

# Thiruvāsagam – A Text of Multi-Discipline

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### Abstract

*Thiruvāsagam authored by Saint Mānikkavāsagar establishes the Author's diverse personality and his expertise in multiple areas like Physics, Astronomy, Philosophy, Literature, Scripture, Science, Medicine, Defence, Genetics, Law, History, Geography, Human psychology, Politics, Fine arts, and so on. Thiruvāsagam proves the author is a Master of all Trades, a Multi faceted personality. Thiruvāsagam is a multi branched, multifarious text though it belongs to divine and Bakthi literature.*

**Keywords:** Physics, Science, Astronomy, Medicine, Defence, Fine Arts, Geography

The author of Thiruvāsagam is saint Mānikkavāsagar a chief minister in the Pandian kingdom of 9<sup>th</sup> century. His text establishes that Mānikkavāsagar is a multifaceted personality who is highly knowledgeable in many subjects like Physics, Astronomy, Philosophy, Literature, Scripture, Science, Medicine, Defence, Genetics, Law, History, Geography, Human psychology, Politics, Fine arts and so on. Thiruvāsagam is like a diamond with many angled flat surfaces which increases its ability to reflect light in all sides.

### Physics and Thiruvāsagam

Mānikkavāsagar proves himself a physicist by explaining the law of Motion in the third chapter - Andappagudhi. Sir Isaac Newton who belongs to the 17<sup>th</sup> Century speaks about dynamics that is the scientific study of the forces involved in movements. It is a branch of Physics (mechanics) which deals with forces and their relation primarily to the motion. Mānikkavāsagar explains this law of motion as

“Nadappana nadāy Kidappana kidāy Nirpana niruvi  
(109-110 - Thiruvāsagam Andappagudhi)

In Every part which moves will always move;  
What lies still, will always at rest  
what stands, Thou dost establish (G.U. Pope).



Mānikkavāsagar



Sir Isaac Newton

The above is the explanation of Newton's First Law of Motion that is "A body at rest persists in its state of rest and a body in motion remains in constant motion along a straight line unless acted upon by an external force".

### Mathematics and Thiruvāsagam

**Infinity:** Mānickavāsagar speaks about infinity in first chapter - Sivapurānam Ennirandhu ellai ilādhāne - Sivapurānam – 24. The word ennirandhu refers infinity when we add number 1+2+3+4 ..... end will be infinite. Mānickavāsagar uses infinite for God's unique nature which cannot be counted in numbers.

Infinity is used in many places in Thiruvāsagam. The words referred are

1. Enniranda - 1.24
2. Ennil Pal - 2.3
3. Ennily - 639, 323
4. Kanakilā - 468
5. Alavillā - 482, 624

**Three Dimension:** In the First Chapter of Sivapurānam he mentions three dimensional nature of God.

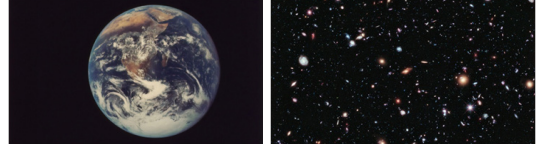
Aiyaa ena ōngi āazhndhu agandra nunniyane – (Sivapurānam - 35). Here in this line ōngi is infinite length of height, āazhndu is infinite length of depth and Agandra is infinite length of breath. So he occupies a space which has a height of infinite number and depth of infinite number and breath of infinite number. So he exists in such a large area which cannot be explained in numbers.

**Big Digit Numbers:** Thiruvāsagam shows many big digit numbers like

1. a hundred millions (nūtroru kodi 3.4)
2. some hundred crore (pal Nūrukodi 33)
3. some crore (Pala kōdi 3.26)
4. Six crore (Aārukōdi 4.44)
5. Hundred Hundred Thousand (Nūru Nūrāyiram – 2.24)
6. Thousand name (Aāyiram – 424)
7. Thousand Lotus (pangayam Aāyiram – 324)
8. Thirty three crore devas (muppatthumu kōdi - 625)
9. Hundred (Nūru – 3-4)

### Astronomy and Thiruvāsagam

Mānickavāsagar in the third Chapter Andappagudhi throws light on Universe, Origin of Earth, Big Bang Theory, the shape of the Earth, Milky way and the Expanding Universe.



