The Yoga of the Bansuri
Swara Yoga as Applied to the Hindustani Bamboo Flute

by Richard Ball

In the tradition of ancient India, *yoga* is a word that describes any action that unites one with the divine. In the field of music, there are considered to be four specific types of yoga: *Shabdha Yoga*, associated with chanting Sanskrit hymns from the ancient texts; *Tantra Yoga*, linked with channeling specific energy by chanting and singing in particular ways; *Bhava* or *Bhakti Yoga*, allied with singing names of the divine, often known as *kirtan*; and *Nada Yoga*, a complex system which includes external and internal sounds, and includes the classical music of India. Contained within *Nada Yoga* is the practice of *Swara Yoga*, which embodies the devotion to the particular tones that make up scales, modes, and ragas. The word *swara* comes from the Sanskrit words "swa," meaning "self," and "ra" meaning "to shine." Swara Yoga will be the focus of this article. (Note: The practice of Swara Yoga is not to be confused with a yoga of the same name that is often referred to as "brain breathing." The version of Swara Yoga to be discussed in this article applies to the tones played on an instrument or those that are sung.)

The *swaras* are the names of the notes. Basically, they correspond to the Western major scale. The swaras can be altered to create different ragas that have different feelings or energy. Whereas the Western chromatic scale consists of 12 tones, or all the black and white keys on the piano within an octave, the "chromatic" scales of India consist of somewhere between 21 and 24 tones, depending upon with whom you study. The reason for the greater number of tones in the Indian scale is due to the use of *just intonation*, rather than the equal tempered scale with which we are more familiar. In the Indian use of *just intonation*, the liberal use of microtones inherent in this scale system enhances the feeling or energy of specific ragas.

A *just scale* is based upon notes that happen naturally as a result of the harmonic overtone series; whereas, an *equal tempered* scale was created for keyboard instruments so that they could successfully play in any key, regardless of the key signature. Equal temperament is referred to as a "compromise" tuning system. Equal temperament divides the octave into equally spaced parts, each being a semitone or half-step. This means that no matter at what pitch level that you play (i.e., key signature), the music will sound the same in terms of how the pitches are related to each other melodically and harmonically. Equal temperament homogenizes the keyboard, and, basically, makes all keys equally out of tune in exactly the same way. Our modern ears have gotten used to this "out-of-tune-ness," so much so that it actually sounds in-tune and normal to us.

Typically, the ragas themselves are not referred to as scales or modes, like we refer to them in the West; rather, they are simply collections of notes that invoke a particular mood or energy, based on time of day, the deities who are personifications of natural energy, or a particular occasion. The word *raga* means "coloring" and is derived from the Sanskrit word that means "the act of dyeing with color." Unlike the notes in the various Western scales, Swara Yoga is the practice of using notes for very specific, spiritual purposes. This article will attempt to convey the very basics of this philosophy, as well as its application to the playing of the bamboo flute or bansuri.

When I met my first teacher of Indian classical music, a charming and enigmatic character who had a graduate degree in music and had spent 12 years living in a cave in India studying the flute and following a guru, he asked me if I played the root tone on my flute with two fingers down or with three fingers down. I told him I played with three fingers down. "I can't help you then," he said. "I play in the ancient, Hindustani style, which is much looser in form than the Carnatic music of the south where they play the root with three fingers down." I told him that I would be willing to switch. He took me on as a student, as long as I promised to balance my study of Indian classical music with devotional music. That required I tour with him to play kirtans around the area where we lived. I told him that I was not really interested in the devotional music. He said that was fine, because I could keep playing classical and it would fit right in. That was the first time he tricked me, as the two are inseparable except in the Western mind!

