

A comparative study of frequencies of a Buddhist mantra – Om Mani Padme Hum and a Hindu mantra - Om Namah Shivaya

Contzen Pereira¹

¹ Independent Scholar, Nandadeep, 302, Tarun Bharat Soc,

Chakala, Andheri (East), Mumbai – 400099, India

Abstract

Chanting of a mantra is the perfect way of awakening the consciousness within and can demonstrate a therapeutic effect on the body. This study is a comparison of frequencies of two well-known mantras – *Om Mani Padme Hum*; a Tibetan Buddhist mantra and *Om Namah Shivaya*; a Hindu mantra. The reason for comparing these two mantras is based on the history behind the origination of the *Om Mani Padme Hum* Tibetan mantra, which is said to have originated from the *Karandavyuha* Sutra that has close affinities to non-Buddhist literature and therefore the six syllable mantra is said to have been conceptualized from the five syllable mantra “*Om Namah Shivaya*”. A strong similarity has been observed in the frequency patterns of the two mantras which provide substantial evidence of the *Om Mani Padme Hum* mantra being a derivative of the *Om Namah Shivaya* mantra. This evidence can be upheld by the ability of both these mantras to generate positive energies within the body when chanted repeatedly.

Key Words

Frequencies, Chanting, Healing, Resonance, Syllable, Meditation

1. Introduction

Om Namah Shivaya is a five syllable mantra that is associated with the qualities of grace, truthfulness and love. It is also called as the Panchakshara or Panchakshari mantra and is a holy salutation to Shiva [1]. On the other hand, the most important mantra for the Tibetan Buddhists associated with the bodhisattva – *Avalokitesvara* is the six syllable

mantra *Om Mani Padme Hum*. His Holiness, The 14th Dalai Lama of Tibet says, the six syllable chant *Om Mani Padme Hum* is great but you need to think of each syllable when you chant it. The OM is an indivisible union of method and wisdom that can transform your impure body, speech, and mind into the pure exalted body, speech, and mind of a Buddha. MANI, the jewel, symbolizes factors of method, compassion and love, the altruistic intention to become enlightened. PADME means lotus and symbolizes wisdom. Growing out of mud, but not being stained by mud, lotus indicates the quality of wisdom, which keeps you out of contradiction. The last syllable, Hum, means inseparability; symbolizing purity and can be achieved by the unity of method and wisdom [2].

In a study conducted by Dr Alexander Studholme, this sutra marks the beginning of theism in Buddhism. *Avalokitesvara* is regarded as a ‘creator lord’ with worlds found in the pores of his skin. The *Karandavyuha* Sutra is a text that is filled with techniques for folding theistic concepts. The Buddhist Mahayana definitely took on influences from the Shiva devotees at the time where there was a lot of interaction between the Buddhist and Hindus during the writing of these sutras and therefore there is a lot of similarity in the texts. The sutras of the Pali era were more dedicated to the representation and working of the mind which is when devotion and mysticism was more popular. The Mahayana sutras were more directed to attain a transcendental experience and therefore very powerful. Studholme claims that the *Om Mani Padme Hum* mantra is said to have originated from one of the Mahayana sutra i.e. *Karandavyuha* Sutra which apparently contains the manifestations and works of *Avalokitesvara*. Since this sutra has close affinities to non-Buddhist literature, the six syllable mantra is said to have been conceptualized or

evolved from ‘Siva’s’ or ‘Shiva’s’ five syllable mantra “*Om Namah Shivaya*” [3].

From the electrons spinning around the nucleus of an atom, to the planets spinning around suns in the galaxy, everything is in movement. Everything is a vibration; a frequency. Mystics of the past and present have known that the whole universe is vibrating with energy and this energy vibrates at various frequencies. Rocks, emotions, people and even planets differ from each other, and everything else, because of their unique vibrational frequency. Tuning the body to these frequencies can bring a phenomenal change in personality and this can be achieved by the frequencies generated from chants or mantras. Meditation and healing practices that induce vibrations have provided us the secrets of resonance, which can induce several conformational changes in the patterns of consciousness. A living system may have many resonant frequencies due to their degrees of freedom, where each can vibrate as a harmonic oscillator supporting the progression of vibrations as waves that moves as a ripple within the whole system [4].