Earth

Universe

Andap pagudhiyin Undai pirakkam  
Alaparun thanmai valaperung katchi  
Ondranuk kondru nindrezh pagarin  
Nūtroru Kōdiyin mērpada virindana  
(Thiruvāsagam – Andappagudhi- 1-4)

### The Development of Earth

He explains that the planets are spherical in shape (Undai) which originates from the expanding universe. The Universe expands through the outer layer with a Big Bang. Its expansion is more than a hundred millions in numbers (nutroru kodiya mērpada virindana). Mānickavāsagar confers the name Universe as "Andam" in eighth century itself. He only first elucidates the shape of our planet Earth as spherical which was later proved by scientists Copernicus and Galileo. The expanding Universe in infinite numbers is expounded very long back in Thiruvāsagam.

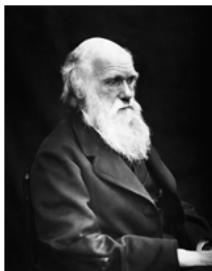
### Evolution and Thiruvāsagam

Charles Darwin a scientist of the 19th Century was the first person who has explained the "Theory of Evolution". In this he delineates the migration of invertebrates to vertebrates and become Human. So the Evolution of Mankind is derived from single celled Protozoa to multi celled highly formed Human Being. But this theory of Evolution is fixed and appreciated in the text Thiruvāsagam many centuries ago. It explains the Evolution from Grass to the Human being.

"Pullāgip poodai puzhuvāi maramāgi  
palvirugamāgi paravaiyai pāmbāgi  
Kallāi manidharāi pēiyai kanangalāi  
valasararāgi munivarāi thevarāi

sellā nindra iththāvara sangamathul  
(Sivapuranam - 26–30)

here it speaks from Grass >> shrub >> worm >> tree >> beast >> bird >> snake >> stone >> man >> demon >> mighty asurās >> ascetics >> God. So the evolution from Grass to Man is explicated in a clear manner.



Charles Darwin

### Genetics and Thiruvāsagam

Genetics is a branch of Biology concerned with the study of Genes, Genetic Variations and Heredity in organisms. Here Heredity refers to specific mechanism by which characteristics or traits are transmitted from one Generation to next via Genes. The scientists of 20th Century confirm that the Genes are transmitted up to 21 Generations. The influence of genes is continued up to 21 Generations. This is explicated in Thiruvāsagam very long back.

Moovēzh sutram muranuru naragidai Aāzhāme arul - Portrithiruagaval - 118-119. Here moovēzh means  $(3 \times 7) = 21$  sutram is relations (generations). It is speaking about the successive 21 birth rounds of human (because of Genes) in this World.

The following terms are used for Genetic Transmission

1. Vazhiadiyōm – 165 (Thiruvembāvāi)
2. Vazhiadiyār – 266
3. Pazhavinai – 282
4. Uzhimudhal – 327



Genes

### Medical Science and Thiruvāsagam

Thiruvāsagam describes the growth and the development of an Embryo in Human in ameliorate manner. After fertilization (Union of Sperm and Egg in Ovum) fetal development begins from the ninth week and continues until birth. Thiruvāsagam speaks about the risk factors during fetal development up to 10 months.

Mānuda pirappinul mādḥā Udharatthu  
Eēnamil kirumi seruvinil pizhaitthum  
Oru madhi thāndriyin irumaiyil pizhaitthum  
Iru madhi vilaiavin orumaiyil pizhaitthum  
Eēriru thingalil pērirul pizhaitthum  
anju thingalil munjudhal pizhaitthum  
Aāru thingalil ooralar pizhaitthum  
Eēzhu thingalil thāzh puvī pizhaitthum  
Ettu thingalil kattamu pizhaitthum  
Onebadhil varutharu thunbamum pizhaitthum  
thakka dasa madhi thāyodu thānpadum  
thukka sāgara thuyaridai pizhaitthum  
(Pottri - 13-25).



