

2 Deep Listeners

Part 1. Contemporary Deep Listeners

The arousal of emotion within the trancer, in part inspired by music, links trancers and deep listeners: trance consciousness and the transcendental experiences of deep listeners both rest on powerful emotional excitement. The United States would seem at first blush to be a place generally hostile to trance, providing few positive role models for trance. And indeed it is. Yet, in spite of this, and ignoring the many communal trances of religious groups such as the Pentecostals, it would appear that many nonreligious Americans have had similar kinds of “oceanic” experiences, the near-trance experiences of deep listeners that resemble in affect the trances of many religious domains. In their exploratory article “Are We a Nation of Mystics?” Greeley and McCready (1979) expressed their surprise at the results when they inserted into a survey on “ultimate values,” distributed to fifteen hundred American adults, a question concerning “religio-mystical experience.” They received back the response that a full 50 percent attested to having had such an experience. For most, it was an intensely joyful experience, often accompanied by the sense of new understanding and knowledge. A good quarter of these forty- to fifty-year-olds had a sense that their own personality had been taken over by something more powerful than they.

In the Greeley and McCready study, music as an emotional trigger is not specifically mentioned. But in a number of recent Western studies of music and emotion, musical emotions alone are the focus for the studies of the psychological and physiological affects of musical listening. For the most part, the researchers quoted in this chapter focus on the senses of embodiment as (1) the body as a physical structure in which emotion happens and (2) the body as a site of first-person experience. These Western listeners may or may not be religious, but they testify to the power of music alone to stimulate what are clearly transcendental experiences. Not all music listeners are deep listeners, nor will all participants in religious ceremonies trance, but deep listeners and trancers are both predictably emotional and prone to numinous experiences.

Before proceeding to relate the neurological and psychological findings of recent music and emotion studies, “emotion” itself needs to be defined.

In his famous and controversial theory of the emotions, William James claimed that the physiological component of arousal is primary and precedes the interpretation of the subsequent emotion (James 1950, vol. 2: 442–85). The “feeling” of anger is the feeling that results from an increased heart rate, an increase of blood to the face, an angry facial expression, an aggressive bodily

Action Before Feelings.

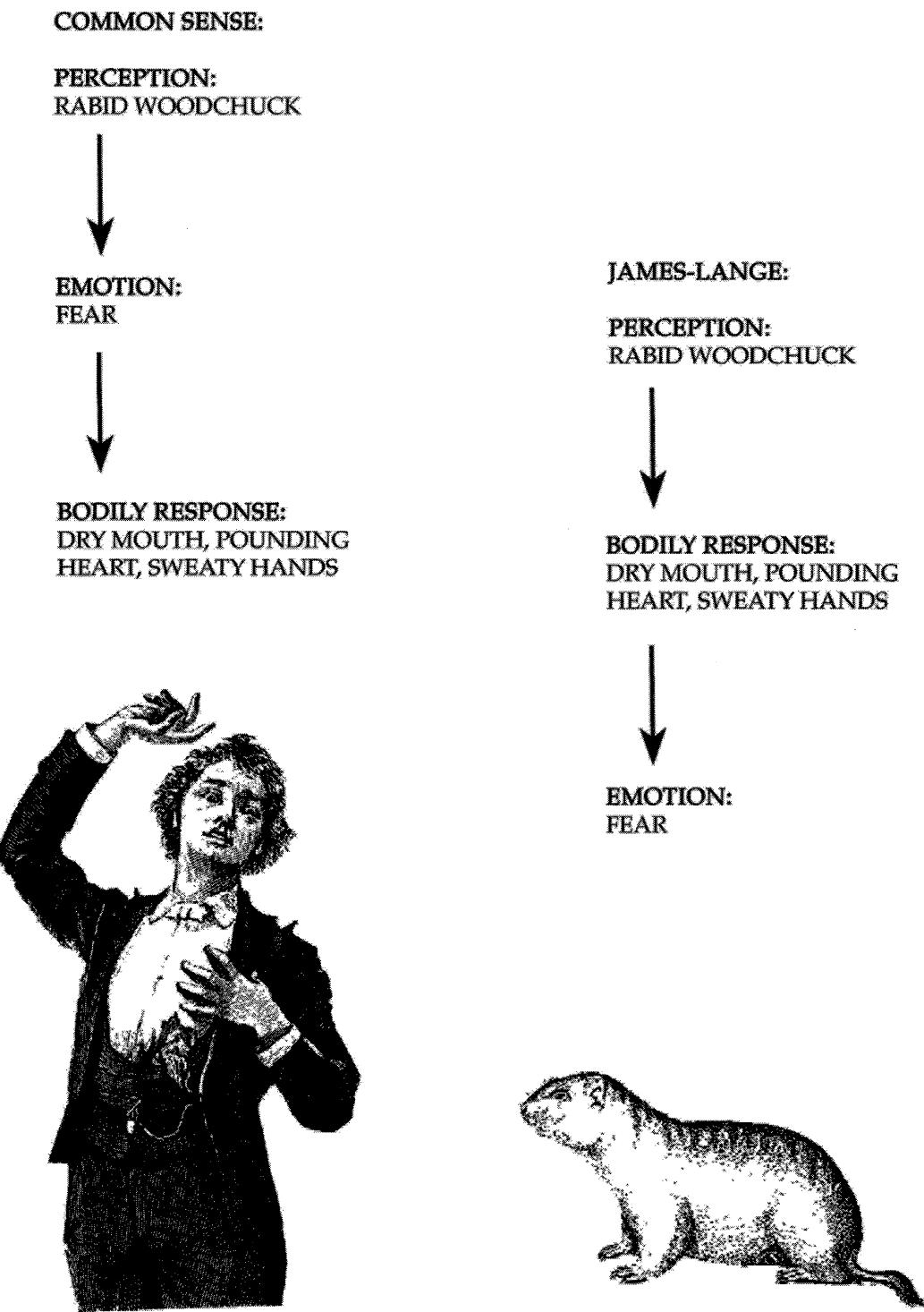


Figure 2-1. A comparison of the common sense and James's theories of emotion. From Cornelius 1996: 62. Courtesy of Prentice Hall and R. Cornelius.

stance, shallow breathing, and so on. Anger, the emotion, *is*, according to James, what one *feels* when enacting this display.¹

If we fancy some strong emotion and then try to abstract from our consciousness of it all the feelings of its bodily symptoms, we find we have nothing left behind, no “mind-stuff” out of which the emotion can be constituted, and that a cold and neutral state of intellectual perception is all that remains. . . .

What kind of an emotion or fear would be felt if the feeling neither of quickened heart-beats nor of shallow breathing, neither of trembling lips nor of weakened limbs, neither of goose-flesh nor of visceral stirrings, were present, it is quite impossible for me to think. Can one fancy the state of rage and picture no ebullition in the chest, no flushing of the face, no dilation of the nostrils, no clenching of the teeth, no impulse to vigorous action, but in their stead limp muscles, calm breathing, and a placid face? (James 1950 [1890], vol. 2: 451–52)

ACTIVE
VS
PASSIVE
AFOOLING
TO MUSIC

In Figure 2-1, the psychologist Randolph Cornelius has constructed a whimsical illustration presenting the two opposing views of the genesis of a Victorian gentleman’s reaction to a “rabid” woodchuck.