In a recent study, the frequencies of the *Om Mani Padme Hum* chant were measured for each of the six syllables, where the frequencies within each of these syllables can possibly create a resonance effect, as a result of formation of constructive interference patterns between the frequencies of each syllable which maybe the reason this chant exhibits a therapeutic/ healing effect on the body and its functions [5]. Chanting the *Om Mani Padme Hum* mantra can actuate the frequencies associated with each syllable, to resonate at frequencies known to bring a change at a physical and biological level. Some of the frequencies measured in the study have been be used during several healing practices [5]. This mantra has also shown enhanced cognitive effects in organisms without auditory apparatus where the interaction is assumed to be taking place at a cellular and biochemical level [6,7,8,9] which confirms the therapeutic effect of the frequencies associated with this chant at a cellular level.

This study evaluates the frequencies for both chants which seem to be correlated and therefore it is hypothecated that if their origins are from the

similar source then there is a possibility of similarity in the frequencies and frequency patterns between these chants. Comparing the frequency patterns for these chants would help decipher the mystical and healing properties associated with these mantras and why they have been widely used for such purposes.

2. Materials and Methods

The chanting of the Tibetan meditational chant *Om Mani Padme Hum* was inspired from the soundtrack “*Om Mani Padme Hum*” by Tibetan Incantations (Nascente) while chanting of *Om Namah Shivaya* was inspired from the soundtrack “*Aum Namha Shivaya*” by Sounds of Isha (Vairagya-Bonding with Beyond). The chants were recorded during a regular chanting exercise using an in-built voice recorder in the Lenovo Ideatab A1000-G tablet equipped with a 1.2GHz dual-core Cortex A-9 processor (MediaTek 8317), 4GB RAM and an Android 4.1 Jelly Bean operating software. The chanting was performed in a semi-sound proof room, with more importance to the intonations of each syllable, such that the frequencies associated while reciting each syllable was crisp and clear. The recordings were saved as .mp3 files with a bit rate of 128 kbps to be processed later. An overall frequency analyses for these .mp3 files were done using the WavePad NCH software Version 6.18, which uses a FFT analytical tool to determine the actual frequency recordings of the soundtrack. These .mp3 files was further snipped using the Audacity version 2.1.2 software, where the soundtrack was split into six syllables for the tibetian chant and five syllables for the Hindu chant using an online audio splitter software – Song Cutter by Mediafox Marketing. Each of the .mp3 files were replicated and joined using the Helium Audio Joiner by Imploded Software, to make a lengthier soundtrack i.e. approximately 5 mins each for every syllable for better analysis.

The analysis for each soundtrack was carried out in a semi-sound proof environment, where the generated .mp3 files for each syllable was played on an I-ball Tarang 2.1 music system with one sub-woofer (20 watts RMS max) and two satellite speakers (10 watts RMS max each) with a total output of 40 watts RMS max and frequency ranges

for – woofer as 20Hz -200Hz and satellites as 100Hz-20kHz at a decibel output range of 75 – 80 db. The frequencies for each syllable were analysed on three android based applications – Spectrum Analyzer by Raspberrywood Version 5.0.3, Spectrum Analyzer by Keuwlsoft Version 1.3 and Sound Analyzer by Tinia Soft Version 1.02 using a Lenovo Ideatab A1000-G tablet with a 1.2GHz dual-core Cortex A-9 processor (MediaTek 8317), a 4GB RAM with an Android 4.1 Jelly Bean operating software. The frequencies for each syllable were analysed by the android applications with an FFT analytical tool of Hz against the decibel output value. By comparing the frequencies recorded for each syllable by all three applications, a final set of frequencies for each syllable was confirmed. Besides, the high decibel frequencies considered for the study, there were several other background frequencies which were observed, but since they were at very low decibel ranges, they were not considered as part of the final set of frequencies. The comparative results for each of the android applications for the *Om Mani Padme Hum* mantra is provided in Figure 1 and the final set of frequencies confirmed for each syllable is provided in Figure 3. Similarly, the comparative results for each of the android applications for the *Om Namah Shivaya* mantra are provided in Figure 2 and the final set of frequencies is provided in Figure 3.

