wind') and '*goeu*' (meaning 'mute'). The Khmer-to-Khmer dictionary goes on to describe an episode of '*kyol goeu*' in the following manner: 'this is a severe case of "the wind begins in the body" (*kyol cap*) causing the sufferer to faint and appear dead.' Hence, the main Khmer-to-Khmer dictionary gives the meaning of the phrase '*kyol goeu*' as 'the wind mutes' and attributes this fainting disorder to an accumulation of bodily wind. In fact, 'the wind mutes' serves as an appropriate name for this syndrome, a prominent symptom being mutism. Similarly, another name for the '*kyol goeu*' syndrome is 'unable to speak' (*bat*

²⁴Of note, other investigators have found a robust association between syncopal episodes and panic disorder. Linzer et al. (1990) hypothesize that panic attacks may result in syncopal events by certain biological mechanisms.

moeut). In the classic version of *kyol goeu*, the person lies supine, the eyes open and aware of the surroundings, but is unable to move or speak. Related to the name of the syndrome, ‘the wind mutes one,’ a tightening of the jaw often serves as a prodrome.

The Lay Understanding of The Term ‘Kyol Goeu’: ‘The Wind Mutes’ and ‘The Wind Piles Up’

Patients add another level of meaning to the term ‘*kyol goeu*.’ My patients agree with the Khmer-to-Khmer dictionary that the word ‘*kyol*’ signifies ‘wind,’ but attribute one additional meaning to the word ‘*goeu*.’ One signification of ‘*goeu*’ is, in keeping with the Khmer-to-Khmer dictionary, ‘to be mute.’ In this case, ‘*kyol goeu*’ would be translated as ‘the wind mutes you.’ But patients also give another interpretation of the word ‘*goeu*’: ‘to pile up.’ To illustrate this explanation, while stating that ‘*kyol goeu*’ means ‘the wind piles up,’ patients will often spread the fingers of the two hands, put them parallel to the ground, then move them upward, thereby dramatically demonstrating the state of inner-wind increase. Similarly, sometimes patients refer to ‘*kyol goeu*’ as ‘big wind’ (*kyol thom*); by way of contrast, ordinary malaise and bodily discomfort is simply called ‘small wind.’ In sum then, patients understand the term ‘*kyol goeu*’ to mean both ‘the wind mutes’ and ‘the wind piles up.’ And these two meanings relate to a key symptom (mutism) and etiological agent (increased inner wind) of the disorder.

Stroke and ‘Kyol Goeu’

In what Western physicians call ‘stroke,’ the person often falls unconscious and frequently recovers but retains either facial paralysis or loss of the use of a limb. When such an event transpires in the Khmer context, it will be classified as an instance of *kyol goeu*. Khmers consider hand paralysis to result from the blockage of the vessel at the elbow, there then ensuing a withering of the hand; that is, paralysis results from occlusion at a joint rather than an insult to the brain. Note that stroke and *kyol goeu* not only demonstrate phenomenological similarity (i.e., fainting) but also pathophysiological similarity (for in both cases, vessel blockage plays a prominent role).²⁵ Furthering the conflation of the two disorders, symptoms of a *kyol goeu* episode (e.g., stiff jaw, syncope, and mutism) suggest the symptoms of what Westerners call stroke (e.g., facial paralysis, poor articulation, loss of limb function, and sometimes syncope). If asked to explain how joint occlusion causes loss of motor function, as in limb paralysis, a patient often mentions the fact that if one ties a string around the finger, all points distal become cold, numb, and pale.