Embryonic development

It explains the embryonic development and the risks of Human embryo during birth process. In the above

mādḥā udhīram - is ovum  
kirumi seru - is sperm  
oru madhi – First month after fertilization  
iru madhi – second month  
mum madhi – third month

Like that he speaks about the pain and harm which affects the embryo till 10 months. It also refers to the 270 days of full fetal development which is a perfect calculation of medical science.

### Human Body

Thiruvāsagam refers the Human Body to a Garment to wear with flesh of Joints, Bones, Fat

filled, thread like nerves and Brain.

Moippanarambu kayirāga moolai enbu thōl pōrtha kuppāyam – 419 (Aāsaipatthu) here kuppayam is garment. narambu is nerve; moolai is brain; enbu is bone; tol is skin.

In another hymn it says Human Body is a Hut where walls are flesh, worm stuffed, decayed, dripping with all foul – 434 – Adisayapatthu.

### Medicine

He praises God himself as medicine (marunthu)

1. Marunthu - 405, 4.116, 11.74, 23.31, 34.30, 37.2,
2. Arul Marunthu - 513, 514
3. Nalla Marunthu - 634
4. Vānanādar Marunthu - 206

### Animal Science and Thiruvāsam

Thiruvāsam depicts Elephant as an example for Big size and Ant for a small size. Though they may be small or Big, females of these will have a Uterus where a baby develops before it was born. .... Vārkadal Ulaḡinil Yāanai mudha lā erumbu eerāya Unamil Yoniyin yoni is referred to the reproductive organ (Potrithiruagaval .... 10-12)

In Ammānai it speaks about big Elephant and small worm (without Vertebra).

Aānaiyāi Keedamāyi - Ammānai - 14.

Smallest animal is mentioned as Ant 4-11, 6.33, 96, 97.

Biggest is Elephant – 246, 2.55, 65, 92, 3.14, 15, 71, 5.29, 7, 46, 70, 22-24, 24.31, 27-37.

In the Evolution theory it starts from Worm – Beast - Bird - Snake - Mammal (1-26-27)

### Smallest to Biggest

1. Worm (puzhu): 537, 538, 434, 1.26, 53, 5.189, 220, 224, 26.25, 586
2. Ant: 4.11, 6.33, 96, 97
3. Fly: 420
4. Humming Bee (Kothumbi) - Euplea Splendens) Full Kothumbi chapter
5. Fishes: 642, 638, 6.101, 5.376
6. Reptiles:
  - Snake (Pambu) - 1.27, 4.56, 240, 516
  - Crocodile - 6.161

### Birds

1. Cock – 7.129, 20.9 (Kōzhi), 370
2. Parrot – 5.186, 12.10, 11, 358, 519
3. Heron (kokku) – 11.77, 254, 382
4. Pea-fowl – 16.11
5. Cockoo (Kuyil) (Kuyil Paattu all 10 songs) – 303

### Mammals

1. Fox – 2.36, 38.3, 50.25, 546
2. Cow, Bull - 4.95, 10.4, 2.25, 5.209, 212, 265, 13.61, 19.10, 558, 537, 49.8, 384
3. Horse : 19.24, 36.34, 344, 294, 526, 532, 527, 2.36, 38, 2.45, 649
4. Deer – 3.80, 4.135, 5.158, 217, 337
5. Boar - 30.17, 235, 472, 566, 594
6. Tiger - 6.2, 523, 3.32, 4.206, 43.29
7. Elephant – 246, 6.76, 125, 194, 2.55, 65, 92, 3.14, 15, 71, 5.23, 7, 46, 70, 22.24, 24.31
8. Goat – 305
9. Horse (as Pari) – 2.38, 116, 8.17, 12.57, 17.27, 18.23, 36.10, 25, 43.15, 50.25
10. Rabbit – 6.138