James never adequately allowed for the reverse process in the generation of emotion, that is, the idea that strong emotions initially can be generated by thought and then be reflected in the body. In Western theatrical traditions, the Jamesian approach to emotion was followed by the Polish director Jerzy Grotowski and his disciples, who taught actors to imitate the outward signs of emotion in order to feel them inwardly (Grotowski 1968). Asian theatrical traditions, especially Kathakali from South India, have long trained actors to “feel” emotion by first embodying its physical characteristics. Supportive of the theatrical pedagogy followed by Kathakali instructors, the work of Ekman, Levenson, and Friesen (1983) has demonstrated specific, differentiated ANS responses to facial expressions of fear, anger, happiness, and disgust.

Following James, but with much more sophisticated knowledge of the neurophysiology of emotion and a more nuanced and inclusive theory of emotion, Damasio claims that the term “emotion” should be applied to the autonomic arousal of specific cortical and subcortical structures, and that “feeling” which generally follows “emotion” should be applied to the complex cognitive, culturally inflected, and secondary interpretation of “emotion.”

The term *feeling* should be reserved for the private, mental experience of an emotion, while the term *emotion* should be used to designate the collection of responses, many of which are publicly observable. (Damasio 1999: 42)

“Arousal,” here, means the activation of the autonomic nervous system, or ANS. “Autonomic” means that particular physiological processes are controlled by sections of the brain that, for the most part, operate independently of our willing them, many located deep within the interior of the brain (the encephalon) and within the brainstem (Figure 2-2, Figure 2-3), the oldest part of the brain believed to have evolved more than five hundred million years ago.

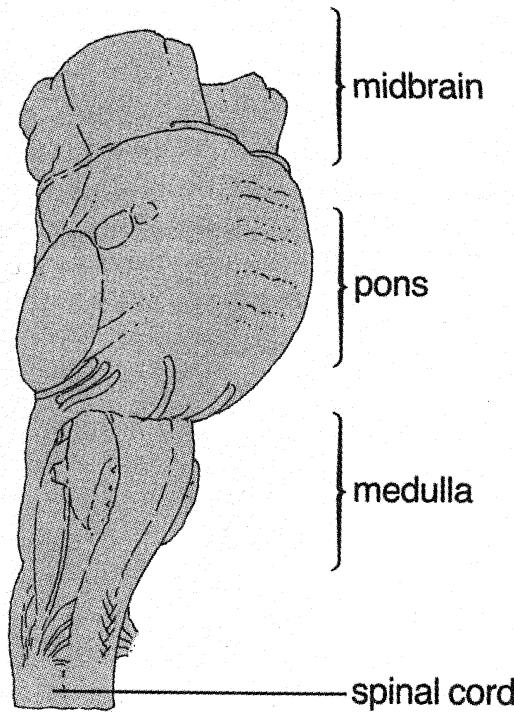


Figure 2-2. The brain stem.
From Ornstein and Thompson
1984: 4. Illustration copyright ©
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The brainstem handles basic bodily functions such as breathing and heart rate, determines levels of wakefulness and alerts the organism to important sensory information that might indicate a threatening situation. (Ornstein and Thompson 1984: 4)

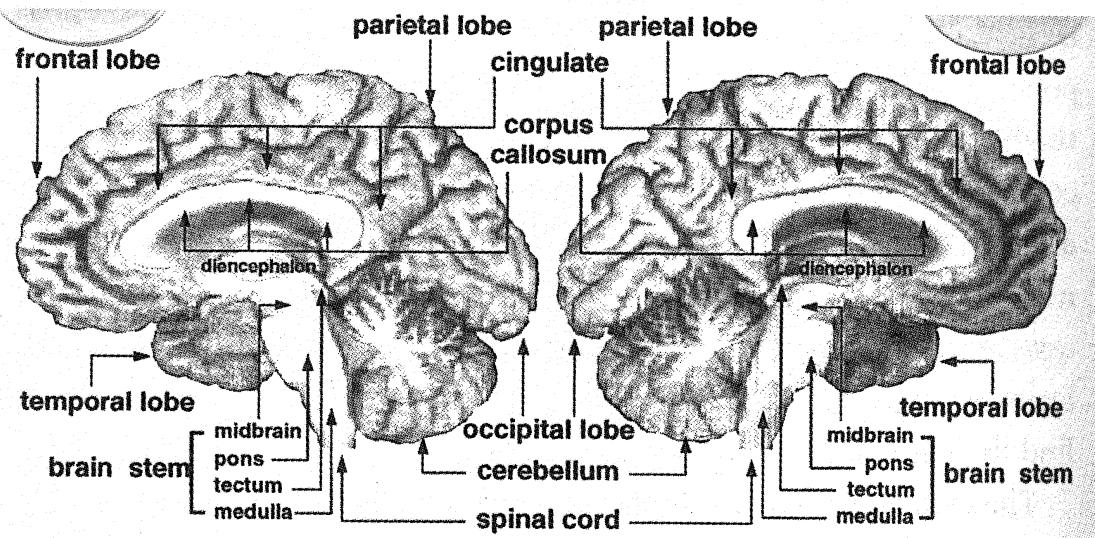


Figure 2-3. Location of brain stem. From Damasio 1999: 326.
Courtesy of Harcourt/H. and A. Damasio.

Respiration, heart functions, other visceral functions such as digestion, the involuntary muscles of the body, as well as skin temperature are all regulated by the ANS. The heart beats faster, the pulse rises, breathing becomes more shallow, the skin temperature rises, the pattern of brain waves becomes less regular as we react to some perception that has emotional resonance for us. All these changes have been observed without any necessary reference to the affective, interpretive component of arousal. Someone who has just been exercising will respond more strongly to sexual stimuli or to musical listening than when just arising from a nap. Arousal, at some basic level, is culturally primitive and most clearly evident in crisis situations.

ANS arousal (emotion) while listening to music may be manifested in shivers, goosebumps, changes in breathing and heart rate, tears, weeping, changes in skin temperature, all involuntary reactions that precede language and evaluation. The term “feeling” is used to refer to the cognitive evaluation of these bodily changes resulting in the language labels “joy,” “anger,” “fear,” “grief,” “surprise,” “disgust,” and so on.

Primary and Secondary Emotions

Neuroscientists, following Darwin (1872), subscribe to the “common-sense” notion that emotions are biologically adaptive processes (Plutchik 1980: 139; Panksepp 1992: 555; Damasio 1994: 118; LeDoux 1996: 17). Many neuroscientists and psychologists also believe that there are core or primary emotions that are hardwired and secondary emotions that are more likely to be culturally conditioned (Lewis and Michalson 1983: 31–38; Lewis and Saarni 1985; Ortony, Clore, and Collins 1988: 27). As a neuroscientist, Damasio separates emotions into primary and secondary emotions according to the degree to which they necessarily involve the upper regions of the brain, the neocortex. Primary emotions include those most crucial to the survival of the organism such as fear, anger, surprise, or disgust, whereas secondary emotions or “social emotions” would include embarrassment, shame, guilt, pride, or jealousy. Secondary emotions are clearly culturally conditioned. Primary emotions are as well, but perhaps to a lesser degree.

