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## THE RELATIONSHIP BETWEEN DEVOTIONAL SANGEETHAM OF SWAMI TYAGAYA, BRAIN-MIND DYNAMICS AND GOD SPOT

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### Abstract

The rationale is that Saint Tyagaya's devotional *Sangeetham* creates brain activity to contemplate on God and therefore God becomes neurologically real. This form of spiritual development and contemplative singing exercise could strengthen neurological circuits and manipulate a devotee's emotion to produce love, empathy, compassion, benevolence and tolerance. The research is a validation of the psychometric assessment extending from Swami Tyagaya, devotional *Sangeetham*, God, neuro-psychology and spirituality. The methodology shows the development of a questionnaire survey with a grand total of Eighty two questions to measure five different types of subjects. The Questionnaire addresses the society's knowledge, belief, devotion, attitudes and educational progress over the five subjects. The compilation of questionnaire was distributed to the Indian community in Malaysia. Four hundred and ten volunteers responded to tell their experiential views of *Sangeetham*, Swami Tyagaya, brain, devotion, God and spirituality. The Questionnaire data were analyzed using Pearson product-moment correlation coefficient. The result showed that there are strong positive correlation between *Sangeetham*, devotional reliance, God, brain Swami Tyagaya and spiritualism. These results conclusively indicate that Swami Tyagaya's devotional *Sangeetham* strongly influences the spiritual experience of the Indian devotees in Malaysia.

Keywords: Swami Tyagaya, neuropsychology, God, brain, devotional music

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## Introduction

*Sangeetham* is believed by the Indians as a divine art and is venerated as Nada Brahmam. The Samaveda is thought have laid the foundation for *Sangeetham* and are sung as Vedic hymns in prayers. *Sangeetham* is based on the concept of svara, raga and tala. The devotional references of *Sangeetham* are made in many ancient literatures like *Silappadhikaram*, *Ramayanam* and *Mahabharatam*. The very famous *sangeethakaras* are Swami Tyagaraja, Purandara Dasa, Annamacharia, Muthusami Dikshitar, SyamaSastri, Maanikavasagar, Pattinathar and many others.

The argument of Swami Tyagaya composed in his *kriti*, “*Nada tanumanism Sankaram*” says, “I bow to Lord Sankara, the embodiment of music with my mind and body”. Music is the essence of *Samaveda* which is *Sa-Ri-Ga-Ma-Pa-Dha-Ni-Sa*. I bow to Lord Sankara the protector of Tyagaya” (Ramanujachari, 1958)<sup>1</sup>.

Swami Tyagaya relates in his *kriti* “*Nanu Palimpa*” about his devotion to Lord Rama, “Have you come walking all the way to bless me. You are the secret longing of my mind, you are my vision and the purpose of my life. O Rama! You are the Lord of my mind” (Ramanujachari, 1958)<sup>1</sup>. *Sangeetham* in the Indian devotional tradition is the involvement of singing with meditational devotion. The *kriti* (song) is believed to reflect the experience of the devotee in scaling the heights of bakthi (devotion) towards his God. It is an invocatory song of bakthi which is the realization of union with the essential nature of the “Divine God” contemplated in the brain. Swami Tyagaya conveyed his dedication to Lord Rama through his *kritis* and his righteous life (Sambamurthy, 2001)<sup>2</sup>.

Swami Tyagaya had the ability to understand the subtle perception of God, (Lord Rama). The creation of music is a product of intelligence and the devotion elevates the emotional mind from the physical level to a metaphysical state. When such an emotional state happens, the devotional singer’s sense of self begins to dissolve and the singer feel unified with the devoted object of contemplation (God). The neuro-chemical activities stimulate a creative motor- sensory system to motivate spirituality. The brain cortical centres produce divine emotions, perception, imagination, thought and memory (Roth, 2004)<sup>3</sup>.