### Plant Sciences and Thiruvāsam

Thiruvāsam explains the Theory of Evolution from Grass to immobile form of Plant Life (Thāvara Sangamam). Grass >> Shrubs >> Tree >> Groove >> Immobile form of Plant Kingdom. A very Small one is expressed as Millet Seed (Thinai) and Oil Seed (el) 5.184

### Trees

1. Kurundham - a fragrant tree - Trichilia 2.61, 29.3. In Arutpatthu all 10 songs mentions this tree.
2. Koovilam – Indian Pomegranate – Crataera Marmelos 17.37, 347
3. Kondrai – Cassia Fistula – 8.94, 97, 9.73, 13.17, 84.39
4. Kōngu – Silk cotton tree – Box bax gossipinum - 39.2
5. Sandhanam Sandal wood – Santalum album, 3.89, 4.203, 17.29
6. Thengu – Cocoa palm tree - 16.49, 581
7. Moongil - Bamboo - Bambūsa – 11.38, 492
8. - Tamarind - 25.18
9. Mandāra – one of the trees of Paradise - Erythrina Indica
10. Vattral Maram – Withered tree – 495

11. Adavimaram – Forest Tree – 515
12. Banyan Tree – 12-16

### Groves

Perfumed and Flory groves are mentioned 3.44, 5-117, 6.39, 67, 8.89, 18-37, 19.5, 20.27, 374, 337

### Flowers

1. Lotus (pangayam) - 7.52, 68, 15-10, 29.2, 521, 567, 580
2. Kondrai – 8.94, 97, 9.73, 13.17, 84.39
3. Lily – sacred Lily flower in all 10 songs of Poovalli

### Yoga and Thiruvāṣagam

Thiruvāṣagam mentions Ohmkaram in two places

1. Ongāratthuutporulai – 656
2. Ongāratunindra – 1.33.

It also mentions yoga related Attamā Siddhi – (2.62) Yogam – 37.1, 14, Yōgi – 46.6, 539 Gnanam – 10.3, 25.38, 1.38, 39, 40, 75, 2.7, 4.23, 3 Meignanam – 1.38, 75 Agnānam – 1-40 Gnāna Nadagam – 99 Gnani - 26.22

### Philosophy and Thiruvāṣagam

1. Like Ant on firebrand lit at Diverse ends - 113
2. The Dog laps water from the Ocean - 117
3. Like climbing plant with no supporting bough - 124
4. Like worm in midst of Ants by senses gnawed - 129
5. When the great water fails the little fishes faint - 130
6. Like a fly in Jack fruit caught - 150
7. Like patient heron watching for its prey - 382
8. Like pipes changing notes - 415
9. Like wax before the unwearied fire - 4.60

### Geography and Thiruvāṣagam

Geography is a study of places and the relationships between people and their environments.

### Physical Geography

It deals with pancha bootha (Earth, water, Fire, Air and Space)

1. Pāridai Indhāi parandāi pōtri – (4-137 - 141)
2. Vānāgi mannāgi valiyāgi oliyāgi – (5-57)



**Pancha Boothas**

### Reference on Earth

Earth has been mentioned as Man, Bhuvani, gnālam, Sagam, pār, Mānilam, Nilam, and Boomi, Manal and so on.