In all probability, development and culture superpose the following influences on the preset devices: first, they shape what constitutes an adequate inducer of a given emotion; second, they shape some aspects of the expression of emotion; and third, they shape the cognition and behavior which follows the deployment of an emotion. (Damasio 1999: 57)

In any case, primary emotions (Figure 2-4) extend far down the evolutionary chain, whereas secondary emotions seem to be more specifically human, or at least mammalian.

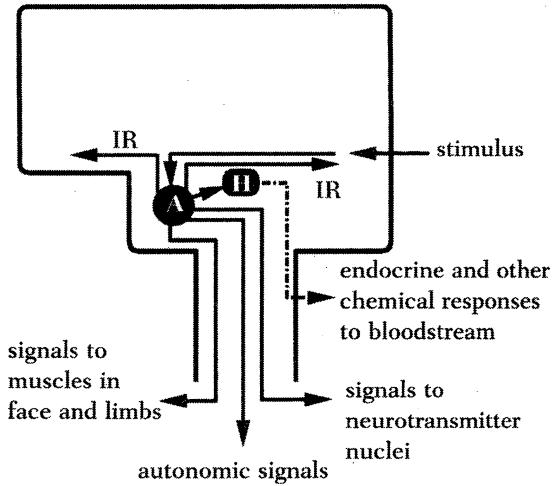


Figure 2-4. Primary emotions.
From Damasio 1994: 132. Courtesy of Putnam/H. and A. Damasio.

The black perimeter stands for the brain and brain stem. After an appropriate stimulus activates the amygdala (A), a number of responses ensue: internal responses (marked IR); muscular responses; visceral responses (autonomic signals); and responses to neurotransmitter nuclei and hypothalamus (H). The hypothalamus gives rise to the endocrine and other chemical responses which use a bloodstream route. . . . [T]he muscular responses with which we express emotions, say, in body posture, probably utilize structures in the basal ganglia. (Damasio 1994: 132)

Both categories of emotion involve only selected portions of the brain and both involve many of the same portions of the brain. Secondary emotions (Figure 2-5) add the involvement of prefrontal and somatosensory cortices to the limbic and brain stem areas of the brain that are active in expressing primary emotions.

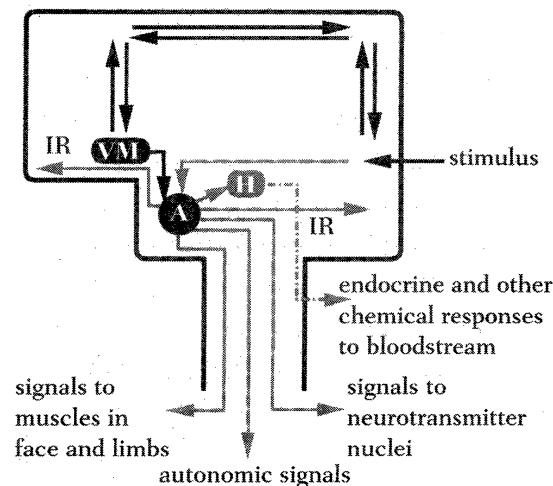


Figure 2-5. Secondary emotions.
From Damasio 1994: 137. Courtesy of Putnam/H. and A. Damasio.

The stimulus may still be processed directly via the amygdala but is now also analyzed in the thought process, and may activate frontal cortices (VM). VM acts via the amygdala (A). In other words, secondary emotions utilize the machinery of Primary Emotions. Again, I am deliberately oversimplifying, since numerous pre-frontal cortices other than VM are also activated, but I believe the essence of the mechanism is as shown in the diagram. Note how VM depends on A to express its activity, how it is piggy-backed on it, so to speak. This dependence-precedence relationship is a good example of nature's tinkering style of engineering. Nature makes use of old structures and mechanisms in order to create new mechanisms and obtain new results. (Damasio 1994: 137)

A shared biological core underlies both primary and secondary emotions as well as what Damasio calls "background emotions" or moods.

- 1) Emotions are complicated collections of chemical and neural responses, forming a pattern: all emotions have some kind of regulatory role to play, leading in one way or another to the creation of circumstances advantageous to the organism exhibiting the phenomenon; emotions are *about* the life of an organism, its body to be precise, and their role is to assist the organism in maintaining life.
- 2) Notwithstanding the reality that learning and culture alter the expression of emotions and give emotions new meanings, emotions are biologically determined processes, depending on innately set brain devices, laid down by a long evolutionary history.
- 3) The devices which produce emotions occupy a fairly restricted ensemble of subcortical regions, beginning at the level of the brain stem and moving up to the higher brain; the devices are part of a set of structures that both regulate and represent body states.
- 4) All the devices can be engaged automatically, without conscious deliberation; the considerable amount of individual variation and the fact that culture plays a role in shaping some inducers does not deny the fundamental stereotypicity, automaticity, and regulatory purpose of the emotions.
- 5) All emotions use the body as their theater (internal milieu, visceral, vestibular, and musculoskeletal systems), but emotions also affect the mode of operation of numerous brain circuits. (Damasio 1999: 28)

Although I accept the basic premise that certain emotions such as anger and fear are evolutionarily ancient, I also believe that from the moment of birth all human emotions are continually being shaped by culture (Geertz 1973a) and that at some point it ceases to make sense to talk about emotions that are culturally conditioned and those that are hardwired. The world is the context of the maturation of the infant, the world is the context of our ever-evolving lives; our continual interaction with that world begins at birth or before, and continues until we die.

Musical Emotions

Musical emotions in this study narrowly refer to emotions aroused in deep listeners or performers, not necessarily those the listener believes are experienced

pressed by the music.² The studies discussed below were focused on the strong emotional reactions of the listener, the physiology of musical listening. Musical emotions are different from life-experience emotions. Basic survival doesn't seem relevant. Nor do musical emotions carry the same consequences that life situations do. Nor do they normally involve subsequent changes in behavior or actions directed toward regaining emotional equilibrium (Krumhansl 1997: 336). For all the differences from other kinds of emotion that may have evolved as a strategy for survival, musical emotion is still rooted in basic physiological arousal felt in the body and displayed by tears, chills/shivers, goosebumps, palpitation of the heart, and perspiration (Sloboda 1991; Panksepp 1995; Gabrielsson and Lindstrom Wik 2000: 103; Blood and Zatorre 2001).