There are both advantages and disadvantages to the two-fingers-down for the root method, as well as the much more widely used three-fingers-down method. Most bansuri players use the latter, and most flutes that you will find on the market will be labeled accordingly. Bansuri will often be named as an "*E*/*B* bass flute." This indicates that three fingers down will yield the pitch *E*, the tonic, while six fingers down will play the *pa* or fifth (*B*). That label also means that the flute plays in the lower register. However, if purchasing a flute to play with the two-fingers-down method, one must think in terms of a whole-step higher. For example, with the two-fingers-down method, the *E*/*B* bansuri becomes an *F#* flute.

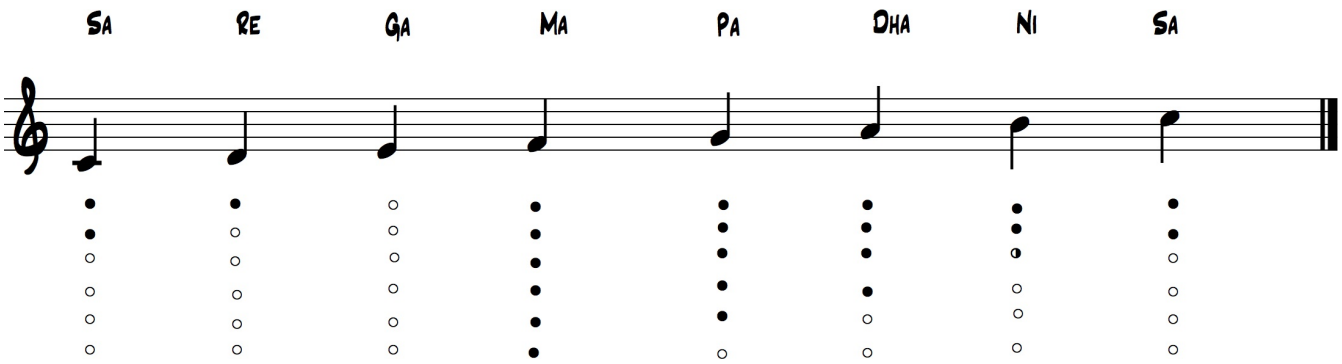
One of the advantages of playing with the three-fingers-down method is that it is more widely used, more literature is written about this technique, and this allows the player to emphasize some of the higher pitches on the flute. The disadvantage is that the lowest tone playable will generally be the *pa* or fifth; although, by rolling the flute inward, one can play down to a raised *ma* or the raised fourth. In addition, most modern flutes have an added seventh hole, and a quarter turn inward on the flute can sometimes yield a raised *ma* or raised fourth, or a natural *ma* by rolling the flute. This hole is only really useable on smaller flutes, and most bansuri players who I know rarely use this seventh hole, if at all. Also, this seventh hole has only been added in the last 100 years or so, and was therefore unknown to ancient players.

An advantage of the two-fingers-down method is that it allows the player to emphasize the lower notes. Using this method, one can play all the way down to *ma* or the fourth, and one can roll the flute inward to play the natural third or the *ga*. I have also been told that this is the more

traditional fingering of the ancient North Indian tribal and Sufi players, but I have not seen this substantiated anywhere. It is, however, a lesser known technique and is definitely worth exploring.

Having used both fingering methods, I have come to appreciate the two-fingers-down technique. This may be because I tend toward the deep resonance of the bass flutes, and I like having access to the lower, deeper pitches. Also, in my improvisation, I appreciate the ability to play down to the third or the *ga*, as it gives me the feeling of having more flexibility with the melodic motifs that I play. When using the three-fingers-down method, I find that I want to be able to play a pitch or two lower than I actually am able to achieve.

