

ACOUSTICS DECIBEL OF DIVINE WORLD BREAKS THE SLUMBER OF EVIL SPIRIT

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ABSTRACT

Music is the art of arranging and combining sounds in order to create a harmonious melody while noise is an unwanted sound that is usually very loud and meaningless. Spirituality involves exploring certain universal themes – love, compassion, altruism, life after death, wisdom and truth, with the knowledge that some people such as saints or enlightened individuals have achieved and manifested higher levels of development than the ordinary person. Keeping a shankh or conch shell in the house helps get rid of Vastu dosha and bring good luck and prosperity. A shankh is considered auspicious and its sound invites peace, prosperity and luck at home. Shankh or shankham in Sanskrit, stands for shum, meaning something good, and kham, meaning water. Ulu-dhwani is the Bengali custom of ululating. While most believe it is done to ward off evil spirits, it is also done as a signal for the beginning/end of important occasions and events. ulu dhvani is usually accompanied by the blowing of the conch shell.

KEYWORDS: Decibel, Sound, Harmony, Shankha, Uvula, Ear drum, Divine, Shankha, Ulu.

OVERVIEW

The sounds can be either pleasant or unpleasant. Such an unpleasant and unwanted sound is known as noise. These sounds are irregular and non-periodic. Whereas, sounds which are pleasant to our ears are known as melodious sound. One of the reasons why Bengali is regarded as the sweetest language in the world is because of its simplicity. It is very easy to speak and comprehend. The words and tonality are known to be absent of harshness and roughness. Additionally, Bengali also has simplified consonant and vowel sounds. India is a land of cultures and traditions, and every religion has its own set of rituals for different occasions. The diversity makes it even more beautiful with so many wedding customs that

are followed by people from different castes and cultures. Indian weddings always bowl us over with the cultural and traditional richness and they make it a surreal experience for the bride and groom. Like all other regional weddings, Bengali weddings are also an amalgamation of customs and rituals, which are rich in spiritual significance. Be it the *aiburobhat*, *dodhi mangal*, *nandi mukh*, *gaye holud*, *shankha paula*, *bor boron*, *saat paak*, *subho drishti*, *sampradan*, *saptapadi* or the *sindoor daan*, the Bengali weddings have several customs, which have their own significances. One tradition that the Bengalis consider very auspicious is a resonating sound which is also known as the **Ululudhvani**.

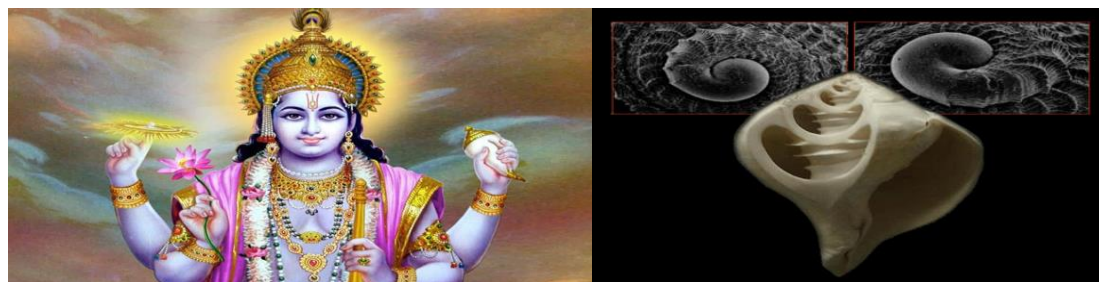


Figure-1: Deity & Divine.

