

## EGO CENTRIC COORDINATES OF TAMIL

Dr. Ganesan Ambedkar

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In spatial navigation, the role of egocentric and geographic coordinates is too crucial. In this article an attempt is made arriving at not only an inventory of EGOCENTRIC COORDINATES in Tamil, but also their geometrical properties. This article is divided into two parts. In the first part, the term egocentric coordinates is grounded with suitable examples. In the second and final part, an inventory consisting of the tokens of egocentric coordinates in Tamil is given along with their geometrical properties.

### I

#### 1.0 Introduction

Speakers of Tamil orient their space, by using two basic coordinates 1) egocentric and 2) geographic coordinates<sup>1</sup> from their respective pool of locatives<sup>2</sup> according to their spatial requirements. These two basic coordinates, as a part of their locativity functions<sup>3</sup>, are generally, encoded either in locative nouns or in case markers and post positions, or in all of these. Before going into the aim of this research paper, differences between these two important terminologies are given with suitable examples, at first: The geographic coordinates are those that do not rotate with speakers wherever they turn whereas, egocentric coordinates rotate with the speakers wherever they turn, i.e. depending on one's own body. Consider the examples below:

- 1) *avan* *vaṭakkē* *ōt. in. ān*  
he north.clit run.pst.png  
“He ran *towards* North”

In (1), the italicized lexeme is a geographic coordinate. It is a part of geographic coordinates system, because, directions, either “north” or “east”, do not orient itself under any circumstances, just, because the body of a speaker turns around. Also, observe the grammatical category of italicized form: a Locative noun. See (2):

- 2) *atu* *terkil* *natantatu*  
it south.loc happen-pst-png  
“It happened in south”

In (2), the italicized lexeme is a geographic coordinate. Recall the geographic coordinate does not orient by itself just because the speaker turns his body about. Also, observe the grammatical category of the lexeme is of a locative directional noun. See the data below:

- 3) *nāṇ* *mērkē* *vāṅtēṇ*  
 I west.clit live.pst.png  
 “I lived in the west”

In (3), yet another geographic coordinate is found in the italicized form. Remember a thumb rule: the geographic coordinate does not orient by itself on account of spatial navigation of any speaker of Tamil. But, contrast, the data in (4):

- 4) *avaṇ* *eṇakku* *etiril* *ōt. iṇ. āṇ*  
 he me-dat front run.pst.png  
 “He ran *in front of* me”

the real difference between these two coordinates is that the former is based on the geographical reality, which can not be changed, whereas the latter is based on human spatial orientation

Locativity changes according to position of a body, as in (4). Hence it is an ego-centric coordinate, because the position “in front of” changes according to one’s own body. The grammatical encodement takes place via a simple locative noun. See (5):

- 5) *avaṇ* *eṇakku* *munṇal* *ōt. iṇ. āṇ*  
 he me-dat front run.pst.png  
 “He ran *in front of* me”

In (5), the italicized form orients according to the body position of a speaker. On account of its “turn-according-to-body-orientation-character”, this becomes a part of egocentric coordinate.

In essence, the real difference between these two coordinates is that the former is based on the geographical reality, which can not be changed, whereas the latter is based on human spatial orientation, which changes according to the orientation of human body. In this article, the egocentric coordinates are alone dealt with. It is here the aim of this article is worth to be placed.

### 1.1 The Aim and scope

The main aim of this research paper is to arrive at an inventory of Tamil egocentric coordinates and its encoded locativity or geometrical properties. The scope of usefulness of such inventory is, too, many. For instance, if anyone, who wishes to build up an artificial system of Tamils’ Spatial Navigation may make out a clean spatial system by the attested forms of egocentric coordinates and its locativity or geometrical properties, because these are the tokens that are responsible for egocentric coordination of Spatial Navigation.

The forms of this inventory – although exhaustive – may allow some more members inside of it, if one looks from descriptive linguistic perspective

Having placed the aim, the second section of this article focuses on the inventory and encoded locativity or geometrical properties of egocentric coordinates in Tamil. Recall from the early beginning of the above section, where it was said and shown that either a locative noun or a case marker or a post position encode locativity or geometrical properties within the egocentric coordinates of Tamil. This premise forces to place those forms along the side of encoded locativity. The forms of this inventory – although exhaustive – may allow some more members inside of it, if one looks from descriptive linguistic perspective. This is because the arrived members that are listed below are from the contrastive work (between English Prepositions and their functional equivalences in Tamil). Example sentence for each sense, although desirable, can be found in Ambedkar (2007). Accordingly, the first column consists of those egocentric coordinates of synchronic Tamil. The second column consists of encoded geometrical distinctions or locativity within it.