Sound Analyzer - Tinia Soft						Spectrum Analyzer - Raspberrywood					
OM	MA	NI	PAD	ME	HUM	OM	MA	NI	PAD	ME	HUM
108.3						110.56					
126.3	129	118.4	130.3	125	125.5	128	126.7	116.2	127.5	129.3	126.5
154						156.3					
279.3	265.3	280	277.4	269.8	270.1	265.2	265	272.1	267.3	279	272
356.4		366.3		350	363	345.2		350		350	363.3
				486	489.3					483.4	485
	512.9	510.4	518.7	512			508.7	512	528.7	512	
	626.7						630.9				
	832.1						824.2				

Spectrum Analyzer - Keuwlsoft					
OM	MA	NI	PAD	ME	HUM
100.56					
123.4	120	123	125	129.3	122.1
152.1					
256.3	260.3	267.5	257	269.1	252.4
342		346.8		350.4	363.3
				473.4	475
	498.4	500.1	518.7	512	
	627.3				
	820				

Figure 1. Comparative results for each of the android applications for *Om Mani Padme Hum* mantra

Sound Analyzer - Tinia Soft						Spectrum Analyzer - Raspberrywood					
OM	MA	NI	PAD	ME	HUM	OM	MA	NI	PAD	ME	HUM
108.3						110.56					
126.3	129	118.4	130.3	125	125.5	128	126.7	116.2	127.5	129.3	126.5
154						156.3					
279.3	265.3	280	277.4	269.8	270.1	265.2	265	272.1	267.3	279	272
356.4		366.3		350	363	345.2		350		350	363.3
				486	489.3					483.4	485
	512.9	510.4	518.7	512			508.7	512	528.7	512	
	626.7						630.9				
	832.1						824.2				

Spectrum Analyzer - Keuwlsoft					
OM	MA	NI	PAD	ME	HUM
100.56					
123.4	120	123	125	129.3	122.1
152.1					
256.3	260.3	267.5	257	269.1	252.4
342		346.8		350.4	363.3
				473.4	475
	498.4	500.1	518.7	512	
	627.3				
	820				

Figure 2. Comparative results for each of the android applications for *Om Namah Shivaya* mantra

FINAL GROUPING					FINAL GROUPING					
OM	NA	MA	SHIVA	YAH	OM	MA	NI	PAD	ME	HUM
99.3					106.47					
	127.6		128.7		125.9	125.2	119.2	127.6	127.9	124.7
140.6		135.3		138.2	154.13					
	229.2		236.2		266.93	263.5	273.2	267.2	272.6	264.8
256.3		257.833	256.7	256.6	347.87		354.4		350.1	363.2
386.8	374.6	383.5	381.2	380.5					480.9	483.1
516.4	525			520.9		506.7	507.5	522	512	
		643.767	644	642.5		628.3				
			820.7			825.4				

Figure 3. Final set of frequencies confirmed for each syllable of both mantras - *Om Mani Padme Hum* and *Om Namah Shivaya*

3. Results and Discussion

Comparison of frequencies between the two chants - *Om Mani Padme Hum* and *Om Namah Shivaya*

The syllable OM is common for both these chants but based on its pronunciation while chanting, the frequencies that emerge are different for each of them. Lower frequencies such as 99.3 Hz, 106.47Hz and 126 Hz are part of the frequencies of the gamma waves recorded in the brain and therefore can stimulate gamma brainwave entrainment. Brain wave entrainment, sometimes referred to as binaural beat is a popular way of inducing desired mental states and accessing our untapped potential. Binaural beats are aural tones played at different frequencies in each ear [10]. Chanting the OM in these mantras has a direct impact with the gamma wave patterns of the brain which have showed increased mental activity/cognitive enhancement, freedom from

distractibility, high levels of info-processing, learning and focus, high short-term memory ability and migraine prevention. EEG recordings of skilled Buddhist monks with years of training have shown a significant rise in gamma wave activity in the 80 – 120 Hz range while this effect was lower in new meditators. For these Buddhist monks, the purpose of meditation is to free oneself from suffering and gain spiritual liberation which is the same reason for meditative practice in other religions [11].