Swami Tyagaya speaks about his mind in the *kriti*, “*manasuloni marmamu telusuko*” thus, “O mind get to know my desire that I need my Lord’s blessing and his compassion” (Ramanujachari, 1958)<sup>1</sup>. Tyagaya appeals to his mind to understand his divine emotion through the dynamics of devotional music. *Sangeetham* is a cultural and devotional phenomenon. *Sangeetham* intensifies emotions. Emotion is a brain entity (Levitin, 2006)<sup>4</sup>. The brain generates a mindful spiritual state which conveys psychological interpretation. Musical sounds are processed in the brain in the neocortex which includes a devotional experience. (Patel, 2008)<sup>5</sup>. The brain creates a personal relationship to the divine spirit (Newberg, 2009)<sup>6</sup>. The

mind of Swami Tyagaya was charged with reverence to his Lord Rama. Devotional music increases neurologically the divine emotional perception of God.

The combinations of meditational devotional singing and leading a righteous life can contribute to an atmosphere of spiritual elevation and celestial tranquillity. Faith is embedded in our neurons and in our genes and it is one of the most important principles to honour our lives (Newberg, 2009)<sup>6</sup>. Music occupies more areas of the brain than language does, and that humans are primary musical species (Sacks, 2007)<sup>7</sup>. Dr Sacks says, “we humans are a musical species no less than a linguistic one. All of us can perceive music, tone, timbre, pitch, melody, harmony and rhythm. We integrate all of these and construct in our minds using many different parts of the brain” (Sacks, 2007)<sup>7</sup>.

Swami Tyagaya sings in his song, “*chakkanirajamargani*”, thus, “Oh mind, when a good and spiritual path is available, why take the wrong paths? When good milk with cream is available, why should one go for poison. The royal road to salvation is devotion to Lord Rama”. (Ramanujachari, 1958)<sup>1</sup>. *Sangeetham* and spirituality are like the obverse and reverse of the same reality. *Sangeetham* in its purest sense is religion and religion in its purest sense is devotional music. Music is the universal language of the soul. Most of the Indian yogis used devotional *Sangeetham* for the search of their personal God. It is both an earthly and a heavenly treasure. (Swami Prajnananada, 1958)<sup>8</sup>. *Sangeetham* imprints itself on the brain deeper than any other human experience. “Music evokes emotion and emotion can bring with it memory” (Sacks, 2007)<sup>7</sup>. Music occupies more areas of the brain than language does and that humans are generally musical species (Sacks, 2007)<sup>7</sup>. Recent developments in cognitive neuroscience have led to a new way of looking at music and emotion, holiness and spiritualism.

Swami Tyagaya describes his reliance to God in his *kriti*, “*Teratiyagarada*” that the Supreme Being should remove the screen of pride and envy which are responsible to keep him away from the reach of *dharma*, *moksha* and Spirituality. Swami adores for devotional reliance to achieve spirituality (Ramunujachari, 1958)<sup>1</sup>. Devotion and spirituality are the two defining factors in determining the higher values of life. The relation between devotion and God is also the relationship between religion and spirituality. In India there is a discipline prescribed for a devotee which is a austere detachment from the usual entanglements of material life if the devotee wish to be *sanyaasi* (hermit). Devotion relies on austerity for spirituality (Ramunujachari, 1958)<sup>1</sup>. The devotional experience transforms God into a symbol representing a personal, ethical and social value. This emotional experience encourages a religious and spiritual development (Newberg, 2009)<sup>6</sup>.

Swami Tyagaya describes his general viewpoint of God, spirituality and devotional *Sangeetham* in his *kriti*, “*Kalaharana Melarahare*”. He asks, “O Lord Rama! Why is the delay to give me salvation? You are my saviour and i am like a bird flying around you. You are the only one to save me. I thinking of you and singing of you day in and day out. My mind is always of You. I have sought your feet and surrendered to you. You are my spiritual goal”

(Ramunujachari, 1958)<sup>1</sup>. Brain-Mind Dynamics revolves around the science and psychology of the brain. During the twenty first century the relationship between science and spirituality has been influenced by Neuro-psychology.