Emotions in response to musical listening, often called "aesthetic emotions" (James 1950, vol. 2: 468; Arnheim 1958; Lazarus 1991: 292) are mostly selectively focused on some form of happiness or sadness, or mixed emotions such as "bitter sweetness" or "beauty and pain" (Gabrielsson and Lindstrom Wik 2000). "Happiness," meaning some kind of strong positive emotion, is the feeling most frequently cited in association with musical listening and may constitute one of the universals of cross-cultural studies of music and emotion. From the "polka happiness" of the Polish-American parties of Chicago (Keil 1987: 276), to the !Kung of the Kalahari desert, "Being at a dance makes our hearts happy" (R. Katz 1982: 348), to the Basongye of the Congo who "make music in order to be happy" (Merriam 1964: 82), to the extroverted joy of a Pentecostal musical service, music has the ability to make people feel good. The "happiness" of listening to music, however one construes "happiness," is in part the simple result of musical arousal. We tend to feel good when we are musically aroused and excited. Notably, musical emotions tend to be positive, whereas primary emotions tend to be negative.³

High Arousal

If, as I believe, arousal is fundamental to the triggering of trancing, then those emotions that signal high arousal should figure prominently in trancers, not the "lower-key" emotional reactions to music described as "calm," "peaceful," "soothing," or "comforting." The emotions of trancing, regardless of cultural conditioning, seem to fall overwhelmingly into the scientists' category of primary emotions. Joy, fear, and rage predominate. Feelings of solace, humility, and peace may occur after trancing, but these feelings do not seem to trigger or sustain trancing. Trancing needs high-energy, high-arousal emotions. Although I suspect that trancers experience higher degrees of ANS arousal than do deep listeners, studies of deep listeners in laboratory situations establish the presence of considerable ANS arousal. Panksepp (1995, 1998b), Krumhansl (1997), Nyklicek et al. (1997), and Blood and Zatorre (2001) have all tested for and found ANS arousal in deep listeners.

Blood and Zatorre (2001) conducted an experiment in which the subjects selected music that predictably invoked intensely pleasurable responses (chills). Changes in heart rate and breathing as well as changes in the electrical activity of skeletal muscles were significant when the subjects were listening to their self-selected, pleasure-inducing musical examples. The same subjects underwent PET scans which showed the involvement of opioid systems in musical listening.⁴ The experimenters Blood and Zatorre observed regional cerebral blood flow increases in paralimbic regions, regions associated with arousal, and in regions associated with motor processes.⁵ They noticed that this blood flow activity in the brain is "similar to that observed in other brain imaging studies of euphoria" (Blood and Zatorre 2001: 11821). From this they postulate that the reward processes for musical listening, as for food and sex, involve dopamine, opioid systems, and other transmitters as well. That "music recruits neural systems of reward" (Blood and Zatorre 2001) is a scientific finding that only confirms a phenomenal truism: Pleasure motivates deep musical listening.

Panksepp also predicts that the social bonding chemicals oxytocin and the opioid systems "may be major players in the production and control of chills" in deep listening. Opioids are known to participate in social bonding, in play, and in sexual pleasures. Panksepp believes that they are operative in emotional listening as well. In any event, the chill feels as if a fountain of neurochemicals has been released in brain areas that control our bodily feelings (Panksepp 1995: 200).

Most people assume that sadness is less arousing than happiness. One of the nonintuitive findings of Panksepp (1995: 172, 1998b: 317) and Krumhansl (1997: 344) is that sadness in relation to a musical example can be more arousing than happiness. PET scan studies also support the idea that sadness may produce more arousal than does happiness (Panksepp 1998b: 317). *Agree!*

The fact that sadness can provoke chills seems outwardly perplexing from the perspective that most people find the experience to be positive emotionally. No doubt, this is only a superficial paradox that disappears when we consider the deeper aspects of human emotionality . . . As neurological evidence indicates, the basic output circuitries of grief and joy (as indexed by crying and laughter) are intertwined in the human brain. These powerful emotions, which emerged early in mammalian evolution, were designed to solidify and elaborate the mandates and possibilities of social bonds. (Panksepp 1995: 197)

The study of Nyklicek et al. (1997) was based on cardiorespiratory responses to musical listening and they, like those discussed earlier, discovered differential visceral and ANS responses to musical examples. But, contrary to the findings of Panksepp and Krumhansl, in this study "sadness" is a depressive, not an arousing, emotion.

The two bipolar dimensions most frequently found in factor analytic studies of emotional reactions are valence (pleasantness vs. unpleasantness) and arousal (high arousal vs. low arousal) . . . specifically, happiness represents a high arousal and

pleasant emotion, sadness a low arousal and unpleasant emotion, serenity a low arousal and pleasant emotion, and agitation a high arousal and unpleasant emotion. (Nyklicek et al. 1997: 305)

Regardless, deep listeners experience strong ANS arousal in listening to music that may result in chills or tears, changes in their heart rates, in their skin temperatures, in their respiration, and in their brain chemistry resulting in a heightened sense of aliveness, an alertness, and, mostly, a joyfulness.

Deep Listeners and Transcendental Experience

Trancers and deep listeners share the ability to respond with strong emotional arousal to musical stimulation. Both, I suggest, are deep listeners in their attention to music and in their expectation that they will be moved by it. Deep listeners' statements about their experiences are often indistinguishable from those of ecstatic trancers. Expressions of transcendence, of gnosis, of out-of-body sensations abound.⁶

This is the moment when I got my musical experience. The first notes made me almost pass out. . . . I felt that I disappeared for a moment and then woke up like in a dream but aware of the music all the time. Somehow I was soaring above the audience that was merely there but could not be heard and did not disturb. It was like a dream, I was soaring and they played just for me. It is very hard to explain the feeling I had. (Gabrielsson and S. Lindstrom 1993: 124)

Feelings of nearness to the sacred, loss of boundaries between self and other, experiences of wholeness and unity occur in relation to emotionally aroused musical listening.

I find it very difficult to find words for this music that I have experienced so strongly at *one* occasion. The closest description I can come up with is that it was a cosmic wholeness-experience beyond time and space. The body and the music became a whole, where I knew that I was dead, but it was a death that also gave birth to something that was liberating and light. A light that did not belong to this life. I disappeared even from this life, so I can't remember anything of my surroundings. I feel hesitant to write what it was, because it has never been important, since everything that happened had no connection to this world. (Gabrielsson and S. Lindstrom 1993: 129)

Often, the deep listener feels great joy:

I was filled by a feeling that the music started to take command of my body. I was charged in some way . . . I was filled by an enormous warmth and heat. I swallowed all tones . . . [T]he music became so distinct. I was captured by each of the instruments and what they had to give me. . . . Nothing else existed. I was dancing, whirling, giving myself up to the music and the rhythms, overjoyed, laughing. Tears came into my eyes—however strange it may seem—and it was as a kind of liberation. (Gabrielsson and Lindstrom Wik 2000: 437)

But pain can also predominate:

I have had similar experience of other music . . . but none so terribly deep as "Pathetique": in certain passages it evokes sobs and I feel totally crushed—my listening is fully concentrated, the rest of the world disappears in a way, and I become merged in the music or the music in me, it fills me completely. I also get physical reactions . . . wet eyes, a breathing that gets sobbing in certain passages, a feeling of crying in my throat and chest. Trying to find words for the emotions themselves, I would like to use words as: crushed, shaken, tragedy, maybe death, absorption, but also tenderness, longing, desire (vain), a will to live, prayer. The whole experience also has the character of a total standstill, a kind of meditative rest, a last definite and absolute end, after which nothing else can follow. (Gabrielsson and S. Lindstrom 1993: 123)

Pentecostal worshippers do not often mention the music that accompanied their ecstasy, but it is ubiquitous in Pentecostal worship services and acknowledged as a cornerstone of religious practice. Pentecostal descriptions of ecstasy parallel deep listeners descriptions of their euphoria.