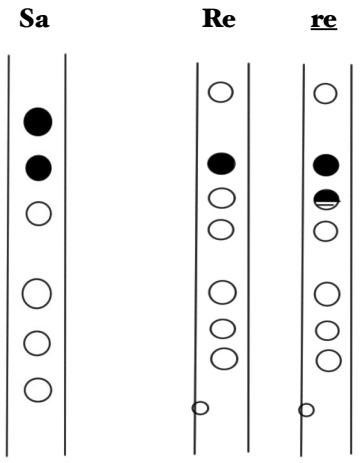
The pitches themselves are known by their nick-names: *sa*, *re*, *ga*, *ma*, *pa*, *dha*, and *ni*. However, these are shortened names of the swaras, each of which has a deeply meaningful name and a story rooted in ancient yogic practice. To play the Western major scale, called *raga bilawal* in the North Indian Hindustani tradition, the finger chart is as follows:



The Western notation is here just to help communicate these concepts to the Western reader. In actuality, the swaras are like the Western solfège: *do*, *re*, *mi*, *fa*, *sol*, *la*, *ti*. These syllables do not correspond to a specific fixed pitch. The flute is the only fixed-pitch traditional instrument of the region. Recently, the addition of the harmonium has created expanded thinking about fixed pitches and tempered scales. When playing the bansuri, it is customary to switch to a different flute if the root tone changes. The system of notation for the bansuri is known as *sargam*, derived from the notes *sa*, *re*, *ga*, *ma*. In the sargam system, once the pitch of *sa* has been established, it is fixed and cannot be altered. *Pa*, the fifth note, also is not altered, though *pa* does not occur in all ragas. All of the other pitches can be altered: *re* can be lowered and has three main microtone possibilities; *ga*, the third, can be lowered or raised and can also produce three major microtonal variations; and *ma*, the fourth, can be raised and has three microtonal variations. As stated previously, *pa* cannot be altered. *Dha*, the sixth, can be lowered, with three microtonal variations. *Ni*, the seventh, can be lowered or raised with at least three major microtonal variations widely used.

The swaras each correspond to an energy, often referred to as a deity, as well as to a *chakra*. The chakras are a set of seven energy centers located in the spine, head, and perineum, which are said to relate to different types of energy and to stages of spiritual evolution. Below is a very brief summary of the deity and chakra that correspond to each tone, and the fingering for the bansuri in the Hindustani North Indian Hindustani tradition. These descriptions are based on the learning I have taken away from my own teachers. There are probably as many variations as there are teachers, but the idea that the swaras are deeply rooted in Vedic history, spirituality, and yoga remains the same.

Sa is named for Shadaja, "the mother of six" or mother of the six other swaras. It is linked with and is located at the perineum. This chakra is associated with grounding to the earth, as well as with the energy of basic survival. Interestingly, *sa* is also associated with the sound of the peacock.



The swara *sa* cannot be altered. Though often considered the tonic when it is the lowest note of the raga, *sa* is not always the most important or influential pitch. More information will be provided about the importance of the tones when we discuss times of day with regard to raga playing.

Sa is also associated with the energy (deity) Ganesh, who is portrayed as the elephant-headed, multi-armed deity who helps us to overcome obstacles. In English script, the swara is indicated as a capital "S." A singular "S" means the lower *sa*, and an "S" with a dot over it indicates the upper register. An "S" with a dot beneath could be used to denote a lower *sa*, but this note does not appear on the bansuri.

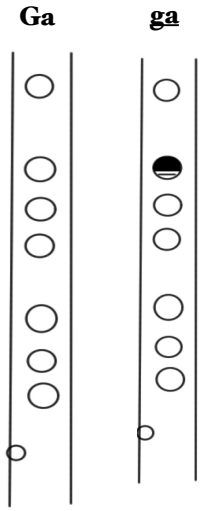
Re, the second note, is named for Rishabha, who is said to be "the first protector" and who is also associated with primal energy. A teacher once told me that the "first protector" title was associated with the first finger down for this note. Others say it is associated with the sound of the bull upon which Rishabha rode, more than with Rishabha himself. It is associated with the sacral (second) chakra located low in the lumbar spine, which is said to regulate sexual energy. It is also associated with material creation.