Such concerns cause a Khmer to experience a great deal of anxiety when detecting in herself/himself any of the symptoms of the cultural syndrome of *kyol goeu*. So, for instance, Khmers are extremely anxious about sensations of numbness, coldness, or weakness in the limbs, especially the hands and feet; these signal potential vessel blockage at a proximal joint and possible ‘death’ of that limb;²⁶ a Khmer, upon feeling such limb sensations anticipates that occlusion at the joint may progress to permanent loss of limb function and perhaps *kyol goeu*.²⁷ And if a Khmer suffers symptoms of *kyol goeu*, then she/he fears the irreparable loss of the use of the limbs and the power of speech. When a patient states with trepidation that he or she had a near (or actual) episode of *kyol goeu*, he or she often will have in mind the image

²⁵Hence, a physician’s erudite explanation of stroke – that is, vessel blockage and rupture – seems to reconfirm that stroke is indeed a case of *kyol goeu*. The physician, referring to stroke as due to vessel blockage, visualizes a blockage in a vessel of the brain, whereas the patient imagines blockage at the arm joint and a pressurized rise of wind into the neck and head causing disorder, resulting in mutism and other such symptoms. To use the Peircian terminology (Nattiez, 1987), the physician and patient have a radically different ‘dynamic of interpretants’ of the term ‘blockage’ in this context.

²⁶For this reason, in making an addendum to the Anxiety Sensitivity Scale, I included the item of ‘fear felt when the hands or feet are cold or numb.’ In fact, even if the person perceives the limb as feeling sort of lifeless and out of power (*ooh day ooh ceung*), this will be attributed to joint blockage.

²⁷In the Anxiety Sensitivity Scale addendum that I use in another study, I include the question: ‘Do you feel afraid when your hands are cold?’ In most cases, my patients respond with either ‘much afraid’ or ‘very much afraid.’

of a friend or relative who suffered an actual stroke, losing the power of speech or use of limb, fearing that this was almost – and might well become – his or her fate due to *kyol goeu*.

Simultaneous Bodily Disasters: Neck-Vessel Bursting and ‘Kyol Goeu’

To explain stroke-like events, Khmers often speak of the simultaneous occurrence of *kyol goeu* and ‘sore-neck episode.’ In fact, *kyol goeu* and sore neck have a similar pathophysiology: rising wind and blood.²⁸ In particular, when combined with fears of ‘sore neck,’ patients confuse the *kyol goeu* fainting syndrome with stroke. In a typical dual-syndromal occurrence, blood and wind, blocked at the joints, move upward into the thorax, neck vessels, and cranium. If a Khmer does not coin quickly, the rising blood and wind may pop the neck vessels. Also, if one does not promptly coin along the arms during this crisis, permanent loss of that limb may occur.

To give an example, one patient described the death of her father-in-law in the following fashion. First, his face became bright red as if air and wind were rising into that area; then he fell to the ground. Everyone rushed to coin him, but it was too late. The blood and wind had risen quickly and ruptured his neck vessels, and blockage at the joints had resulted in death of all the limbs. Soon the relative had died. In this case, the person had an actual illness resulting in death. But a psychiatric syncopal episode of *kyol goeu* would be interpreted in the same way.

Thus, *kyol goeu* raises fears not only of permanent loss of the use of the limbs, but also of ‘neck-vessel bursting.’ These dual-syndromal fears result in an extreme sensitivity to such symptoms as soreness at the joints and coolness in the extremities, both of which may indicate the start of a *kyol goeu* episode and conjure in the mind of the patient images of limb loss and neck-vessel bursting.

Seizure and ‘Kyol Goeu’

Patients state that ‘wind overload’ (*kyol goeu*) also results in tonic–clonic seizures. Seizures may also be caused by another illness (*skoon cruuk*).²⁹ However, many patients claim that the epileptic events of the *kyol goeu* subtype are much more serious, frequently resulting in death, whereas *skoon cruuk* seizures tend toward the benign. Hence, orthostatic dizziness brings to mind not only images of stroke-like loss of limb and neck-vessel bursting but also that of tonic–clonic seizures.