Being sanctified was indescribable! . . . It was as if a thousand bulbs had been turned on in me. After that it was possible to see the meaning in the Bible in things where I had never seen anything before. (Wood 1965: 24)

When I received it [Baptism in the Holy Spirit] I felt light-hearted and happy—more than at any other time. . . . Have you felt so joyous that you didn't know what you were doing? Well, it's that way—except more. . . . I didn't know what was happening at first, but when I began to speak in tongues I did. (Wood 1965: 26)

My heart was filled with light, love and glory. . . . I seemingly was taken out of myself and thought I was within a few feet of the gates of Heaven. . . . It was utterly indescribably. (Wacker 2001: 55)

Sanctification is just more of the same thing as being saved; but the Holy Spirit is different—it knocks you about and you don't know what is going on. The most wonderful experiences of my life have been over in that church. When the Holy Spirit hits you it is like getting over your head in water. One doesn't know what is what when he gets the Holy Spirit. (Wood 1965: 24)

It seemed as if human joys vanished. . . . This is something I never had before. It seemed as if the whole world and the people looked a different color. Jesus had come to me. (Blumhofer 1993: 91)

The anger of the Balinese *bebuteñ* trancer contrasts with the joy of the Pentecostals, but both share an intensely emotional moment. Similar to deep listeners' euphoria and Pentecostal ecstasy, *bebuteñ* trancers see things and feel things that far exceed the sights, thoughts, and feelings of everyday life.

When I come up to that tower, when the curtain opens like that, as soon as I step up to approach Rangda [the witch], I see a strong fire coming from her eyes. . . . I want to attack her! (I Wayan Dibia, interview, 1996)

What is happening within the brains and bodies of these enraptured persons? What is the physiology that supports the phenomenal experience of extreme joy or furious rage?

Initially, strong ANS arousal that recruits neural activity in the brainstem nuclei, hypothalamus, amygdala, basal forebrain, and ventromedial prefrontal cortex—brain structures that are ancient and for the most part deep within the lower part of the brain. These changes, deep within the brain, lead to visible, perceptible changes such as increased heart rate, perspiration, and faster breathing. Almost immediately, news of these perturbations are sent via the thalamus to many parts of the cortex recruiting memories of former history with the ritual, knowledge of appropriate behavior in this situation, valorizing of the event and one's participation in it, and, I suspect, enlisting the know-how to control and modulate ANS response and thus how to propel oneself into trance consciousness. Without a rich history of immersion within the beliefs of each faith, as well as a readiness for, an acceptance of a changed consciousness, trancing won't happen. Nor will it happen without strong ANS "bottom-up" arousal, further intensified by belief—magnified by reverse neural activity from the neocortex, "top-down" arousal. It is as if the electrical storm, the concomitant chemical bath and the skill to control them all are the necessary preconditions for trance.

If, as I am proposing, trancers and deep listeners share intense reactions to musical stimulation, then one may predict that the physiological studies of deep listeners also may apply to trancers. Because most studies of deep listeners have been about positive emotional responses, the physical correlates may apply more to Pentecostals and most Sufi trancers rather than the angry *bebute* trancers, although there is bound to be much overlapping, as the general emotional circuitry of the brain is enlisted in any case. The increases in blood flow to the paralimbic regions of the brain associated with arousal and with motor functions surely happen with trancers as well as with deep listeners. Trancers often are distinguished by their agitated and strenuous physical movements. The similarity of this blood flow pattern with brain imaging patterns for euphoria also suggests that the chemical bath of dopamine, oxytocin, and other transmitters is experienced by trancers. If chills and tears are the phenomenal experience of the deep listener to these physiological changes, then trance may be the response of the even deeper listener.

Part 2. Ancient Deep Listeners, *Rasa* Theory

The focus of the scientific studies reported earlier is on the physical impact of aesthetic emotion on the listener. The perceiver is also the focus of the oldest and best-known non-Western theory of aesthetic emotions, *rasa* theory of ancient and medieval India: a theory that makes transcendental claims about the importance of the arousal of primary emotions when listening to music, when viewing beautiful statues in a temple, or when relishing a theatrical performance.⁷ *Rasa* theory is also like current scientific studies of music and emotion in ignoring cultural influences. Both ancient Indian philosophers and contemporary scientists, for different reasons, proceed with universalist assumptions of the fundamental psychological sameness of all peoples.

The earliest written document including rasa theory was composed by Bharata in his treatise on theater, the *Natyashastra*, written sometime between the first and fifth centuries C.E. Later, in the Middle Ages, Indian Tantric philosophers, Buddhist and Shaivite, further developed *rasa* theory, the aesthetic experience, and expressly linked it to the pursuit of enlightenment. The best-known Indian philosopher who wrote extensively on this theory of aesthetics was Abhinavagupta, a Tantric Shaivite who lived in Kashmir, India, in the eleventh century. Abhinavagupta incorporated works of earlier theorists into his own works, clarifying and systematizing aesthetic terminology. After his death, his influence continued in the writings not only of his students but also in the incorporation of his ideas into the writings and teachings of philosophers from other schools as well (Masson and Patwardhan 1977: 290).

The English term “aesthetics” has come to mean the study of the basis of evaluating objects designated as “artistic” that have been isolated from their cultural context (Sparshott 1983: 3). But that was not its original Greek meaning (*aesthetikos* “of sense perception”), nor is it the meaning of comparable terms used in India and Southeast Asia. The idea of aesthetic appreciation in Tantric teachings has to do with a special kind of perception, of paying full attention to whatever is before one at the moment. The Tantrics of medieval India linked the study of perception and cognition with aesthetics. One is taught constantly to strive to be in the present, not mentally reliving the past nor rehearsing the future. One strives to be mindful of every moment and to see, hear, taste, smell, and touch without preconceptions, without the intervening overlay of the memory of past experiences. To see things as they are, to hear music as it is, without precognition or judgment, is to perceive aesthetically. Refinement of perception, according to Tantric philosophy, can lead to a refinement of cognition and a dissolution of the boundaries between oneself and the thing perceived. Aesthetics as clarified perception becomes a cornerstone of spiritual practice and an important source of meaning in a performance or a ritual.

Rasa is not a thing in itself, formed previous to the act of consciousness by which it is perceived, but the consciousness itself (and therefore the perception) which, freed from external interference and from all practical desires, becomes Rasa or aesthetic consciousness. The subject, when immersed in this state, finds, in it, the fulfillment of all his desires: in this sense, therefore, Rasa is pleasure, beatitude, rest, lysis. Aesthetic consciousness has no end outside itself. . . . Aesthetic experience postulates, of necessity, the extinction of every practical desire and, therefore, the submersion of the subject in the aesthetic object to the exclusion of all else. (Gnoli 1956: xxii)

What was to be perceived? The emotion portrayed in the music, the dance, or the theatrical persona. A dance, a musical composition or a theatrical presentation should be centered on one of the “permanent” emotions, which is to be experienced by the receiver “without obstacles,” by which is meant received experience without individual memories, associations, the colorings of one’s own personal history. The aim is to feel the designated emotion, along with all other

listeners or viewers, united in a “field” of emotion, removed from autobiography, without consequences, and transformed into “aesthetic rapture” regardless of the positive or negative nature of the emotion portrayed. From the eight basic emotions (nine by the Middle Ages) the artist chooses to portray one *rasa*, or “taste,” corresponding to one primary emotion.