1. Man : 1.23, 2.4, 47, 3.26, 5.29, 57, 8.47, 13.62, 26.23, 37.6, 41.1, 9, 53.13, 375, 433, 469, 512, 537, 571, 569, 589, 585, 635, 639, 653, 469, 512, 547
2. Gnālam : 2.3, 2.4, 5.110, 171, 7.5, 18, 13-43, 16-45, 18- 12 , 23, 33, 30, 19,36, 18,49, 12, 50, 25, 406, 531, 590, 649
3. Buvani : 3.61, 20.37, 277, 377, 2.25, 5.251.
4. Pār : 395, 582.
5. Boomi : 377,
6. avani : 377, 439
7. Manal : 439
8. Mānilam : 443
9. Nilam : 444
10. Mānagar : 2.38
11. powder crumble : 12.3

### Water

The source of water is mentioned as Neer, Kadal (Ocean), Vellam (Flood), Uuttru (spring), river (āaru), pond, Sea, Tide, and so on.

1. Neer (Water): 395, 444, 1.69, 3.25, 2.58, 443, 417. Siraiperāneer – 392, Munneer - 2.59, Nayananeer – 387
2. Ocean or Sea (Kadal):
  - 1) Mākadal – 396, 537
  - 2) Kārārkadal – 284
  - 3) Thazh Kadal – 336
  - 4) Perungkadal – 398, 407, 487
  - 5) Mari Kadal – 404
  - 6) Poru Kadal – 405, 23.29

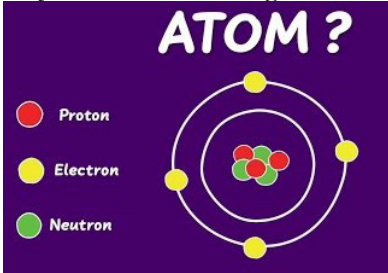


- 7) Idar Kadal – 411
- 8) Nadu Kadal – 471
- 9) Karunai Kadal – 486, 593
- 10) Pazhangkadal – 489
- 11) Vinai Kadal – 517
- 12) Piravi Kadal – 585
- 13) Thirai Kadal – 593
- 14) Pār Kadal – 168
- 15) Uvāk Kadal – 169
3. Flood: (Vellam) – 411, 472, 528, 574, 1.79, 3.77, 12.10
4. Spring (Uuttru) – 439, 1.83
5. River (āaru) – 1.79

### Human Geography

It is the relationship between the people. God has been mentioned as Father, Mother, Son, Daughter, Boy, Beloved, Hero, Male, Female, He, She, Transgender (ali) relations, in all such relations in Thiruvāsagam.

### Atomic Physics and Thiruvāsagam



1) Anuve Pōtri – 4-112 Praises Lord as Atom the minute one ; He is the Biggest Like Universe and smallest like Atom.

2) Anutharum thanmaiyl Iyōn – 3.45 Here it praises Lord as more subtle than an Atom.

3) Thun anupuraiya - 3.2.

Like an Atom he dwells all over the world.

4) sendru sendru anuvāi Theindhu Theindhu – 394 Here it says Atom can be further divided into tiny particles by saying theindu theindu. So through these lines Manikkavasagar denies the Daltons Atomic Theory that is Atom can neither be created nor destroyed Today the scientist says an Atom is the smallest unit into which matter can be divided without the release of electrically charged particles. Hence Thiruvāsagam clearly explains the nature of Atom in very early period.

### Defence Studies

As Mānickavāsagar was a chief Minister in the Pandiya Kingdom he explicate Army, Marshalling, and Marching and the Defense weapons through sacred illustrations..

In the First verse of Thiruppadaī ezhucchi – 615 he explains Drums, sword, canopy, armor, and so on. As this is a sacred war to capture Heaven he calls everybody to strike the (NadhaParai) drum, Wielders to hold wisdom's sword, Spread the white canopy over the Lord , and to wear the armor to capture heavenly fortress.

In the second song (616) he speaks about Marshalling, that is assembling and arrangement of troops in order. As it is a Sacred March he explains 4 classes of holy warriors. First one is His Servant (Thondar) gathering (Dūsipadaī). Second one is His Devotee (Patthar) gathering which are Flanks , they are the part of an Army at the sides in a battle.

Third one is gathering of Sages (Yogis) will fill up in swelling Ranks. Fourth one is gathering of Mystic (Siddhar) close to the rear. They are the rear Guards.