Pathophysiology of ‘Kyol Goeu’

Patients give several explanations of how excessive bodily wind may result in an episode of orthostatic dizziness, and, at the extreme, *kyol goeu*. Many of these mechanisms have been discussed above in the section on the ethnophysiology of wind. In keeping with one of the lay etymologies of the term (i.e., wind pile up), patients usually ascribe *kyol goeu* episodes to a wind overload in the body. Local explanations of the pathophysiology of *kyol goeu* usually address three aspects of how the syndrome comes to occur: causes of increased wind in the body; inadequate wind removal; and specific mechanisms by which increased body wind leads to syncope upon standing.

Often abdominal distension plays a major role in the drama of *kyol goeu*. Frequently the sufferer attributes the syncopal event to a gust of wind suddenly hitting upwards from the abdomen. In keeping with these concerns, patients carefully monitor whether they regularly pass gas and

²⁸*Kyol goeu* will not always be attributed to rising wind. Sometimes it is explained to be like a car running out of gas, or even sudden failure of the entire mechanism.

²⁹Some claim that the two seizure types vary in appearance: for one, in *kyol goeu* seizures, the mouth is dry, whereas in *skoon cruuk* events, foam emerges from the mouth.

have normal bowel habits; these events indicate that wind is leaving the body by a downward movement, as it should. If the stomach becomes distended, patients start to fear that the wind will rise toward the lungs, this is called ‘backward movement of the wind’ (*kyal crah laeung leu*), for normally wind moves downward and not upward. ‘Backward movement of the wind’ can cause multiple complaints, such as shortness of breath and palpitations, as described above. Sometimes this pressurized uprising of wind is only relieved by burping or even throwing up.

Also, as described above in the ethnophysiology section, when feeling anxious, patients frequently talk of increasing inner wind (e.g., ‘wind increases in the body’; *gaeut kyol*); as the dysphoria escalates, the Khmer talks of ‘wind not flowing well,’ (*kyol daeu mun smaeu*), of ‘wind being blocked at the joints’ (*sla kyol*), especially the elbows and knees. Vapors then rise in the body towards the trunk, and because wind normally moves downward (as in down and out of the hands, feet, and the alimentary track), this is also called ‘backward moving wind’ (*kyal crah*).

Thus, a patient may have two simultaneous ‘wind reversals’: (i) in contrast to its proper direction, wind moves upward from the belly toward the lungs, heart, neck, and head; and (ii) because of blockage at the knees and elbow, the wind and blood moves backward and upward from the legs and arms toward the chest, neck, and head. The double reversal of flow produces a pressurized surge upward in the body toward the thorax, neck, and head, this possibly resulting in both neck-vessel bursting and *kyol goeu*.³⁰

Prolegomena to the Culturally Sensitive Study of Panic Disorder

In this article, I have advocated that clinicians and researchers should analyze in a more rigorous fashion the cultural syndromes that generate catastrophic cognitions. Catastrophic cognitions should be considered in relation to cultural syndromes; and cultural syndromes should be analyzed as multidimensional constructs conveying multiple schemata: explanatory models (Kleinman, 1980, p. 105; this term evokes the idea of the complexity of beliefs regarding illness categories, as in etiology, course, and pathophysiology); ethnophysiology (Good, 1994; Hinton, 1999; this term emphasizes the embodied nature of illness, its status as a complex local epistemology); prototypical scenario (Lakoff, 1987; this phrase highlights the sequential and dynamic nature of the symptoms in an episode of the disorder); symptom clusters (or as Good, 1977, expresses it, ‘how symptoms run together’); and interpersonal and vocational meanings (Kleinman, 1995; Lewis, 1989; Ong, 1987; Scott, 1985; i.e., how having the disorder changes the person’s relationship with family, friends, and others; how having a certain syndrome may represent an act of desperation or ‘weapon of the weak;’ and how having the ‘cultural syndrome’ changes the person’s identity and relationships to others).