Shankha dhvani: When air is blown through this hole, it travels through the whorls of the shankha, producing a loud, sharp, shrill sound. This sound is the reason the shankha was used as a war trumpet, to summon helpers and friends. Shankha continued to be used in battles for a long time. The sound it produced was called shankanad. A Shankha (conch shell) has religious ritual importance in Hinduism. It is the shell of any suitable sea snail which had a hole made for the performer's embouchure. At 500 Hz frequency shankha S1 and S3 have higher amplitude response than other shankha. At 1 KHz, shankha S1, S3, and S5 have higher amplitude as compared to original signal and rest of the shankha have low amplitude than original signal. Played by a musician, it had tones close to C, C sharp and D. And it boomed at a resounding 100 decibels a metre from the conch. The decibel (symbol: dB) is a relative unit of measurement equal to one tenth of a bel (B). It expresses the ratio of two values of a power or root-power quantity on a logarithmic scale. Two signals whose levels differ by one decibel have a power ratio of 101/10 (approximately 1.26) or root-power ratio of 101/20 (approximately 1.12)

In Hindu history, the shankha is a sacred emblem of The Hindu preserver god Vishnu. It is still used as a trumpet in Hindu ritual, and in the past was used as a war trumpet. The shankha is praised in Hindu scriptures as a giver of fame, longevity and prosperity, the cleanser of sin and the abode of goddess Lakshmi, who is the goddess of prosperity and consort of Vishnu. The shankha is displayed in Hindu art in association with Vishnu. As a symbol of water, it is associated with female fertility and serpents (Nāgas). The shankha (representing the conch of the presiding deity of Padmanabhaswamy Temple is a part of the state emblem of the Indian state of Kerala. The symbol was derived from the erstwhile emblems of the Indian princely state of Travancore, and the Kingdom of Cochin. The shankha is one of the eight auspicious symbols of Buddhism, the

Ashtamangala, and represents the pervasive sound of Buddhism. A powder made from the shell material is used in ayurveda as a treatment for stomach ailments.

In the Western world, in the English language, the shell of this species is known as the "divine conch" or the "sacred chank". It may also be simply called a "chank" or conch. The more common form of this shell is known as "right-turning" in a religious context, although scientists would call it "dextral". A very rarely encountered form has reverse coiling which is called "left-turning" in a religious context, but is known as "sinistral" or left-coiling in a scientific context. This shell is from a sea snail species *Turbinella pyrum* in the family Turbinellidae. This species is found living in the Indian Ocean and surrounding seas. The shell is porcelaneous (i.e. the surface of the shell is strong, hard, shiny, and somewhat translucent, like porcelain). The bouncing air inside a conch shell produces a unique sound which sounds just like the ocean. Keeping a shankh or conch shell in the house helps get rid of Vastu dosha and bring good luck and prosperity. A shankh is considered auspicious and its sound invites peace, prosperity and luck at home. Shankh or shankham in Sanskrit, stands for shum, meaning something good, and kham, meaning water.

Turbinella pyrum, common names the chank shell, sacred chank or chank, also known as the divine conch, sometimes referred to simply as a conch, is a species of very large sea snail with a gill and an operculum, a marine gastropod mollusk in the family Turbinellidae. This species occurs in the Indian Ocean. The overall shape of the main body of the shell is oblong or conical. In the oblong form, it has a protuberance in the middle, but tapers at each end.



Figure-2: Shankha & Panchajanya Sankha.

The upper portion (the siphonal canal) is corkscrew-shaped, while the lower end (the spire) is twisted and tapering. Its colour is dull, and the surface is hard, brittle and translucent. Like all snail shells, the interior is hollow. The inner surfaces of the shell are very shiny, but the outer surface exhibits high tuberculation. In

Hinduism, the shiny, white, soft shankha with pointed ends and heavy is the most sought after. The name "chank" for the shell of this species is derived from the Indian word shankha, the divine conch. The old generic name was Xancus. The Dutch used to call them chianco.



Figure-3: Shankha blowing.

Taxonomy:

Kingdom: Animalia
 Phylum: Mollusca
 Class: Gastropoda
 Subclass: Caenogastropoda
 Order: Neogastropoda
 Family: Turbinellidae
 Genus: Turbinella
 Species: *Turbinella pyrum*

The overall shape of the main body of the shell is oblong or conical. In the oblong form, it has a protuberance in

the middle, but tapers at each end. The upper portion (the siphonal canal) is corkscrew-shaped, while the lower end (the spire) is twisted and tapering. Its colour is dull, and the surface is hard, brittle and translucent. Like all snail shells, the interior is hollow. The inner surfaces of the shell are very shiny, but the outer surface exhibits high tuberculation. In Hinduism, the shiny, white, soft shankha with pointed ends and heavy is the most sought after. It is made up from the shell of a large predatory sea snail particularly found in the Indian Ocean. Air is blown with very high pressure through the outer hole and passes through a tiny hole inside the Shankh.

