Tuam is a dialect of the Oceanic Austronesian Saveeng language (aka Mutu-Tuam) spoken on Tuam and Umboi islands (Morobe Province, Papua New Guinea). To specify locations, an absolute spatial framework based on four wind directions may be used: *ragh* ‘southeast wind’, *yavaar* ‘northwest wind’, *kaagu* ‘north-northeast wind’, and *daudao* ‘south-southwest wind’. More commonly, however, use is made of intrinsic and anthropocentric relative spatial frameworks. The absolute framework based on wind direction exhibits a scalar restriction which the other two frameworks lack. It is only used outdoors for figures which are relatively large in size.

A number of devices specify the directional vectors from grounds to figures in locative constructions: a rich set of motion predicates occurring in serialized constructions, positional verbs, prepositions, demonstratives, deictic locative adverbs, proximity adverbs, and locative nouns having inalienable genitives. Most predicates in the language have a single inherent path orientation, either towards, at, or away from a locative ground, which severely constrains the semantic role of associated prepositional phrases and subject arguments.

Motion verbs expressing sea travel exhibit specialized senses based on the prevailing winds, with ‘up’ as motion southeasterly and ‘down’ as motion northwesterly. Although it is possible to combine several different devices to very precisely specify a location, in normal conversation this is rare. Speakers normally use the most economical means possible.
1 Introduction

The treatment of space and motion is a topic of current linguistic interest since language seems to provide a window into the nature of human spatial thinking. Spatial thinking is fundamental to human cognition. Stephen Levinson (2003:7ff) notes that from the time of Aristotle onwards there has been a strong tradition in western philosophy emphasizing the importance of ego’s human body as a reference point, yielding such directions as front, back, left, right, above, and below. Levinson questions the universality of this tradition, however, citing languages such as Tzeltal of Chiapas, Mexico and the Australian aboriginal language Guugu Yimidhirr, which seem to predominantly use an absolute spatial frame of reference rather than an anthropocentric one.

Spatial frames of reference are different types of coordinate systems with respect to which certain properties of objects are gauged. Levinson (2003:35) states that there are essentially three main frames of reference in linguistic descriptions of horizontal spatial directions: intrinsic, relative, and absolute. He characterizes each of these in the following way:

- **Intrinsic**—an object-centered coordinate system, where the coordinates are determined by the inherent features, sidedness, or facets of the object to be used as the ground or relatum (2003:41).
- **Relative**—presupposes a viewpoint V (given by the location of a perceiver in any sensory modality), and a figure and a ground distinct from V. It thus offers a triangulation of three points, and utilizes coordinates fixed on V to assign directions to figure and ground. The viewer/perceiver is normally a participant in the speech event but not necessarily so (2003:43).
- **Absolute**—many languages make extensive, some almost exclusive, use of such an absolute frame of reference on the horizontal. They do so by fixing arbitrary fixed bearings—cardinal directions that can be related by the analyst to compass bearings (2003:48).

In English, a sentence like *The women are standing in front of the church* evidences use of an intrinsic spatial frame of reference. The front, being defined as the side of the church where the main entrance is, serves as a reference for locating the women. A sentence like *He is standing to the left of the tree* evidences a relative spatial framework, left and right being projected from the speaker or some other viewpoint. A sentence like *The village is located on the south side of the mountain* evidences an absolute spatial frame of reference.