The *rasas*

1. *srngara*: the erotic
2. *hasya*: the comic
3. *karuna*: the compassionate
4. *raudra*: the furious
5. *vira*: the heroic
6. *bhayanaika*: the terrible
7. *bibhatsa*: the odious
8. *adbhuta*: the wondrous
9. [*shanta*: the peaceful—added in the medieval period]

The “permanent” (primary) emotions

- rati*: love (sexual)
hasa: laughter
soka: sorrow
krodha: anger
utsaha: energy
bhaya: fear
jugupsa: disgust
vismaya: wonder

(Rowell 1992: 329)

With the possible exception of “wonder,” I would designate all the primary emotions of Indian *rasa* theory as high arousal emotions. Among *rasa* theorists, as often as they are called “emotions” they are called “mental states” or “forms of consciousness.”

Indeed every creature from its birth possesses these nine forms of consciousness. In fact, on the basis of the principle that all beings “hate to be in contact with pain and are eager to taste pleasure,” everyone is pervaded by sexual desires [Delight]; believes himself to be superior to others, whom he is thus led to deride [Laughter]; grieves when he is forced to part from what he loves [Sorrow]; gets angry against the causes of such separation [Anger]; gets frightened when he finds himself powerless [Fear]—but still is desirous of overcoming the danger which threatens him [Heroism]; is attacked, when judging a thing to be displeasing, by a sense of revulsion directed just toward this ugly object [Disgust]; wonders at the sight of extraordinary deeds done by himself or others [Astonishment]; and, lastly, is desirous of abandoning certain things [Serenity]. (Abhinavagupta in Gnoli 1956: 91)

Most of the “transitory mental states” or secondary emotions of *rasa* theory appear to be in the low arousal category. Some of those states included in the secondary, transitory category such as death, sleeping, or awakening would not be likely to appear in a Western list unless “emotion” is defined generally as a “feeling state.”⁸

Transitory Mental States/secondary emotions

- | | |
|-------------------|-----------------|
| 1. discouragement | 18. dreaming |
| 2. weakness | 19. sleeping |
| 3. apprehension | 20. awakening |
| 4. weariness | 21. shame |
| 5. contentment | 22. epilepsy |
| 6. stupor | 23. distraction |
| 7. joy | 24. assurance |

- | | |
|------------------|----------------------------------|
| 8. depression | 25. indolence |
| 9. cruelty | 26. agitation |
| 10. anxiety | 27. deliberation |
| 11. fright | 28. dissimulation |
| 12. envy | 29. sickness |
| 13. indignation | 30. insanity |
| 14. arrogance | 31. despair |
| 15. recollection | 32. impatience |
| 16. death | 33. inconstancy (Gnoli 1956: 30) |
| 17. intoxication | |

An artist is ideally expected to portray one central, primary emotion, and a subset of lesser, secondary emotions. For example, the primary emotion may be *sringara* (erotic love) and the secondary emotions might be joy, arrogance, and distraction. Or the primary emotion may be *sringara* with a different set of secondary emotions such as apprehension, anxiety, and despair. *Rasa* theory also includes a discussion of what would now be called the outward, visible manifestations of ANS arousal, in this ancient theory called “consequents” of the emotion, or “involuntary states.” Many of these ancient “involuntary states” closely parallel the physiological responses of deep listeners. “Paralysis” and “fainting” seem to suggest trancing as well.

Involuntary States

- Paralysis
- Fainting
- Horripilation [goosebumps]
- Sweating
- Change of colour
- Trembling
- Weeping
- Change of voice (Gnoli 1956: 29–30)

In its insistence on the primacy of strong emotional arousal in musical listening, *rasa* theory has parallels with the “strong emotions” of the deep listeners in the studies of Gabrielsson and Lindstrom Wik, Krumhansl, Nyklicek et al., and Panksepp. But there may be a significant difference. *Rasa* theorists posit a distancing of the receiver from the emotion received, an impersonal and disinterested pleasure in order, in part, to transform pain into pleasure.

Aesthetic experience, being characterized by disinterested and impersonal pleasure, is a modality *sui generis* of the unbounded beatitude that appears to the yogin in his ecstasy and, in his eyes, transforms *samsara* into *nirvana*. The mysterious conversion of pain into pleasure, which accompanies the full realization of one’s own Self, is to be found equally in aesthetic experience, which possesses the magical power of transfiguring the greatest sadness into the disinterested pleasure of contemplation. Pain, which is mobility, inquietude, has no place in aesthetic experi-

ence, which is rest, lysis and the fulfillment of all desires—unless it is converted magically into pleasure. (Gnoli 1956: xxiv)

In this respect, *rasa* theory may be applicable to some deep listeners but not to trancers. The trancer, for certain, is not mentally distanced from the inducer of her arousal.

For medieval Tantric Shaivite and Buddhist scholars, there is a clear distinction between the aesthetic experience and the experience of God. The aesthetic experience is merely a stepping-stone toward a more perfect enlightenment. It seems that for Abhinavagupta, the difference between aesthetic consciousness and enlightenment lies in the object into which the listener is absorbed—whether absorbed in the music or absorbed in God. Significantly, he posits a group of listeners in a ritual context, not an individual listener as the ideal forum for aesthetic consciousness. The type of consciousness experienced by the sensitive listener in a group ritual context “expands,” as opposed to individual consciousness, which he describes as “a state of contraction.”

The consciousness, which consists of, and is animated by, all things on account of the difference of bodies, enters into a state of contraction. But, in public celebrations, it returns to a state of expansion—since all the components are reflected in each other. The flow of one’s own consciousness in ebullition (i.e., when it is tending to come out of itself) is reflected in the consciousness of all the bystanders, as if in so many mirrors, and, inflamed by these, it abandons without effort its state of individual contraction. (Abhinavagupta in Gnoli 1956: 70)

Writing about aesthetic experience a millennium ago, Abhinavagupta seems to be invoking the phenomenon I would call structural coupling and rhythmic entrainment (see Chapter 5). Solitary listening would not have been the norm in his place and time. His deep listeners would usually be in groups, in “public celebrations,” in which structural coupling and rhythmic entrainment would facilitate his expansion of consciousness.

Deep Listening, Trance, and the Srngara Rasa

It is no accident that the first *rasa* in Indian texts is always the *srngara rasa*, the erotic *rasa*. Erotic feelings are commonly aroused by musical listening and frequently reported by listeners in Western studies of music and emotions (Goldstein 1968; Crow 1984; Blood and Zatorre 2001). Sexual arousal while playing gamelan music is testified to in this excerpt from a nineteenth-century Javanese poem, *Serat Centhini*:

The musicians played with skill and with the same feel for the piece.
The tranquility of the rhythm vied with the melodic realizations in realizing desire.
Their rendition was just the right length for a puppeteer’s narration.