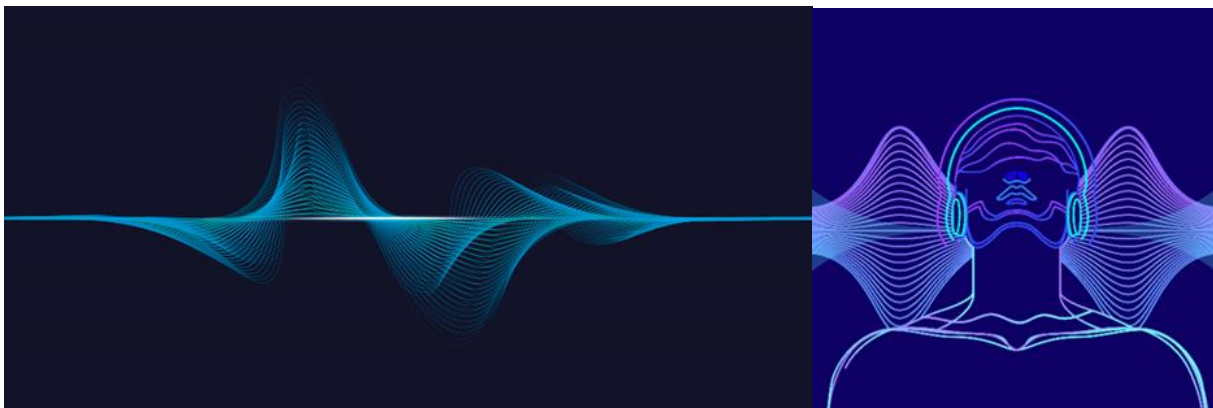


Figure-4: Melody & Harmony.

The sound of the shankha symbolises the sacred Om sound. Vishnu holding the conch represents him as the god of sound. Brahma Vaivarta Purana declares that shankha is the residence of both Lakshmi and Vishnu, bathing by the waters led through a shankha is considered like bathing with all holy waters at once. Sankha Sadma Purana declares that bathing an image of

Vishnu with cow milk is as virtuous as performing a million yajnas (fire sacrifices), and bathing Vishnu with Ganges river water frees one from the cycle of births. It further says "while the mere sight of the conch (shankha) dispels all sins as the Sun dispels the fog, why talk of its worship?" Padma Purana asserts the same effect of bathing Vishnu by Ganges water and milk and further

adds doing so avoids evil, pouring water from a shankha on one's own head before a Vishnu image is equivalent to bathing in the pious Ganges river. Krishna successfully slew Panchajanya and took the conch shell for himself. He then went to his guru Sandipani, who named the conch Panchjanya. Panchjanya is the shankha or conch of the Hindu preserver deity Vishnu, known to be one of his four divine attributes. It is stated to have been one among the various substances that emerged during the Samudra Manthana. According to the Mahabharata, Purushottama (Vishnu) killed a daitya (a member of a clan of asuras) named Panchajanya on a mountain named Chakravan constructed by Vishvakarma, and seized the conch shell in which Panchajanya had lived for himself. The conch is named after the daitya. Music is present in all cultures, and it plays a significant role in man's life. Even during prehistoric times man was known to have enjoyed music as evidenced by ancient musical instruments found in ruins of ancient civilizations. It has many genres with common elements such as pitch, rhythm, dynamics, timbre, and texture. Different voices and instruments produce varying frequency combinations of sound and music. When these frequencies become inharmonious, they produce noise instead of music. While music has a