To advance a culturally sensitive study of panic disorder, the investigator and clinician should consider symptoms in relation to syndromes; most importantly, one must examine the cultural syndromes that generate catastrophic cognitions. Similarly, in an article trying to describe a more comprehensive approach to the seemingly psychogenic somatic complaints of certain medical out-patients, the authors suggest that these symptoms should be considered in relation to certain prominent ‘functional somatic syndromes’ such as fibromyalgia, chronic fatigue, and irritable bowel (Robbins, Kirmayer, & Hemami, 1997), supporting this position with factor analysis. Such a factor analytic approach to cultural syndromes, augmented with a discussion

³⁰In addition, when sleeping, the pressure may become so high in the neck that if the sufferer twists the head, then the vessels in that area may burst; this is reflected in a frequent Khmer explanation of nocturnal death: ‘the head falls off the pillow, twisting and snapping the neck vessels.’ To prevent such nocturnal events of vessel rupture, patients often apply special medicated patches to the neck when going to sleep. These patches are said both to heat the blood in the neck vessels so it does not clot (this would result in a pressure head and vessel bursting) and also to lead to a direct exiting of wind from those vessels.

of the popular understandings of these disorders, conceptual metaphor analysis, and ethnophysiology elucidation, is an extremely important research agenda.

I would argue, in keeping with the position of several lines of research, that a cross-cultural psychiatry that aims to pay proper attention to the person as embodied biocultural ontology, must consider emergent sensation, attentional focusing, attribution, symptom schemata, and cultural syndromes. A cultural phenomenology of illness experience needs to be developed. Initially, there is an ambiguous awareness of a certain bodily sensation that produces concern. The individual will then attribute this symptom to various causes, for example, in the case of dizziness upon standing, the patient might attribute the sensations to three different kinds of explanations (Robbins & Kirmayer, 1991): physical (e.g., I have a blood pressure problem and probably will faint and maybe die), environmental/normalizing (I am not eating enough or I got up too quickly), or psychological (I must be under a lot of stress). In the case of an attribution of 'bodily dysfunction,' a patient considers the symptom as evidence that he or she may suffer a 'cultural syndrome' (or what might be better called a 'functional somatic syndrome'; Kirmayer & Robbins, 1991), as in an American thinking that orthostatic dizziness collaborates the self-diagnosis of chronic fatigue syndrome (for a discussion on dizziness in CFS, see Wessely, Hotopf, & Sharpe, 1999). A medical anthropology of the body that aims to adequately investigate somatization must consider: (i) nascent bodily sensation, (ii) attentional focusing as a sensation becomes 'symptom,' (iii) the process of the symptom attribution, (iv) the evocation of a symptom schemata, and (v) the invocation of specific cultural syndromes (Kirmayer, 1996).

In the classic version of attribution as advanced by Mechanic (Miranda, Perez-Stable, Munoz, Hargreaves, & Henke, 1991), the person suffers a stressor, becomes anxious or depressed, but then attributes these somatic aspects of affective disorder to actual physical disease, for example, falsely believing him- or herself to be suffering a bodily disorder by a selective focusing upon – and worried elaboration of the consequences of – somatic symptoms of anxiety. This is a classic theory of somatization. As the next step of analysis, one must analyze the cultural syndromes that cause catastrophic cognitions. That is, not only is a symptom evaluated in terms of whether it is due to a physical disorder, some environmental transitory cause, or a psychological state, but in addition, there is an assessment of whether this bodily event may result in immediate dire consequence. In particular, if the symptom focused upon is arousal reactive, a crescendo-like positive feedback eventuating in a panic attack may occur. Here we are not talking of culture as affecting just labeling and illness behavior, but in addition, culture as triggering a radical change in state, as precipitating panic.