They played so together that the *rasa* of the piece was obtained.
So they played on and on.

They played the piece for a long time.
Then it sped up and moved into the second section.

The longer it lasted, the more intimate with one another the individual rendition became.

They seized the thrill of satisfaction.
The musicians were all sexually aroused, eager, and randy,
Feeling [*rasa-rasa*] as if they couldn't stand it any longer.

The quickened tempo could last no longer.
Then the final cadence came, followed by the *sendhon*.⁹ (Soeradipoera et al. 1912–15)

Deep listening or trancing may incite sexual passion. Religious ecstasy is often described in explicitly sexual terminology. The similarities between trancing and states of sexual bliss or the invoking of sexual metaphors as a description of trance may be a problem for those whose beliefs systems place sexuality in the realm of the profane. As an orthodox Christian or Muslim, how is one to interpret the parallelism between religious ecstasy and sexual ecstasy?

Erotic imagery is an important part of many of the religious poems sung for a Sufi *sama'*. Below is an excerpt from a poem by the Indian Sufi, Amir Khusrau, whose tomb lies within the Nizamuddin shrine in New Delhi. The imagery of the poem is that of a lover longing for the beloved, a standard *topos* of Sufi mystic poetry.

I Don't Know Where I'm Going

(Poem in Persian by Amir Khusrau, 1254–1325 C.E., translated by Jeffrey Grice

A devoted suitor is approaching on horseback.

*I was told tonight
That you were coming, my Love:
I lay down my head in sacrifice on the path
Which you will ride, my cavalier.*

Without hesitation, I have laid the Jewel of my life as a carpet for your arrival.

*I lay down my head in sacrifice on the path
Which you will ride, my cavalier!*

Living only with your memory
Has brought me to the point of death.

O what use will your coming be,
Once I am dead?

The power of love is so strong
That its privileges cannot be taken away.
If you don't come to the funeral,
You will come to the grave!
In only coming once you stole
The heart, religion and patience of Khusrau.
Whatever will happen if you come in this way
Two or three times more?

I was told tonight

That you were coming, my Love! (Excerpted from Program Notes, concert of Nusrat Fateh Ali Khan, Ann Arbor, Michigan, 1993)

Sufis stress the fact that they understand the imagery metaphorically, and also that the Sufi path is always an individual one, entirely dependent on the particular spiritual state of the devotee. One responds to any particular line of poetry depending on one's own state of mind at the time.

The name passion applied to other than Him is a pure metaphor, not a proper sense of the word, though he that has a lack, near in his lack to brute beasts sometimes does not recognize in the expression passion anything but the seeking of sexual intercourse. And such a one as this is like a donkey-driver, with whom it is not fitting that one should use such terms as passion, union, longing, humane intercourse. (al-Ghazzali 1901–02: 233)

The problem of sexuality and ecstatic trance is not special to Islam. In Christianity it seems to have been compounded by the fact that it was more often than not women who were overcome with spiritual ecstasy. The sensuality that presented a problem in the Christian Middle Ages was not the eroticism of a religious text but, specifically, the erotic dimensions of the trance experience itself. The following passage is attributed to Angela of Foligno (died 1309 C.E.).

And then the soul, participating in the highest one . . . desires to possess him, and embraces him, and squeezes him to herself, and conjoins herself with God, and God draws her to himself with the highest sweetness of love, and then the power of love transforms the beloved into the lover: that is, the soul, inflamed with divine love, transforms herself through the power of love into God, her beloved. (Caciola 1994: 41)

The metaphor of the lover and the beloved as representing the relationship between the seeker and the Divine takes some of its power from this ambiguity, from its association with sexuality. Because of its clear rootedness in bodily sensation, sexual imagery slides easily into powerful symbolism. The similarities between divine love and human sensuality add color, emotion, and mystery to the impact of trancing.

During the Barong/Rangda ceremonies, the trancing men who first attack Rangda and then themselves often assume a stance and perform gestures similar to coitus.

The performer stands with legs apart and knees slightly bent. He holds the *kris* [dagger] with both hands down between his thighs, the point extending upward toward his breast. From this position, the performer may rear back, bringing his body into a position analogous to that of the other modes at the top of the thrust, or he may seem to fall forward upon it, so that the strong beat of the rhythmic motion comes on the forward and not on the backward bend. (Belo 1960: 21)

Eroticism in the secular trancing of *tarantismo* was attested to by many first-hand observers (Mora 1963: 418). The gestures of the women and some of the lyrics indicate a strong sexual undertone to the dancing/trancing performance.

Where did it bite you, tell me, beloved, where it was.
Oh, if it was your leg, oh mamma! (Sigerist 1944: 220)

The semiotic, metaphoric relationship between trancing and the sexual act may be supported by a physiological relationship between the neural pathways of aroused musical listening and those of aroused sexuality. High arousal emotions can both precipitate trancing and the phenomenon known as “chills” in musical listening, a tingling at the back of the neck, down the spine, or the raising of “goosebumps.” Trancing and “chills” may be linked to the circuits and chemicals of sexual arousal.

We have shown here that music recruits neural systems of reward and emotion similar to those known to respond specifically to biologically relevant stimuli, such as food and sex, and those that are artificially activated by drugs of abuse. (Blood and Zatorre 2001: 11823)

This possible neural/chemical link has led Panksepp to label musically induced chills as a “skin orgasm.”

I chose to label the chill phenomenon as a “skin orgasm” on the basis of the assumption that there are underlying neurochemical similarities between the two phenomena. . . . many of the neurochemistries that underlie sexuality are the same as those that mediate other social processes. (Panksepp 1995: 203)

If the sadness of musical emotion is not necessarily depressive but may be stimulating, then, in musical/trancing situations, the sexuality of the longing Sufi, the longing of the victim of a tarantula bite, and the longing of the *bebuden* trancer may not be painful either. Or the sadness of the deep listener may be transformed into joy. Or the sexuality of a trancer may be a result of extreme joy or extreme arousal. If under conditions of extreme arousal the neural circuits and chemical reactions that are normally generated by sexual interest come into play for trancers and deep listeners, then that may only demonstrate the interconnectedness of our emotional circuits. Musical arousal and sexual arousal may share “underlying neurochemical similarities.”

Panksepp goes further and links the “skin orgasm” reaction to particular types of musical stimuli.

A certain kind of acoustic dynamic, with intrinsic emotion-activating properties (e.g. “piercing” crescendos) . . . may be essential for the phenomenon to be triggered, but a background mood of bittersweet, melancholy, and sadness may also be important for the responses to occur with any consistency. It also seems evident that certain types of sustained high-frequency notes, often presented by a solo performer, are an optimal stimulus for activating the response. (Panksepp 1995: 195–96)

His description of those stimuli could just as easily be descriptive of north Indian/Pakistani Chishti Sufi musical traditions as can be heard in the CDs of the late Nusrat Fateh Ali Khan or the Sabri Brothers. The performance tran-

TRANCE
STUFF
DOWN

q = 90

Lead Singer (Nusrat)

Other Solo Singer

Chorus

Harmonium

Nusrat

Solo

Chorus

Harm.