pleasing effect on the listener, noise is unpleasant to a person because of its irregular wave form, low frequency, and sudden changes in wave length. Noise can obstruct, garble, and contradict the meaning of electronic human and animal communication. It is an unwanted sound, usually very loud, and meaningless. Only a very thin line distinguishes music from noise. With the popularity of rock music, what is considered noise by other people may be music to the ears of others. Music is the art of arranging and combining sounds in order to create a harmonious melody while noise is an unwanted sound that is usually very loud and meaningless. Music is pleasing to the ears while noise is an unpleasant sound. Noise has irregular wave form and wave length and has low frequency while music has frequencies and wave lengths that are harmonious. Noise can obstruct and confuse the spoken messages of man and animals when they are communicating with each other while music has a very soothing and pleasing effect. Noise may also be low like the conversation between two people, which is considered noise by a third person who is not involved, while music may also be loud such as in the case of heavy metal or rock music. Both noise and music when very loud can be damaging to the human ears.

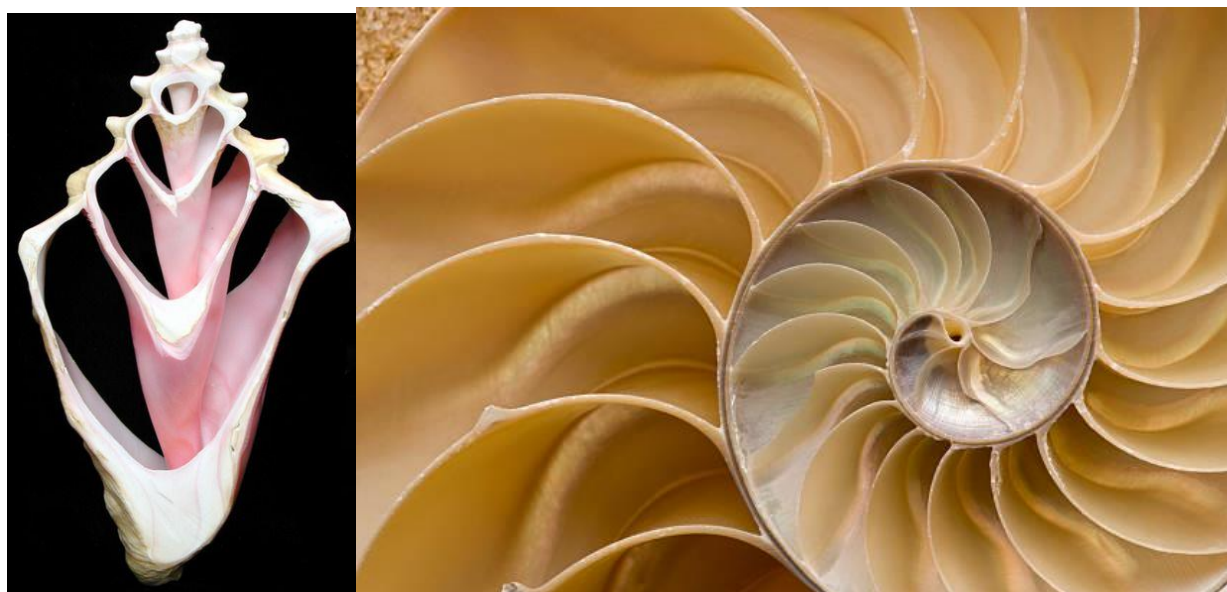


Figure-5: Cross section of Shankha.

In Buddhism, the conch shell has been incorporated as one of the eight auspicious symbols, also called Ashtamangala. The right-turning white conch shell represents the elegant, deep, melodious, interpenetrating and pervasive sound of Buddhism, which awakens disciples from the deep slumber of ignorance and urges them to accomplish their own welfare and the welfare of others. Shankha was the Royal State Emblem of Travancore and also figured on the Royal Flag of the Jaffna kingdom. It is also the election symbol of the

Indian political party Biju Janata Dal. Shankh was also used by sikh warriors before they started the war. The maryada is still practiced by all nihangs while doing aarti aarta prayer and is used in hola mohalla festival as well. Having grown up in a mainstream Indian household, the shankh or the conch shell as I know is a symbol of a beautiful natural work of art and is associated with Lord Krishna. Its sound is supposed to destroy harmful elements in the environment and bring in positive energy. Any puja is incomplete without the blowing of a

shankh or conch shell. But apart from having to do with the spiritual significance of conch blowing there are also

many health benefits. Here s why you should blow the shankh or the conch shell every single day.