This paper describes the treatment of motion and location in the Tuam dialect of the Saveeng (also known as Mutu or Mutu-Tuam) language. Although the language exhibits an absolute spatial framework based on wind directions, intrinsic and anthropocentric relative spatial frameworks are more commonly used than the absolute one.
Language classification and typological sketch

Saveeng/Mutu is an Oceanic Austronesian language spoken by about 4,000 people who live in the Morobe Province of Papua New Guinea on Umboi Island and the small Siassi Islands to the southeast. Malcolm Ross (1988:122) classifies it as a member of the Ngero-Vitiaz family within his North New Guinea Cluster. There are three dialects: Tuam (spoken on Tuam Island and in Yaagha village on Umboi Island), Malai (spoken on Malai Island), and Oov (also known as Mutu and spoken on Aramot, Mutu-Malau, Mandok, and Aronai islands). The language has a nominative-accusative case marking system, and the basic word in the clause is:

(Theme/Topic,) SubjectNOMINATIVE—Verb—
ObjectACCUSATIVE—Other Peripheral constituents

Most verbs have a prefix indicating the identity of the clausal Subject.2

<table>
<thead>
<tr>
<th>Subject</th>
<th>Verb</th>
<th>Object</th>
<th>Prepositional Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Yes]</td>
<td>[ti-velegh]3</td>
<td>[ghiiit]</td>
<td>[pa uraat toit].</td>
</tr>
<tr>
<td>3PL.NOM</td>
<td>3PL-mock</td>
<td>1PL.INC.ACC OBL work 1PL.INC.LOC</td>
<td></td>
</tr>
<tr>
<td>'They mocked us (INC) on account of our work.'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(2) Yau na-ghe [pa I i-maat wa].
1SG.NOM 1SG-say/think OBL 3SG.NOM 3SG-die PERF
'I thought he had died.' [Subordinate clausal complement]

In noun phrases, most modifiers come after the head noun.

<table>
<thead>
<tr>
<th>N</th>
<th>N_ATTRIB</th>
<th>QP</th>
</tr>
</thead>
<tbody>
<tr>
<td>[livaa [marani]</td>
<td>[e = ta]</td>
<td></td>
</tr>
<tr>
<td>female small.one one = NON.REF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'a/any/some small/young girl.'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Vernacular examples in this paper reflect the Tuam dialect of the language, unless noted otherwise. I would like to acknowledge the very helpful comments I received from the reviewers of this article and the editors of this volume, especially Kenneth McElhanon. And, of course, I am most thankful to the speakers of the Saveeng language, who have been gracious and very patient in sharing their language with me and my wife over these past nine years, especially the residents of Yaga village.


3The phonemes of the language are: /p t k b d g mb nd ng m n y v (= [j]/) l r w y (= [j]) a e i o u/. Initial ts, in a form represented orthographically as tsiau, indicates a pronunciation that varies between a laminal palatalized t [tʃ], [tsj] and [sj]. Vowel length is contrastive, and is orthographically represented via a doubling of the vowel.
3 Specifying motion and location in Tuam

3.1 Preliminaries: terminology

Leonard Talmy states:

The spatial disposition of a focal object in a scene is largely characterized in terms of a single further object, also selected within the scene, whose location and sometimes also “geometric” properties are already known (or assumed known to an addressee) and so can function as a reference object...the first object's site, path, or orientation is thus indicated in terms of the distance from or relation to the geometry of the second object. (2000a:182)

In talking about the linguistic encoding of location, it is common, following Talmy (2000a:184-185), to use the terms FIGURE and GROUND from Gestalt psychology to refer to the focal object and the reference object. The entity whose position is being specified is termed a FIGURE, while the reference entity with respect to which its position is specified is termed a GROUND. In an example like The cheese is in the refrigerator, cheese functions as the FIGURE and refrigerator functions as the GROUND.

In talking about linguistic descriptions of location, the distinction made by Marcus Kracht between “configuration” and “mode” is also helpful. Kracht characterizes these as follows:

We shall argue that locative expressions universally consist of two layers, one for the configuration and one for the mode. The configuration describes the way in which several objects are positioned with respect to each other. Configurations can be brought into correspondence with prepositions which do not indicate change of location. Examples are: at, in, on, between, in front of, etc. The mode on the other hand describes the way in which an object moves with respect to the named configuration. (2002:159)

Kracht notes that while there is no real limit to the number of possible configurations, there does seem to be a limit on the number of possible locative modes.