Nusrat

Solo

Chorus

Harm.

Figure 2-6. Transcription of one verse of “*Shamas-ud-doha, badar-ud-doja*” sung by Nusrat Fateh Ali Khan and party. Reproduced with permission of Joshua Penman.

Nusrat

Solo

Chorus

Harm.

Nusrat

Solo

Chorus

Harm.

Nusrat

Solo

Chorus

Harm.

Figure 2-6. Continued on the next page

The musical score consists of two staves of music. The top staff begins with a treble clef, a key signature of four sharps, and a time signature of common time (indicated by '4'). The lyrics 'qi-ir hai' are written above the notes. The bottom staff begins with a bass clef, a key signature of four sharps, and a time signature of common time (indicated by '4'). The lyrics 'qi-ir hai' are also present. The music continues with various notes and rests, followed by a section where the lyrics 'A' and 'Shams - ud du - haa' are written. The instruction 'bellows accents' is placed above the notes, with a small diagram showing a bellows with arrows pointing outwards. The bottom staff concludes with the lyrics 'ba-dr - ud du-jaa'. The top staff resumes with the lyrics 'sa-de-ma ni-da-na' and 'da da da da (da-da-ga-da-ga-da-ga-da) (approximately) Shams-ud du-haa'. The instruction 'etc.' is written to the right of the staff. The bottom staff ends with the lyrics 'ud du-haa'.

Figure 2-6. *Continued*

scribed in Figure 2-6 is played with heavy accents on downbeats, at high volume and with a penetrating voice quality.¹⁰

Unlike meditation, where strong emotions are to be eliminated or set aside or transcended, trancing in religious contexts draws on emotion, depends on emotion, and stimulates emotion through sensual overload: visual, tactile and aural. In trancing contexts, the ANS seems in overdrive, propelling the tracer to physical feats not normally possible, and to the feeling of numinous luminosity that encapsulates special knowledge not accessible during normal consciousness. In trance, all sensations become intense: hot or cold, smooth or rough, light or dark. Arousal and speed, arousal and dynamism, arousal and dancing, arousal and sex are all natural pairs. Although any kind of music can be associated with trance, it remains significant that much trance music is rhythmically vibrant and somewhat loud, or at least with a piercing tone quality. ANS

arousal seems to be a central factor in precipitating trance, often dependent on enlivening musical accompaniment facilitating a sense of divinity, of the sacred realm. There is a joy in the pure bodily experience of strong arousal, a life-affirming quality of feeling truly alive that both deep listening and trancing can enhance. Both are affectively akin to sexual arousal.

Conclusion: Controlling the Uncontrollable

The generation of the initiating physiological responses to primary emotions generally are not under conscious control. We do not will ourselves to feel anger, or sadness, or elation. Damasio cites the one exception he found, which he believes to be rare, of the pianist Maria Joao Pires, who claims to be able to either hold back or enhance her emotional involvement while listening to music or playing music. Damasio was skeptical and submitted her to a test including skin conductance response and rate of heartbeat. One listening test was a “hold-back emotion” listening, the other was an “emotional release” listening. She not only demonstrated her conscious control over bodily reactions believed to be autonomic but also repeated the experiment and with the same results for a colleague who was sure someone had erred in the first experiment (Damasio 1999: 50).

One of the startling aspects of religious trancing worldwide is its stereotypicity. Trancers behave exactly the way in which they have learned to behave, and trance behavior is narrowly circumscribed by time and place. In my hometown, Pentecostal trancing can be witnessed each Sunday morning sometime between 11:30 A.M. and 1:30 P.M., in a particular church, with all trancers following basically the same gestural script. Likewise in the Rangda/Barong ceremony, the trancers who attack Rangda and then turn their knives against themselves do so on cue, so to speak. Very rarely do they enter trance before the proper narrative moment. Precisely at the point in the drama at which they begin trancing, their actions, gestures, and the duration of the trancing are predictable. Trance behavior is much more circumscribed, more stereotypical than everyday behavior. Trancers follow a script that determines the time of the onset of trance, the duration of trance, behavior during trance, and the style of withdrawal from trance.

How do they do it?

I believe they do it in part by control over the physiology of emotional arousal. To use the vernacular, they are able to turn on strong emotions at will. The case of the pianist Maria Joao Pires may not be as exceptional as it at first appears. Control over what are believed to be involuntary bodily states and reactions may be more widespread than is normally believed. We have all heard stories about Indian yogis who can control their metabolic rates and respiration rate to the degree that they can be buried alive for several hours or even days and yet survive. I suspect that less spectacular cases may be occurring regularly or occasionally with persons who are not, like yogis, professionals. One clear

example is the ability of some patients with severe headaches to ease their pain by learning to redirect or redistribute their blood flow from their head to their hands or legs, called biofeedback (Green and Green 1989: 213). The headache sufferer is linked to a machine whose dials indicate hand temperature. The patient learns to redistribute blood flow not by watching the dial on the machine but by *imagination*, by visualizing her hands on a summers' day in full sunlight. I suspect that deep listeners, performers like Maria Joao Pires, and trancers also learn to control emotional arousal. Like al-Ghazzali's Qur'an listeners, they turn effort into effortlessness, force into habit.

And therefore the Apostle of God commanded him who did not weep at the reading of the Qur'an that he should force weeping and mourning; for the beginning of these States is sometimes forced while their ends thereafter are true. (al-Ghazzali 1901: 731)

Trancers and deep listeners are not able to describe this process anymore than the pianist Maria Joao Pires could describe the opening and closing of her floodgates of emotion. Like riding a bike, or learning via biofeedback, once you learn you don't forget. You know that you know, but cannot describe the knowing to another.

In learning voluntary control of normally unconscious processes, we do not become directly aware of the neural pathways and muscle fibers involved, any more than we become aware of what cerebral and subcerebral nerves are involved in playing tennis. . . . Everything that is learned, without exception, is learned with feedback of some kind, whether it involves the corticostriate system or the corticosubcortical-autonomic system. (Green and Green 1989: 211)

The trancers at a Barong/Rangda ritual "permit" emotional arousal on hearing music and finding themselves players in a religious drama. In the words of Merleau-Ponty, they "offer" themselves to "actions from outside." I suspect that strong emotional arousal stimulated by listening helps precipitate the onset of a trancing consciousness characterized by focus, by duration, by limiting the sense of self, and by the surety of special knowledge—the gnosis of trancing. Control of the autonomic bodily responses of emotion and the ability to affect the intensity of those physiological responses is one definition of a trancer.

How else can one reconcile the fact that within a society *who* trances, *when* they trance, and *where* they trance is so predictable? This predictability might lead one to suspect fakery, which surely sometimes happens, but not nearly so often as most nonbelievers suspect. The predictability of trancing and the stereotypicity of trancing, conforming to community expectations, is not, I am convinced, a result of fraudulence, of chicanery, but of skill. Trancers and deep listeners have more control over the activities of their minds and bodies than most of us. They are not "out-of-control" but, rather, more fully able to modulate and enhance what are normally autonomic bodily responses than most people. They are profoundly in control of themselves.