This swara has several *kamal* (lowered) possibilities, depending on the raga. These lowered possibilities are indicated by the additional line in the flute diagram, indicated in the flute figure on the previous page. In this diagram example, one plays *sa* and barely lifts the third finger as to raise the *sa* pitch a very small amount, much less than a quarter-tone. The second technique lifts or rolls the finger only a bit more to approach an actual quarter tone. The third possibility is a little flat or a half-step from *sa*. Though the technique is called *half-holing*, if half of the hole is truly open then the tone will be considerably sharp of what is acceptable.

The swara *re* is also associated with the energy (deity) Agni, associated with the energy of fire. This is a little confusing, as the second chakra is normally associated with water. This may date the names and associations of this swara to a much earlier time, when the element of fire may have been related to this chakra.

The *komal* (lowered) *re* is written in the lower case, or more simply with the lowercase letter "r." Also, using a line below the "R" or "r" indicates a lowered pitch. When written with an uppercase letter "R," it indicates a natural (*shuddha*) *re*. Written without embellishment, *re* indicates the middle register. A dot over it, indicates the upper register.

Ga is associated with the third chakra, effecting the solar plexus located behind the naval in the spine and is considered to be a source of power. It is named for Gandhara, which does not seem to be a currently known energy or deity. It is a region, and the pitch is also associated with the sky. I heard an old yogi say it is possible that this was a deity of antiquity which is no longer known, either due to it being an energy that no longer exists, one that has been forgotten, or one that has taken on a new name, as it is unlikely that a region in India would be named for a particular important deity.

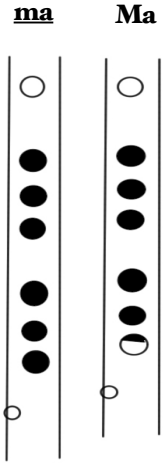


Ga can be lowered (komal) or raised, slightly. This is an important tone, as it uses the alteration of the third note that distinguishes a major from a minor mode or scale in Western music. So, as Westerners, we can certainly understand the change in mood or energy that happens when this tone is altered. There are a group of ragas that have a lowered *ga* when ascending, and a natural *ga* when descending, or visa versa, giving a wonderful sense of mood change when approaching the *ga* from different directions.

When written in lower case, *ga* or *g*, or with a line below, *G* or *g*, then the komal version is played. When written with an uppercase *G* or *Ga*, the shuddha (natural) note is played. Since this note can be played on the flute when using the two-fingers-down method, a dot beneath it indicates a lowered tone. The tone with a dot above, indicates that the note is played in the higher register, while a dot below indicates a lower register note.

Ma is named for Madhyama. In the practice of Nada Yoga, there are several levels of sound. The sounds we hear that are generated by voices, instruments, man, or nature are the lowest or most dense level of sound. Madhyama is the next level, which is known as "subtle sound." These are called the "unstruck" sounds, and include the sounds of *prana*, or energy in the body, such as the chakras. The practice of Nada Yoga at this level involves closing the ears, listening beyond the sounds of the body, such as the heart, breathing, blood flow, and digestion, instead tuning into the energetic sounds. In this practice, the heart is thought of as a hearing sense organ. Often, when people are in absolute quiet, there is a subtle hissing sound that they hear. This is known as "the cosmic hiss" or "the cosmic hum." Some call it "The Sound of Aum."

Ma is associated with the heart chakra, located in the spine, behind the heart, as well as with the sounds of the dove or the heron, according to some. It is also associated with the energy (deity) of Vishnu, which is the energy that deals with stability, from the trinity of Brahma (creation,) Vishnu (stability or maintenance), and Shiva (destruction) that are considered to be the primary energies.



The stability of *Ma* is also evident in the drones that often accompany Indian music. The drone, most often played on the tanpura, but today often provided by the harmonium, shruti box, or electronic drone, are typically composed of the swaras of *Sa* and *Ma*, or *Sa* and *Pa*. Especially on the tanpura, these drone notes produce the overtones of the important swaras in the raga, to which one can attune musically. The drone also serves as a meditative pad for the performer of Nada Yogi.