As stressed in this article, a cultural syndrome is a schema of particular complexity (Robbins & Kirmayer, 1991) that encompasses ideas of physiology and pathology, pathognomonic symptoms, the way symptoms run together (Good, 1977), etiologies, sequelae, how certain daily processes (e.g., eating and sleeping) affect the malady, and how recovery can be attained (e.g., coining and various other means of wind removal in the Khmer case). It then creates a certain manner of scanning of the body –for example, a Sri Lankan hypervigilant about phlegm in the throat, gargling extensively in the morning (phlegm has major role in the Sinhalese ethnophysiology, this substance potentially plugging channels to the brain and causing mental illness; Obeyesekere, 1976, 1977); an American alert to back pain (the upright posture has elaborate moral, medical, and psychological meanings in the US, the chiropractor as the folk healer of this malady; Scheper-Hughes & Lock, 1987); or a Khmer refugee ever concerned about orthostatic dizziness as indicating an increase in bodily wind.

Cultural syndromes detail the bodily events that lead to a certain kind of corporal dysfunction and specify whether this dysfunction may result in immediate (more likely to cause panic, as in a fear of a heart attack) or long-term consequences (less likely to cause panic but rather

perpetuating hypochondriasis, as in concerns about having a brain tumor). Here I analyze cultural schemas and how these lead to a certain reading of the body. It is also important to attend to ‘symptom schemata’ (Robbins & Kirmayer, 1991), or what might also be called ‘sensation schemata.’ In a way, that is the more phenomenologically acute stance, for the patient initially experiences nascent sensations that then are attributed to a cultural syndrome; but also, as soon as the patient considers herself to have a certain ‘syndrome,’ that patient continually scans the body and deciphers bodily events with this schematical optic. In this article, I have tried to illustrate that Khmer orthostatic panic attacks can only be explicated when the cultural syndrome of *kyol goeu* is explained in detail.

Conclusion

Kyol goeu can be understood as an extreme on a spectrum of disorder, a state of almost fatal inner-wind accumulation; that is, *kyol goeu* is a severe form of orthostatically induced panic. In mild orthostatic panic, the episode is short with few autonomic symptoms; in such cases, there is usually no fear of *kyol goeu*. As the orthostatic panic worsens, the patient increasingly fears *kyol goeu*. At the extreme, the person experiences an episode of *kyol goeu* upon standing.

The cultural syndrome of *kyol goeu* generates catastrophic cognitions regarding the autonomic symptoms felt upon standing; this helps to explain the frequency of orthostatically induced panic among Cambodians.

To advance a culturally acute study of panic disorder, researchers and clinicians must adequately analyze the syndromes that generate catastrophic cognitions concerning certain bodily sensations (in particular, autonomic arousal). This is a key method of determining the local manner of ‘anxious embodiment,’ revealing the specific ways of scanning the body, which anxiety symptoms will be amplified, how certain bodily occurrences will be considered, and the way that others will understand presented complaint. In sum, an adequate analysis must account for the complex sequence of nascent sensation, concerned focus upon – and amplification – of the bodily event, attribution to cause, syndromal concerns, and interpersonal meaning (for a discussion of this model, see Kirmayer, 1996; Kirmayer, Young, & Robbins, 1995).

Acknowledgments

The author wishes to thank Laurence Kirmayer, Allan Young, and two anonymous reviewers for their suggestions in the revising of the manuscript.