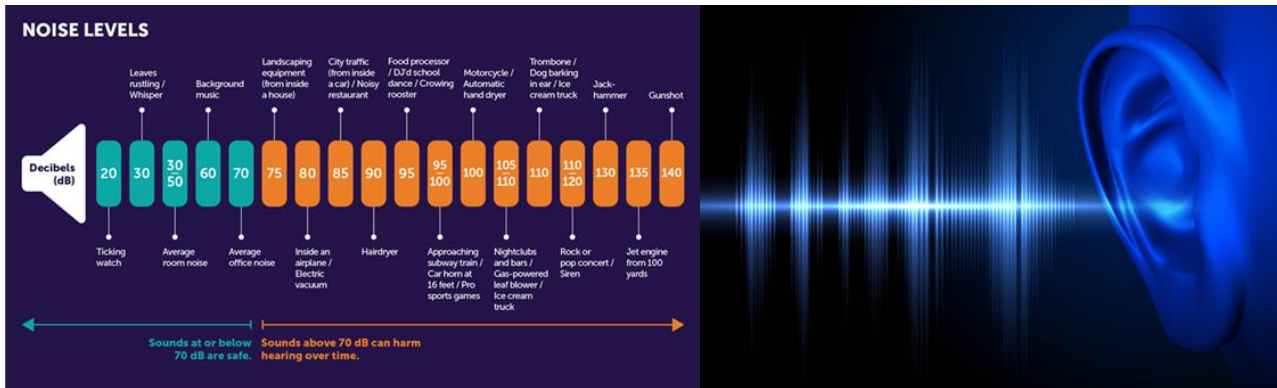


Figure-6: Sound waves with decibel count.

Benefits: Conch blowing can provide a great exercise for, urinary tract, bladder, lower abdomen, diaphragm, chest and neck muscles. You exercise the rectal muscles in the process of blowing a shankh thus strengthening the rectal muscles and preventing many problems which occur due to the gradual weakening of the rectal muscles. As it also puts pressure on the prostate area, it improves the prostate health and helps prevent prostate enlargement. When you blow the conch, your lung muscles are expanded, improving their aerial capacity. Also, perform these yoga asanas for healthy lungs. Conch blowing also exercises your thyroid glands and vocal cords and helps in correcting any speech problems. Your face muscles are stretched when you blow a conch,

so you're automatically doing away with fine lines by blowing the conch every day. The real shankha has 3 to 7 ridges or plaits on its columella, whereas whelk shells have no such plaits. The so-called "flower-bud opening test", and the "rice pulling test" (Valampuri said to rise up through a rice heap) are non scientific. The best authenticity test is to take an X-ray image of the Valampuri.

Ulu-dhwani is the Bengali custom of ululating. Bengali weddings are an amalgamation of customs and rituals, which are rich in spiritual significance. One tradition that the Bengalis consider very auspicious is a resonating sound which is also known as the Ululudhwani.



Figure-7: Uvula anatomy.

While most believe it is done to ward off evil spirits, it is also done as a signal for the beginning/end of important occasions and events. ulu dhwani is usually accompanied by the blowing of the conch shell (shankh). Grateful for Kū's sacrifice, generations of Hawaiians have regarded 'ulu as a symbol of resilience, perseverance, and security, often revering 'ulu trees as kinolau (embodiments) of Kū.