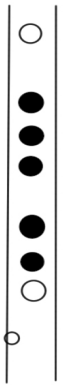
Since this note can be played natural or sharpened, the notation for the natural form is the lower case *ma*, and the raised note is with the upper case *Ma*. A line below *ma* also can indicate the natural *ma*. A dot above indicates the higher register, while a dot below indicates the lower register.

Ma can be raised up to a half-step, functionally serving the Western interval of the augmented fourth/diminished fifth. Typically, a raga will have either the natural (shuddha) *ma* or the sharpened (*tivra*) *Ma*, but not both. The raised or sharpened *Ma* is written using the capital letter "M."

Pa is named for Panchama, which is the name of one of *The Vedas*. *The Vedas* are ancient scriptures, some thought to be 7,500 to 10,000 years old. The verses of *The Vedas* are thought to have come from a non-human source. Many of the

songs of both Indian classical music and devotional music take their text from *The Vedas*. These texts are written in Sanskrit, an important language in the yogas and in the musical yogas. This nod to the inspirational source of much of Indian music demonstrates the importance of this particular swara.

Pa



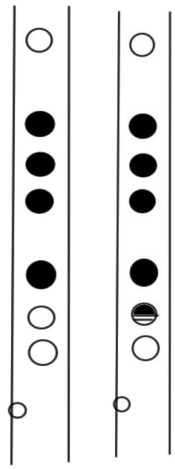
Pa and *Sa* are the two swaras that cannot be altered. They always exist in the ratio of 3:2. This is the most common second note in the drone, in addition to *Sa*. *Pa* does not exist in all ragas.

Pa is also associated with the cuckoo bird, the throat chakra and the energy (deity) of Narada. Narada is often depicted as a wandering sage who travels carrying and playing a *veena*. The veena is a plucked stringed instrument originating in ancient India, used primarily in Indian classical music. It derives its unique timbre and resonance from the sympathetic strings, the bridge design, a long hollow neck, and resonating gourd chamber. Narada has to do with our ability to see into other worlds and other realms. Narada is considered to be a master of Bhava or Bhakti Yoga, which is the yoga of devotion. Stories in the ancient scriptures depict him singing songs to the deities, especially to the deity Vishnu.

The energy of stability in *Pa* makes it one of the most stable swaras. Since this swara cannot be altered, it is just written as a capital "P." A dot below indicates the lowest *pa*, while a dot above indicates the upper register which can be played by using an extended/ altered fingering.

Dha is named for Dhaivata, which usually is just translated as "sixth note," but a more obscure meaning is "divine." This swara is one of the most expressive tones. It can be played in a few places lowered (komal), as well as natural (shuddha.) I received a call from one of my friends in India telling me that he was very excited to be attending a three-day music festival, which means 24 hours of playing each day. It was a festival tribute "to the lowered *dha*." Ragas that have the lowered *dha* as one of the most important notes tend to be very haunting and evocative.

Dha **<u>dha</u>**

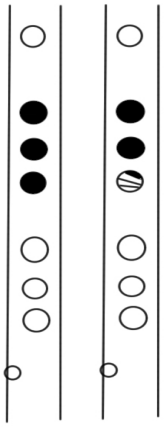


Dha is also associated with the whinnying of a horse, and the third-eye chakra that has to do with divinity. It is also associated with Shiva in a tantric sense, meaning the unmanifested form of Shiva also thought of as pure consciousness. In a Western sense, it may be similar to the concept of "Christ Consciousness."

The komal *dha* is written in lower case "d" and the shuddha *Dha* uses the uppercase "D." A dot below indicates the lower register. Written normally, *Dha* indicates the middle register. There may be a few people who can find a false fingering to play the high version of this note on the flute, but it is typically considered out of range.