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References

- Barrett R. Cultural formulation of psychiatric diagnosis. *Culture, Medicine, and Psychiatry* 1997;21:481–496.
- Barsky A, Coeytaux R, Sarnie M, Cleary P. Hypochondriacal patients' beliefs about good health. *American Journal of Psychiatry* 1993;150(7):1085–1089. [PubMed: 8317581]
- Barsky A, Goodson J, Lane R, Cleary P. The amplification of somatic symptoms. *Psychosomatic Medicine* 1988;50:510–519. [PubMed: 3186894]
- Carlson EB, Rosser-Hogan R. Trauma experiences, post-traumatic stress, dissociation, and depression in Cambodian refugees. *American Journal of Psychiatry* 1991;148(11):1548–1551. [PubMed: 1928471]
- Eisenbruch M. 'Wind illness' or somatic depression? A case study in psychiatric anthropology. *British Journal of Psychiatry* 1983;143:323–326. [PubMed: 6626850]
- Eisenbruch M. From post-traumatic stress disorder to cultural bereavement; diagnosis of Southeast Asian refugees. *Social Science and Medicine* 1991;23(6):673–680. [PubMed: 1957187]
- Falsetti, S.; Resnick, H.; Dansky, B.; Lydiard, B.; Kilpatrick, B. The relationship of stress to panic disorder: cause and effect?. In: Mazure, C., editor. *Does stress cause psychiatric illness*. Washington, DC: American Psychiatric Press; 1995. p. 111-148.
- Finneran, R. *The collected poems of W.B. Yeats. 2*. New York: Scribner Paperback Poetry; 1996.
- Good BJ. The heart of what's the matter, the semantics of illness in Iran. *Culture, Medicine, and Psychiatry* 1977;1:25–58.
- Good, BJ. *Medicine, rationality, and experience, an anthropological perspective*. Cambridge, UK: Cambridge University Press; 1994.
- Hinton, D. *Musical healing and cultural syndromes in Isan: Landscape, conceptual metaphor, and embodiment*. Harvard University. University Microfilm; Ann Arbor, MI: 1999. Doctoral Thesis
- Hinton, D. *Orthostatic panic among Cambodians*. 2001a. Manuscript submitted for publication
- Hinton, D. *The weak heart syndrome among Khmer refugees*. 2001b. Manuscript submitted for publication
- Hinton D. *The Khmer sore neck syndrome*. *Culture, Medicine, and Psychiatry*. in press-a.
- Hinton D. *Panic subtypes among Vietnamese refugees attending a psychiatric clinic*. *General Hospital Psychiatry*. in press-b.
- Hinton D, Ba P, Peou S, Um K. *Panic disorder among Cambodian refugees attending a psychiatric clinic: Prevalence and subtypes*. *General Hospital Psychiatry* 2000;22(6):437–444. [PubMed: 11072060]
- Institute Bouddhique. *Dictionnaire Bouddhique. 5*. Phnom Penh: Institute Bouddhique; 1967.
- Jackson, S. *Melancholia and depression*. New Haven, CT: Yale University Press; 1986.
- Kinzie J, David J, Boehnlein P, Leung L, Moore L, Riley C, Smith D. The prevalence of posttraumatic stress disorder and its clinical significance among Southeast Asian refugees. *American Journal of Psychiatry* 1990;147(7):913–917. [PubMed: 2356877]
- Kirmayer, L. Confusion of the senses: Implications of ethnocultural variations in somatoform and dissociative disorders for PTSD. In: Marsella, A.; Friedman, M.; Scurfield, R., editors. *Ethnocultural aspects of posttraumatic stress disorder*. Washington, DC: American Psychological Association; 1996. p. 131-164.
- Kirmayer, L. *Culture and anxiety: A clinical and research agenda*. In: Friedman, S., editor. *Culture and anxiety disorders*. New York: Guilford Press; 1997. p. 225-251.
- Kirmayer, L.; Robbins, J. *Functional somatic syndromes*. In: Kirmayer, L.; Robbins, J., editors. *Current concepts of somatization*. Washington, DC: American Psychiatric Press; 1991. p. 79-106.
- Kirmayer L, Young A, Robbins J. *Symptom attribution in cultural perspective*. *Canadian Journal of Psychiatry* 1995;39:584–595.