The debate about the ‘God spot’ in the brain or the Spiritual area in the brain is actively pursued. (Newberg, 2009)<sup>6</sup>. The modern Neuro-scientists are trying to learn more about how the brain functions during reported spiritual experiences. Dr. Newberg, a famous neuro-psychologist says, ” If you contemplate God long enough, something surprising happens in the brain (Newberg, 2009)<sup>6</sup>. “Devotional singing like meditation and contemplation of God for long enough can cause different neural circuits in the brain to become activated new neurons and synaptic connections are made in the brain and God becomes neurologically real” (Newberg, 2009)<sup>6</sup>. This form of spiritual development and contemplative singing exercise could strengthen neurological circuits involved with consciousness, empathy, compassion, love and tolerance (Newberg, 2009)<sup>6</sup>. Music listening, performance and composition engages nearly every area of the brain and music is used to manipulate our emotions (Levitin, 2006)<sup>4</sup>.

## Methodology

The methodology shows the development of a questionnaire survey to measure five different types of subjects extending from Swami Tyagaya, *Sangeetham*, devotional music, neuro-psychology and spirituality. The intention is to assess the Psychological measurement with Psychometric properties of Tyagaya’s *Sangeetham* and spirituality which addresses the society’s abilities, attitudes, traits, knowledge and educational progress The study attempts to construct a philosophical science of devotional consciousness in God and neuro-psychology.

1. The quantitative survey methodology deals with the procedure-ethics-purpose and time period, pilot study, confidentiality, distribution, data collection and analysis. The study handles different statistical scales of 5 point Likert scale. Psychometric values and the Statistical Package for the Social Sciences (SPSS-22). The research has also applied descriptive and inferential Correlation Pearson Product moment using Cohen 1988 table method to determine generality of the findings. The research has also applied the statistical null hypothesis testing and Six Null Hypothesis statements of Inferential Tests on the values of *Sangeetham*, *Swami Tyagaya*, *the brain*, *devotion* and *spirituality*.
2. The study was designed and conducted from 1<sup>st</sup> December to 31<sup>st</sup> March (Four months), which was adequate for the respondents to answer the questions diligently. The questionnaires are in English language. The questionnaires are distributed by email and as well as hand delivery depending on which method is convenient for the respondents. In either case, the researcher explained the purpose and use of the study and sought their consent in a letter. A four pages structured self-completion questionnaires with open ended questions were sent electronically and by hand to the general public at random to

the Indian society of Malaysia and University students of Malaysia. (Indian society is important because they may be familiar with the context of the questionnaire like *Sangeetham*, Swami Tyagaya and Vedanta). Strict confidentiality was maintained.

3. The survey contains Eighty two Questions. The answers are considered based on the 5-point Likert-type scale. The Questionnaire protocol also includes a validated tool survey which was previously published by Genia, V. (1991)<sup>9</sup>. The spiritual experience index: A measure of spiritual maturity (*Journal of Religion and Health*, 30, 337-347). Here, a section of the questionnaire is simplified to extract the answers with a YES, NO and Don't Know range. This scale is most widely used in survey research.
4. The findings are based on a correlation study. The other part of the field is concerned with statistical measurement theory like item response theory, correlation theory and hypothetical nullifying theory. The Statistical Package for the Social Sciences, (SPSS 22), is used for statistical analysis. In this methodology, significant effects are demonstrated in both descriptive statistics and ANOVA results based on gender, age, academic specialty, economic status, musical skills, and research productivity. The survey methodology approach is robust and replicable and is beneficial for this study. This method is realistic and the individual data is an exemplar for other alternate level of studies. This rich array of survey model can integrate more realism into many other macro-level models.
5. The research has also applied Pearson correlation method to determine generality of findings. It would be inaccurate to claim hundred percent reliability and validity due to the limitations of understanding and knowledge of the subjects. Four broad factors that influence data analysis. They are: a) The number of variables being examined, b) The level of measurement of variables, c) Whether to use the data for descriptive or inferential purposes and, d) The ethical responsibilities. Subsequently, the study included these four above factors and incorporated the six Null Hypothesis statements for Inferential Tests.
6. The statistical null hypothesis testing reported for the study is based on the questionnaire survey statistics. The six statistical hypothesis tests are conducted for statistical inference with the assistance of the survey statistical data. The statistical data is compared with the synthetic data as an alternative null hypothesis. The comparison is regarded statistically important according to threshold probability.
7. The Six Null Hypothesis statements of Inferential Tests are also conducted for the study. The survey results are reported with the Six Null Hypothesis statements of Inferential Tests. Inferential analysis was conducted with the methodology of Cohen, J. (1988)<sup>10</sup>.
8. The Six Null Hypothesis statements discussed for six alternate statements:

Nul HO<sub>1</sub> : There is no significant relationship between *Sangeetham* (Indian Classical music) and devotional experience among Indians.

Nul HO<sub>2</sub> : There is no significant relationship between *Sangeetham* and general perception on God, brain science and devotional experience among Indians.

Nul HO<sub>3</sub> : There is no significant relationship between *Sangeetham* and Neuropsychology among Indians.

Nul HO<sub>4</sub> : There is no significant relationship between devotional *Sangeetham* and holiness among Indians.

Nul HO<sub>5</sub> : There is no significant relationship between devotional reliance and spirituality among Indians.

Nul HO<sub>6</sub> : There is no significant relationship connecting God, brain, devotional *Sangeetham* of Swami Tyagaya and spirituality among Indians.

The above six hypothesis are anticipated to be reject by six alternate statements during discussion.

## Findings

### (i) The relationship between *Sangeetham* and devotional experience

The null hypothesis denotes that there is no significant relationship between *Sangeetham* (Indian Classical music) and devotional experience which is rejected by the observed effect of the survey. The investigation using Pearson product-moment correlation coefficient showed there was moderate positive correlation between music and devotional experience ( $r = .476$ ;  $n = 410$ ;  $p = 0.00$ ;  $p < 0.01$ ). This finding indicated that traditional music (*Sangeetham*) moderately influences the devotional experience of the Indians.

Table 1:

*Correlation Between Sangeetham and Devotional Experience Among Indians*

		<i>Sangeetham</i> music	devotional experience
Pearson Correlation		1	.476**
Sig. (2-tailed )			0.000
Music	Min	33.60	169.77
	Standard Deviation	7.35	29.56
N		410	410

\*\* Correlation is significant at the 0.01 level (2-tailed)



**(ii) The relationship between *Sangeetham*, Brain and God and devotional experience.**

The investigation using Pearson product-moment correlation coefficient showed there was moderate positive correlation between music and general perception on God, brain & devotion ( $r = .483$ ;  $n = 410$ ;  $p = 0.00$ ;  $p < 0.01$ ). This finding indicates that traditional music (*Sangeetham*) moderately influences the general perception on God, brain & devotional among Indians.

Table 2:

*Correlation Between Sangeetham and General Perception on God, Brain and Devotional Experience Among Indians*

	<i>Sangeetham</i> Music	General perception on God, brain & devotion experience
	Pearson Correlation	1
	Sig. (2-tailed )	0.000
Music	Min	33.60
	Standard Deviation	7.35
	N	410

\*\* Correlation is significant at the 0.01 level (2-tailed)

**(iii) The relationship between *Sangeetham* and Brain**

The null hypothesis states that there is no significant relationship between *Sangeetham* and Neuropsychology (brain). The investigation using Pearson product-moment correlation coefficient showed there was moderate positive correlation between music and brain ( $r = .456$ ;  $n = 410$ ;  $p = 0.00$ ;  $p < 0.01$ ). This finding indicates that traditional music (*Sangeetham*) moderately influences the brain among Indians.