An 'ulu tree is still often planted when a child is born to ensure a lifetime of nourishment. This religious ritual Ululudhwani is followed in mostly all Bengali functions and it is believed to drive away all the negativities and bring auspiciousness. It is not pan-Indian custom but followed in Bengal, Assam and Odisha, where married women produce a sound called 'Ululu'. It is used by women to give praises at weddings and all other

celebrations. It is a general sound of good cheer and celebration, when good news has been delivered in a place of gathering, even in church. On any auspicious occasions like Durga Puja and weddings, Bongs make a distinctive hooting sound which is produced by striking both cheeks with tongue while uttering a high-pitched

howl. This religious ritual Ululudhvani is followed in mostly all Bengali functions and it is believed to drive away all the negativities and bring auspiciousness. It is not pan-Indian custom but followed in Bengal, Assam and Odisha, where married women produce a sound called 'Ululu'.



Figure-8: Uludhwani.

Ululation from Latin ululo, is a long, wavering, high-pitched vocal sound resembling a howl with a trilling quality. It is produced by emitting a high pitched loud voice accompanied with a rapid back and forth movement of the tongue and the uvula. Ululation, Ulu Dhvani, Uludhvani, Ululudhvani or Jokara (Jugaar) is a high pitched loud vocal sound accompanied with a rapid back and forth movement of the tongue and the uvula. It is used in many popular cultures around the globe. It is also a tradition in Hindu Bengali community. On any

auspicious occasions like Durga Puja and weddings, Bongs make a distinctive hooting sound which is produced by striking both cheeks with tongue while uttering a high-pitched howl. Sound is measured in decibels (dB). A whisper is about 30 dB, normal conversation is about 60 dB, and a motorcycle engine running is about 95 dB. Noise above 70 dB over a prolonged period of time may start to damage your hearing. Loud noise above 120 dB can cause immediate harm to your ears.^[1]

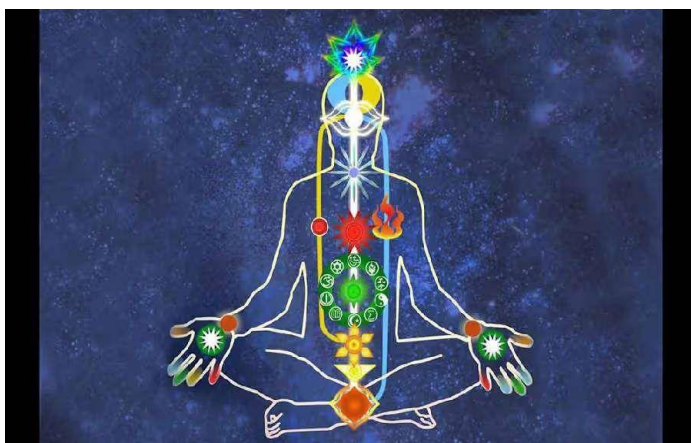


Figure-9: Sushuma Nadi & Autonomic Nervous System.

Pharmacology of acoustics when crosses the *Sushumna Nadi* it directly crosses the blood brain barrier to the cerebellum and increases the release of dopamine the catecholamine neurotransmitter and activates the sympathetic outflow and finally increases parasympathetic system to secrete the acetylcholine neurotransmitter. The shankha sound and ulu sound enters from ear and hits pre and post ganglionic system

via *Sushumna Nadi* to cerebellum to feel the divine world which breaks the slumber of evil spirit.

CONCLUSION

Hindu socio-religious ethos deeply embeds its importance of Shank. Shankh symbolizes the cosmic space of which the attribute is sabda or sound. The

resounding musical notes of sacred sankha rent the air when it is blown during the religious ceremonies, and thus the devotee's emotions get expressed. In religious rituals, Shankh is used to announce the beginning of a prayer or arrival of a deity, and in some places, sacred water is collected and distributed in it. This is one art that is mastered by all Bengali women. A Bengali wedding is incomplete without the overwhelming sound of Ululudhvani and conch shells and it definitely gives everyone goosebumps. Written musical notation was the first mark of a literate society. During the time of prehistoric music, people had a tendency to primarily convey their music and ideas through oral means. However, with the rise of social classes, many European and Asian societies regarded literacy as superior to illiteracy, which caused people to begin writing down their musical notations. This made music evolve from simply hearing music and transmitting it orally, to keeping records and personal interpretations of musical themes.

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