- Kleinman A. Medicine's symbolic reality: On a central problem in the philosophy of medicine. *Inquiry* 1973;16:203.
- Kleinman, A. Patients and healers in the context of culture: An exploration of the borderland between anthropology, medicine, and psychiatry. Berkeley: University of California Press; 1980.
- Kleinman, A. Writing at the margin: Discourse between anthropology and medicine. Berkeley: University of California Press; 1995.
- Laderman, C. Taming the winds of desire: Psychology, medicine and aesthetics in Malay shamanistic performance. Berkeley: University of California Press; 1991.
- Lakoff, G. Women, fire, and dangerous things. Chicago: University of Chicago Press; 1987.
- Lambert, J. PhD dissertation, Southern Methodist University. Ann Arbor, MI: UMI Dissertation Service; 1986. Khmer refugees in Dallas: Medical decisions in the context of pluralism.
- Lévi-Strauss, C. Anthropologie structurale. Paris: Librairie Plon; 1974.
- Lewis, IM. Ecstatic religion. London: Routledge; 1989.
- Linzer M, Felder A, Hackel A, Perry A, Varia I, Melville M, Krishnan R. Psychiatric syncope: A new look at an old disease. *Psychosomatics* 1990;31(2):181–188. [PubMed: 2330399]
- Miranda J, Perez-Stable E, Munoz R, Hargreaves W, Henke C. Somatization, psychiatric disorder, and stress in utilization of ambulatory medical services. *Health Psychology* 1991;10(1):46–51. [PubMed: 2026130]
- Muecke M. Wind illness in Northern Thailand. *Culture, Medicine, and Psychiatry* 1980;4:267–290.
- Nattiez, J. Musicologie générale et semiologie. Montreal, Canada: Christian Bourgois Editeur; 1987.
- Obeyesekere, G. The impact of ayurvedic ideas on the culture and individual in Sri Lanka. In: Leslie, C., editor. Asian medical systems: A comparative study. Berkeley: University of California Press; 1976. p. 206-226.
- Obeyesekere G. The theory and practice of psychological medicine in the ayurvedic tradition. *Culture, Medicine, and Psychiatry* 1977;1:155–181.
- Ong, A. Spirits of resistance and capitalist discipline: Factory women in Malaysia. Albany: State University of New York Press; 1987.
- Orsillo SM, Weathers F, Litz B, Steinberg H, Huska J, Keane T. Current and lifetime psychiatric disorders among veterans with war zone-related posttraumatic stress disorder. *Journal of Nervous and Mental Disease* 1996;184(5):307–313. [PubMed: 8627277]
- Otto, MW.; Deckersback, T. Cognitive-behavioral therapy for panic disorder: Theory, strategies, and outcome. In: Rosenbaum, J.; Pollack, M., editors. Panic disorder and its treatment. New York: Marcel Dekker; 1998. p. 181-205.
- Rachman S, Levitt K, Lopatka C. Panic: The links between cognitions and bodily symptoms – I. *Behavior Research and Therapy* 1987;25(5):411–423.
- Robbins J, Kirmayer L. Attributions of common somatic symptoms. *Psychological Medicine* 1991;21:1029–1045. [PubMed: 1780396]
- Robbins J, Kirmayer L, Hemami S. Latent variable models of functional somatic distress. *Journal of Nervous and Mental Disease* 1997;185(10):606–615. [PubMed: 9345250]
- Scheper-Hughes N, Lock M. The mindful body: A prolegomenon to future work in medical anthropology. *Medical Anthropology Quarterly* 1987;1:6–41.
- Schmidt N, Lerew D, Jackson R. The role of anxiety sensitivity in the pathogenesis of fear: Prospective evaluation of spontaneous panic attacks during acute stress. *Journal of Abnormal Psychology* 1997;106:355–364. [PubMed: 9241937]
- Scott, J. Weapons of the weak: Everyday forms of peasant resistance. New Haven, CT: Yale University Press; 1985.
- Taylor S. Comment on Otto et al. (1992): Hypochondriacal concerns, anxiety sensitivity, and panic disorder. *Journal of Anxiety Disorders* 1994;8(1):97–99.
- Taylor S, Cox B. Anxiety sensitivity: Multiple dimensions and hierarchic structure. *Behaviour Research and Therapy* 1998;36:37–51. [PubMed: 9613015]
- Wessely, S.; Hotopf, M.; Sharpe, M. Chronic fatigue and its syndromes. London: Oxford University Press; 1999.

Yardley, L. Vertigo and dizziness. London: Routledge; 1994.