Table 3:

*Correlation Between Sangeetham and Brain Among Indians*

	<i>Sangeetham</i>	Brain-Psycholgy
	Pearson Correlation	1
	Sig. (2-tailed )	0.000
Music	Min	33.80
	Standard Deviation	7.35
	N	410

\*\* Correlation is significant at the 0.01 level (2-tailed)

**(iv) The relationship between *Sangeetham* and Holiness**

The null hypothesis states that there is no significant relationship between devotional *Sangeetham* and holiness among Indians which is rejected by the observed effect of the survey. The investigation using Pearson product-moment correlation coefficient showed there was strong positive correlation between music and spiritual holiness ( $r = .638$ ;  $n = 410$ ;  $p = 0.00$ ;  $p < 0.01$ ). This finding indicates that devotional music (*Sangeetham*) strongly influences the spirituality and holiness among Indians.

Table 4:

*Correlation Between Music and Holiness Among Indians*

		<i>Sangeetham</i> devotional	Holiness
Music	Pearson Correlation	1	.638**
	Sig. (2-tailed )		0.000
	Min	33.60	339.94
	Standard Deviation	7.35	48.51
	N	410	410

\*\* Correlation is significant at the 0.01 level (2-tailed)

**(v) The relationship between Devotional reliance and Spirituality**

The analysis using Pearson product-moment correlation coefficient showed there was strong positive correlation between devotional reliance and spiritual (  $r = .921$ ;  $n = 410$ ;  $p = 0.00$ ;  $p < 0.01$ ). This finding indicates that devotional experience strongly influences the spiritual among Indians.

Table 5:

*Correlation Between Devotional Reliance and Spiritual Among Indians*

		Devotional reliance	Spirituality
Music	Pearson Correlation	1	.921**
	Sig. (2-tailed )		0.000
	Min	169.78	339.9
	Standard Deviation	29.56	48.51
	N	410	410

\*\* . Correlation is significant at the 0.01 level (2-tailed)



(vi) **The relationship between** God, Brain, Tyagaya, *Sangeetham* and spirituality.

Relationship connecting God, brain, devotional music of Swami Tyagaya and spirituality among Indians using Pearson product-moment correlation coefficient showed that there was strong positive correlation between general perspective on god, brain & devotional and spiritual ( $r = .839$ ;  $n = 410$ ;  $p = 0.00$ ;  $p < 0.01$ ). This finding indicates that general perspective on God, brain & devotional music of Swami Tyagaya strongly influences the spirituality among Indians.

Table 6:

*Correlation Between General Perspective on God, Brain & Devotional Sangeetham and Spiritual Among Indians*

		General perspective on God, brain & Devotional <i>Sangeetham</i>	
			spirituality
Music	Pearson Correlation	1	.839**
	Sig. (2-tailed )		.0000
	Min	136.58	339.94
	Standard Deviation	19.78	48.51
	N	410	410

\*\* Correlation is significant at the 0.01 level (2-tailed)

**Conclusion**

In conclusion the survey findings show the use of devotional music, neuropsychology, God and Spirituality can provide subjective and objective evidences on the values of Tyagaya’s devotional *Sangeetham*. It shows from the findings that good data amplifies the voice of the four hundred volunteers who have come forward to tell their experiential views of *Sangeetham*, Swami Tyagaya, brain, devotion, God and spirituality. The Questionnaire survey findings were investigated using Pearson product-moment correlation coefficient against the six alternate theories show that there are strong positive correlation between *Sangeetham*, devotional reliance, God, brain and spiritualism. These results conclusively indicates that devotional *Sangeetham* strongly influences the spiritual experience of the Indians. It can be seen that the demographic and the statistical findings have proved to uncover and clarify the social, scientific and philosophical knowledge of Swami Tyagaya, *Sangeetham*, brain, devotion, spirituality and God. The results have clarified the pattern and nature of devotion and identified the long environmental influence that perhaps creates the state of relaxation of the brain to visualize “God”.

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