## 2.2 Conclusions

Markers	Encoded Locativity
<i>aṭiyil</i>	On the foot of
<i>arukil</i>	Beside or Close to or Near by
<i>iṭattil</i>	In the direction of
<i>iṭ attiliruntu</i>	From a place of reference to
<i>iṭam</i>	About, in, in the direction of, in the presence of, to, to have or to own or to possess or sent or given
<i>iṭ amiruntu</i>	From a place of reference to
<i>iṭaiyē</i>	Between or in or in to middle of or surrounded by
<i>iruntu</i>	Away from, sent or originating from or distant in regard to
<i>il</i>	Along, at the foot of or below or under, between, by or close to or close to or covering a surface or fastened and attached to or immediately below and touching or supported by or without touching, distance from or away from or farther than, from, aside from or from side to side of or to the other side of, here and there in or across every part of, in the middle of or among or surrounded by or surrounding or expressing external physical environment, beside, in the same direction as, in to or to the inside of, near or near by or to the proximity of, over, through or through any part of the length of, for or to a position or a point on or to denote a place or to have or to own or to possess or to or in the direction of, to reach the end of or to the far end of, to the amount or extent of, towards, within or not beyond or not more than the space of
<i>iliruntu</i>	At some distance from or distant in regard to, away or away from, from a higher to a lower level or starting at or last but one, two, three, until and including, with or with in

<i>uṭan</i>	Behind, besides or close to or to the proximity of, in, on, in the same direction as or to have
<i>uḷ</i>	On the inner side of
<i>ūṭē</i>	By way of
<i>etiril</i>	In front of
<i>etiriliruntu</i>	From the side of face
<i>ai_aṭuttu</i>	After or following in place or order or with the length beside
<i>ai_aṭutta</i>	After or Next to
<i>ai_kaṭanta</i>	Beyond the limits of or not in or up to and beyond
<i>ai_kaṇṭu</i>	In the direction of or towards
<i>ai_curri</i>	About or surrounding
<i>ai_tāṇṭi</i>	Beyond or on the far side of or on or to the side of
<i>ai_toṭarntu</i>	to the rear of or following in place or order
<i>ai_nōkki</i>	In the direction of or towards
<i>ai_pārttu</i>	In the direction of or towards
<i>ai_mīri</i>	Beyond the limits of or not in
<i>ai_viṭṭu</i>	Away from or From
<i>ōramāka</i>	To the edge of
<i>kku</i>	Distant in regard to or for or for the possession of or for the purpose of or in order to reach or towards or to have, from among or in, to the distance of or to the far end of or to the length of or up to, in the direction of, in the position of, in the same direction as, indicating change of one state from another, less,
<i>kku_aṭiyil</i>	Below or below at the foot of or directly below to immediately below and touching or in or at a lower place or lower in position to
<i>kku_aṭuttu</i>	Beside, last but one, two, three, etc, to the rear of
<i>kku_aṭutta</i>	Beside or last but one, two, three, etc,
<i>kku_aṇṭappakkam</i>	On or to that side of
<i>kku_appāl</i>	A farther than or on or to the side of or on the far side of, out of reach of, along
<i>kku_arukāmayil</i>	Near by
<i>kku_arukil</i>	Against or at some distance from or beside or near or close to or next to
<i>kku_iṭaiyil</i>	Among or in the middle of or surrounded by
<i>kku_iṭaiyiliruntu</i>	From the middle of
<i>kku_iṭaiyē</i>	Among or between or in the middle of or surrounded by
<i>kku_intap_pakkam</i>	On or to this side of
<i>kku_etiril</i>	Before or in front of or facing or on the other side from here
<i>kku_etiriliruntu</i>	In front of or facing or on the other side from here
<i>kku_etirāka</i>	In an opposite direction to