Buddhist teachings claim that by chanting the OM syllable, an impure body, speech and mind can be transformed into pure ones of a Buddha, who was once impure and later by removing negative attributes, achieved enlightenment on his path [2]. Based on the comparison of frequencies for both the chants and their syllables, there is a resilient similarity in the frequency patterns for each of the syllables and therefore there seems to be some commonality in the experience and healing capability of these chants. 126 Hz was the most common frequency for all the syllables in both chants. 126Hz is also part of the gamma wave frequency patterns in the brain and therefore when induced can enhance the gamma wave activity in the brain. The *Mahayana* sutras mark the beginning of theism in Buddhism and are known to provide teachings related to attaining transcendental experience which is why the chants provided in these sutras can bring about a transformation when regularly chanted. The frequencies associated with these chants and their syllables are the most important as there is a direct effect of these frequencies on the brain. The final grouping and comparison of the frequencies for the syllables of the two mantras have shown some common frequencies which have apparently been used by healers and meditators to bring a significant change in the lives of individuals.

Ancient Egyptians used Solfeggio scale for healing and altering consciousness in large sound chambers where they would play frequencies at 528 Hz throughout the chambers to generate specific effects on individuals [12] which is also a frequency found in both mantras and in most of the syllables (Figure 3). This frequency is also known to increase energy, clarity of mind, awareness, awakened or activated creativity, ecstatic states like deep inner peace, dance and celebration and

activate one's imagination, intention and intuition [13,14]. 800 - 825 Hz range of frequencies is linked to the ability to see through the illusions of one's life and has been used in healing techniques to open up a person for communication with the awareness of the spiritual order. For cellular processes, this frequency is known to support the cell to transform itself into a system of higher level [14,15]. 639 Hz frequency has been used by healers and meditators on individuals to enhance communication, understanding, tolerance and love. Healers call this frequency as Relationship Harmonization where they claim that the frequency results in complete healing radiant light that descends upon the listener filling the personal mind with the influences of balance, health and tranquillity [14] which is also common in some of the syllable of both chants (Figure 3).

Studholme claims that the *Om Mani Padme Hum* mantra is said to have originated from one of the *Mahayana* sutra i.e. *Karandavyuha* Sutra which apparently contains the manifestations and works of *Avalokitesvara*. Since this sutra has close affinities to non-Buddhist literature, the six syllable mantra is said to have been conceptualized or evolved from 'Siva's' or 'Shiva's' five syllable mantra "*Om Namah Shivaya*" [3]. Based on the results of this study it can be confirmed that the *Om Mani Padme Hum* mantra is surely conceptualized from the *Om Namah Shivaya* mantra, as the frequencies for each of these syllables of these mantra's are similar with slight variations. The aim for chanting such mantras have supported the concept of transcendental experiences and therefore may have been used as a common platform across religions to achieve these experiences, but since Buddhism is different from Hinduism there may have been a need to change the mantra a bit which resulted in a new mantra like *Om Mani Padme Hum*. The *Om Namah Shivaya* mantra has been widely used in Hindu rituals and meditative practices and with the origination of Buddhism may have given rise to the *Om Mani Padme Hum* mantra for Buddhist teachings and meditative practices.

4. Conclusion

Frequencies are perceived as vibrations by means of the phenomenon of resonance and therefore play

a major effect on the body and its vibrations. This study confirms that the frequencies associated with both chants - *Om Mani Padme Hum* and *Om Namah Shivaya* are comparable based on their frequency patterns and therefore the origin of the *Om Mani Padme Hum* chant from the source - *Karandavyuha* Sutra as suggested by Studholme can be justified. Mystics have known the importance of these chants from a long time, but what was not known was that the power of these chants lies in the frequencies that make up this mantra, which have been revealed in this study. Tuning the body to these frequencies can bring a phenomenal change in personality, which has been demonstrated by healers and mediators in the holistic and religious world. His Holiness The 14th Dalai Lama states that just by chanting the *Om Mani Padme Hum* mantra would not help, but chanting each syllable with precision of note and frequency would definitely show a meaningful effect.

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