The last swara, *Ni*, is named for Nishadam, which is said to mean "purity" according to one of my teachers, but I have been unable to find any additional verification of this. This swara is associated with the trumpeting of the elephant, and with the crown chakra. The crown chakra is often considered to be our interface between the material world and the divine. It is located at the top of the head, although some people consider it to be slightly above the head. It is also associated with the energy (deity) of Surya, which is the aspect of the sun said to inspire us to make positive changes in our lives. There are numerous aspects of the sun, in the practice of Hatha Yoga, that are recognized in the familiar "sun salutations" - a flow of physical yoga movements, each of which is dedicated to a certain aspect of the sun. These are typically done each morning to welcome the sun.

<u>ni</u> **Ni**



Ni can be played in several lower variations, as a natural variation, and as a slightly raised variation. There are times, when *Ma* and *Pa* are absent from or not important notes in the raga, that *Ni* is used in the drone.

The natural (shuddha) *Ni* is written with the upper case "N" and is the higher version, using the half-holing. Using the dot, indicates the lower register. The komal *ni*, with the entire hole covered, is written "n," with the dot below indicating the low register.

<u>Raga</u>

As you can see, each swara has its particular attributes and spiritual properties. That is why ragas are considered to be collections of swaras, rather than scalar or modal units. Also, ragas are not always "balanced" and often have different sets of notes for ascending passages and different sets of notes descending. While this concept is known in the Western melodic minor scale, it is rare to find it in other Western scales.

One of the most controversial and highly debated subjects in all of Indian music is the idea of ragas that apply to specific times of day, occasions, or seasons. In the modern era, when most concerts are performed in the evening, people tend to play any of the ragas, as there would be limited variety if only evening ragas could be performed. Many artists do not believe in the legitimacy of the theory. This idea was much more influential in North Indian music than in the Carnatic music of southern India. However, on the flip side, there are many stories about great musicians who have created rain by playing monsoon ragas during a drought, or musicians who could play a night raga during the morning and bring about eerie changes in the quality of light. There are also stories of people who have died while playing the wrong raga at the wrong time.

Some of the legitimacy of the time-of-day theory comes from the healing practices of Ayurveda, as well as from the sound yoga practice of Nada Yoga. Ayurvedic medicine believes that different aspects of the body, or elements, and particular organs become activated at different times of the day. The ragas are said to accompany the energies of these organs and aspects as they change during the day.

Nada is the Sanskrit word for vibration. It is believed, in this practice of yoga, that all things are vibration, and, therefore, all things can be heard. Nada yogis meditate by listening to the sounds of the energy they are contemplating. As mentioned above, there are both struck or external (*aharta*) sounds and unstruck (*anaharta*) sounds. It is believed that certain unstruck vibrations become more active at different times of the day. It is believed that the nadas related to the primordial sound of Aum, for instance, are most prevalent between midnight and 3:00 a.m. That is why nada yogis tend to meditate during this time. My own experience is that the "cosmic hiss" described above is definitely most audible during these hours. It is said that ragas created by nada yogis bring these unstruck sounds into "manifest" sound, trying to recreate and share with others the energies they experience by listening internally.

Given these two arguments in favor of the time-of-day theory, there are some very rough commonalities between the ragas of certain times of day:

> Ragas played between midnight and 3:00 a.m. tend to emphasize *Ga* and *Ni*, often lowered or flattened.
>
> Ragas played between 3:00 a.m. and 6:00 a.m. tend to emphasize *Re* and *Dha*, often both lowered or flattened.
>
> Ragas played between 6:00 a.m. and 9:00 a.m. tend to emphasize *Re*, *Ga*, and *Dha*, often with a lowered or flattened *Ga*. Also, morning ragas tend to have the most important note (the *vadi*) located in the upper portion of the raga.
>
> Ragas played between 9:00 a.m. and noon tend to emphasize *Ga* and *Ni*.
>
> Ragas played between noon and 3:00 p.m. also emphasize *Ga* and *Ni*.
>
> Ragas played between 3:00 p.m. and 6:00 p.m. tend to emphasize *Re* and *Dha*.
>
> Ragas played between 6:00 p.m. and 9:00 p.m. tend to emphasize *Re*, *Ga*, and *Dha*. Also, ragas played in the evening tend to have their most important note (the *vadi*) located in the lower portion of the raga.
>
> Ragas played between 9:00 p.m. and midnight tend to emphasize *Ga* and *Ni*.