**Marshalling**

This type of Marshalling shows his extraordinary knowledge about Defence.

Thondergāl dūsiseller, Bhakthargāl sozhapōgir Nōndiral yogigale – Perani undheergal

Thindiral Siddhargale Kadaikoozhai senmingal Andar nādaalvōm nām allarpadaī vārāmē (616)

### Music

This Thiruvāsagam is sung in Mullai Pann which is Mohana Ragam from early period. It speaks about some Technical Terms in music like

1. Nādhm – 2.108, 17.2, 3, 19.32, 43-49, 46.11
2. Pādal – 8.43, 11.4, 13.64, 49.33
3. Pāttu – 1.93

4. Gitam – 372
5. Thālam – 345
6. Nādagam – 5.27, 40.41, 379, 380, 95
7. Pan – 278, 547, 632, 635

### Musical Instruments

It explicates 4 types of musical Instruments like wind Instruments, percussion Instruments, Stringed Instruments, and Auto-phones

#### 1) Stringed Instruments

- 1) Vinai - 371, 640
- 2) Yāzh – 371

#### 2) Wind Instruments

- 1) Flute – Kuzhal – 24.31
- 2) Sangu Conch – 642, 7.29, 49, 15

#### 3) Percussion Instruments

- 1) Thudi – 452, 560
- 2) Murasu – 365
- 3) Parai – 2.108, 17.2, 3, 19.32, 46.1
- 4) Drum Damarugam, Idaikkai - 2.108, 7.2, 3,

19.32, 46.1

#### 4) Auto- Phones

- 1) Bell (mani) - 641
- 2) Thālam (cymbal) – 345
- 3) Silambu - 2.53, 7.51, 9.53, 11.80, 13.69, 41.15

### Mentioning of Octaves

In Music there are three Octaves – Tārasthāyi, (higher Octave) Madhya Sthāyi, (Middle Octave) and Manthra Sthāyi (lower Octave), while singing or playing a musical Instrument. Thiruvāsagam mentions Tārasthāyi, and Manthra Sthāyi in neethalvinnappam. The Bee Hums in both Tārasthāyi (Higher Octave) and Manthra Sthāyi (Lower Octave).

Manthārathil thāram payindru mandham mural vandu (NeethalVinnappam - 36)

### Dance

Some dance aspects seen in Thiruvāsagam

- 1) Nattam – 268, 1.89
- 2) Kootthu – 271, 322, 384, 385, 651
- 3) Nadam – 279, 288, 292, 315, 648
- 4) Anjali – one of the Hasthas in Dance – 8.75, 371

### Folklore

They are the stories, Customs, and beliefs in a culture are written and passed down orally from generation to generation. They are the superstition of

a particular ethnic population. Thiruvāsagam depicts many references about folk – music, folk - Dance, folk - Rhythms, and folk plays. Ritual Dances are called Religious Dances because of their purpose. Some of the Folk type of songs in Thiruvāsagam are

1. Thiruvēnbāvāi - The Mystic songs sung in Morning by maidens (7.1-20)
2. Ammānai - Women in great numbers enjoying their favorite game of Ammānai – Tossing number of little balls from one to another with great dexterity and very swiftly (8.1-20)
3. Thiru Porchunnam - Pounding Songs women sing in time with the pestles (9.1-20)
4. Thiru Thellēnam - Tambour song singing with Tambourine (11.1-20)
5. Thiru Undhiyār – Play resembling ball and shuttle cock sung while playing (14.1-20)
6. Thiru Thōlnōkkam - Dancing aiming at the shoulder (15-1-14)
7. Thiru Ponnūsāl - Song on Swing (16-1-9)

### Conclusion

From the above we can come to a conclusion that Thiruvāsagam is a multi branched, multifarious text with a combination of different features parts and perspectives to make a complex as a whole. It establishes Mānikkavāsagar's diverse personality and his expertise in multiple areas that is JACK OF ALL TRADES.

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