<i>kku kīl</i>	Below or below at the foot of or below without touching or directly below or immediately below and touching or in or at a lower place or under
<i>kkuḷ</i>	On the inner side of or to the inside of or to the proximity of or close to or to the rear of or within
<i>kku naṭuvil</i>	Between
<i>kku nēr</i>	In front of
<i>kku nēr etir</i>	Facing
<i>kku nēr etiriliruntu</i>	From the side of face to
<i>kku pakkattil</i>	Against, at some distance from, beside or near or near by or close to or next to or side by side, last but one, two or three, etc, or with the length beside
<i>kku pakkattil iruntu</i>	From the side of
<i>kkup piṛaku</i>	Following in place or order
<i>kkup piṇ</i>	After or to the rear of
<i>kku piṇṇāl</i>	At the back of and attached to or behind or following in place or order or to the rear of, on or to the side of
<i>kku piṇṇāḷiruntu</i>	From the position of behind to
<i>kku pinpuram</i>	To the rear of
<i>kku purampāṇa</i>	Beyond the limits of
<i>kkum mattiyil</i>	Among
<i>kkum naṭuvē</i>	Between
<i>kku mattiyil</i>	Among or between or in the middle of
<i>kku maṟupuram</i>	On the other side from here or on the far side of
<i>kku muṇ</i>	Ahead of, above or last but one, two, three
<i>kku muṇpu</i>	Ahead of, above or last but one, two, three
<i>kku muṇṇāl</i>	Ahead of or in front of, last but one, two, three —
<i>kku muṇṇāḷiruntu</i>	From the face of or ahead of
<i>kku mēl</i>	Directly above without touching or higher than or out of reach of
<i>kku mēḷiruntu</i>	From the position of upper to
<i>kku veḷiyē</i>	At or on the outer side of or away from or beyond the limits of or not in
<i>kaṭaicikku</i>	To the far end of
<i>kāṭṭi</i>	Used to indicate the source from which something is taken
<i>kīl</i>	Below without touching or immediately below and touching or lower in position than or directly below
<i>kīḷiruntu</i>	From the lower position to
<i>kuṟukkē</i>	Across or from side to another side of
<i>kuṟukkiruntu</i>	From the position of across
<i>kuṭa</i>	Besides or along with

<i>naṭuvil</i>	Between or in or into the middle of
<i>naṭuviliruntu</i>	From the position of middle to
<i>neṭuka</i>	Along or through any part of the length of
<i>nēr etirāka</i>	In front of or facing
<i>nēr etiril</i>	In front of or facing
<i>nēr etiriliruntu</i>	From the position of facing
<i>nēr etir</i>	In front of or facing
<i>nōkki</i>	Towards or to indicate a point of arrival or to a state
<i>mattiyil</i>	In or in to the middle of
<i>pakkattil</i>	Close to or Next to or To denote the place
<i>pakkattiliruntu</i>	From the position of proximity to
<i>piṇ</i>	To the rear of
<i>piṇṇāl</i>	At the back of and attached to or to the rear of
<i>piṇṇāḷiruntu</i>	From the rear side to
<i>mītu</i>	Above and covering or covering a surface or in contact with or directly above without touching or fastened and attached to or supported by or from one side to the other side of or higher than
<i>mītiruntu</i>	From a position of reference to
<i>muḥvatam</i>	Through any part of the length of or in or across every part of
<i>muṇ</i>	In front of
<i>muṇpu</i>	In front of
<i>muṇṇāl</i>	Before or In front of
<i>muṇṇāḷiruntu</i>	Ahead of
<i>mūlamāka</i>	By way of or With in the limits or a part of a surface or
<i>mēl</i>	Above and covering or in contact with or covering a surface or supported by or fastened or attached to, for possession of in the direction of or to or to a position or point on or to express a higher position than or towards. From side to side of Surrounding astride
<i>mēḷiruntu</i>	From higher position to
<i>varai</i>	As far as or till the end of or towards or until and including or up to
<i>vaḷiyil</i>	Along the path or reference point or surface of
<i>vaḷiyiliruntu</i>	From the path or reference or surface point of
<i>vaḷiyāka</i>	By way of or through or in the direction of or towards or within the limits or parts of a surface, over or past
<i>veḷiyē</i>	Away from or outside
<i>veḷiyiliruntu</i>	From the area of out side to

**Table: 01 Egocentric Coordinates of Tamil**

In this research article, an inventory consisting of egocentric coordinates and their geometrical properties were given. The egocentric inventory helps us to arrive at the spatial navigational side of Tamils' orientation.

### (Footnotes)

- <sup>1</sup> The terminologies are from Guy Deutscher (2010). Cf Levinson (1994)
- <sup>2</sup> Locatives are the results of Linguistic perspective. Locatives give Locativity. By using the same locatives and locativity, arrival of spatial navigational system of Tamil is not too distant dream. This is because functions of those locatives and egocentric and geographic coordinates are one and the same. In other words, locatives are from linguistics perspective and egocentric and geographic coordinates are from anthropological linguistic perspective. Irrespective of discipline perspectives, the aim is to build spatial navigational system for Artificial Intelligent System.
- <sup>3</sup> Locative nouns, case markers, post positions and combination of case markers and post positions are their combinatorial. For a list of Locatives, see Shivakumar, B.S and Ambedkar, G (2007) for Kannada, and Ambedkar, G (2007) for Tamil.

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**Dr. Ganesan Ambedkar**  
Dravidian University  
Kuppam – 517 425