Again, these are extremely broad generalizations. Yoga is considered to be a science by those who practice it. It is considered a science, because the results of particular practices almost always yield expected results. It is said that many ragas were derived by divine insight, and that the practitioners then saw, over a span of hundreds and thousands of years, the effect that different ragas had upon themselves and upon others. Given this philosophical paradigm, it is easy to see why the above "rules" that may appeal to the Western mind would have little bearing on the mindset of the yogi. Interestingly, there are ragas that are effective at given times that completely contradict all of the generalizations given above.

The other aspect of raga is the effect on the mood. Ragas can either create mood in the listener and player, or the raga can be used to express the already existing mood. There are nine principal moods, or *nava rasa*, that play a role not just in Indian music, but in all the expressive and healing arts:

Shringar - Love; Hasya - Comic; Karuna - Sadness; Rauda - Furious; Veera - Heroic; Bhayanak - Terrible;

Vibhats - Disgust; Abdhuta - Wonderment; Shanta - Peace

<u>Yoga of the Bansuri</u>

In addition to the swaras and the ragas, the bansuri has several other wonderful, yogic qualities. The word is derived from the Sanskrit words for bamboo and for sound. The flute is straight, and one of the major, physical goals of many varieties of yoga is the emphasis on and importance of a straight spine. Even in Nada Yoga, which is the mother of Swara Yoga, there is much emphasis on sitting with crossed legs and a straight spine whether playing an instrument, singing, or listening to external, internal, or interior sounds. In addition to the straightness of the spine, the bansuri, traditionally, has seven holes: six playing holes and the hole for blowing, all of which represent the seven chakras. In fact, more practically, the bansuri was likely designed this way to play the seven swaras to the chakras for the purpose of sound healing, rather than the other way around.

The bansuri is also associated with the avatar Krishna. He is often depicted playing the flute. The stories are that Krishna used the flute to call

the *gopis* or cow-milking girls, who really represent the enlightened souls. It is said that the sound of Krishna's flute can call forth the enlightened soul that exists within every person. It is also said, by nada yogis, that the sound of the flute can be heard when meditating on the second, or sacral, chakra, and that this unstruck sound can bring about powerful healing and aid in a process of manifesting energy known as *kundalini*.

Unlike much of our Western music, which seems largely to be used for purposes of entertainment, ancient music of the indigenous people of the world was developed for the purposes of healing, magic, and other esoteric purposes. The music of India is some of the richest and most ancient in the world. The swaras and ragas create a framework in which the player is absorbed and then improvises, drawing on meditation, mood, and energy manipulation. It is thought that music served the sole purpose of healing and ceremonial magic, until India was invaded by the Mughals in the early 16th century. It was only after that that music was introduced to the courts and used for entertainment. But, much of the rich, healing art and yoga of music remains.

This article is only the tip of the iceberg of an amazing and vast system of music in the Asian subcontinent. Studying the music of India not only changed the way I look at music, but the way I look at the world.

Richard Ball is a Special Education teacher, musician, artist, and a practitioner of Raja and Nada Yoga, living in the mountains of Colorado. He plays with many bands in the area, gives solo performances, and has numerous solo and ensemble recordings to his name. He also teaches sound yoga and hosts sound healing and Sanskrit chanting events. More information about Richard, including the ability to listen to his albums, can be found on his Web site: **www.BallFlutes.com**.