While there is no plausible bound on the number of configurations that a language distinguishes, the number of modes seems to be limited: there is evidence for the static, the cofinal, the coinitial, the transitory and the approximative mode. (2002:159)

While accepting the notional distinction made by Kracht, I shall use slightly different terminology. The following terms for locative mode seem more transparent than Kracht’s, and are the ones used in the remainder of this paper:
1. **SITE/POSITION** (= Static mode): the place at which something is asserted to be located or in which some event takes place.
2. **SOURCE** (= Coinitial mode): the place from which something moves.
3. **GOAL** (= Cofinal mode): the place to which something moves.
4. **PATH** (= Transitory mode): an intermediate place along the way between the source and the goal.

These modes can be graphically represented by the image-schemas in figure 1:

![Diagram of Locative Modes]

In a sentence like *I flew from Washington, D.C. to Los Angeles via Chicago*, Washington, D.C. indicates the **SOURCE** from which the **FIGURE** (= ‘I’) leaves, Los Angeles indicates the ultimate **GOAL**, and Chicago is a **PATH**, an intermediate location along the way from the **SOURCE** to the **GOAL**. In the sentence *I lived in Washington, D.C. for ten years*, Washington, D.C. would be the **SITE** or **POSITION**.

Regarding the semantic constituency of locative expressions, Kracht (2002:159) states, “From a semantic and syntactical point of view a locative expression is therefore structured as follows [M [L DP]], where M is a modaliser (specifying the mode), L a localiser (specifying the configuration) and DP a determiner phrase.” He goes on to state that morphologically M and L may be expressed by distinct forms, but are frequently combined into a single unit: a case ending or an adposition (2002:160). In the following section we shall see, however, that in Tuam the M component is more typically covert, being an inherent part of the meaning of the verb.

### 3.2 Motion verbs and inherent directional orientation of predicates

Talmy distinguishes three common typological patterns of lexicalization for verbs of motion:

1. **Motion + Co-Event**: “...the verb root expresses at once both the fact of Motion and a Co-Event, usually either the manner or the cause of the Motion. A language of this type has a whole series of verbs in common use that express motion occurring in various manners or by various causes” (2000b:27).

2. **Motion + Path**: “In the second typological pattern for the expression of motion, the verb root expresses both the fact of Motion and the Path. If a
Co-Event of Manner or Cause is expressed in the same sentence, it must be as an independent, usually adverbia\(l\) or gerundive type constituent ... \[L\]anguages of this type have a whole series of surface verbs that express motion along various paths” (2000b:49).

3. Motion + Figure: “In the third major typological pattern for the expression of Motion, the verb expresses the fact of Motion together with the Figure. Languages with this as their characteristic pattern have a whole series of surface verbs that express various kinds of objects or materials as moving or located” (2000b:57).

In Talmy (2000c:222), the first two types are termed respectively “satellite-framed” and “verb framed.” In satellite-framed languages, if one wants to express the path of motion, this path is given by some sort of a satellite. In verb-framed languages, if one wants to express the manner, this is done via some sort of subordinated verb construction.

Daniel Slobin (2006:65) proposes an additional, fourth typological pattern, which he terms “equipollent,” to account for languages where neither the path nor the manner constituent can plausibly be viewed as being subordinate to the other. This fourth typological pattern is divided into three subcategories:

1. serial verb languages \[v_{\text{MANNER}} + v_{\text{PATH}}\]
2. bipartite verbs \[[\text{manner + path}]_\text{VERB}\]
3. generic verb \[[\text{coverbMANNER} + \text{coverbPATH} + v_{\text{GENERIC}}]\].

Examples of languages in each of these four typological categories are:

1. Motion + Co-Event: Germanic, Slavic, Finno-Ugric
2. Motion + Path: Romance, Semitic, Turkic, Basque, Japanese, Korean
3. Motion + Figure: Atsugewi and some other northern Hokan languages
5. Equipollent\(_b\) (bipartite verb): Algonquian, Athabaskan
6. Equipollent\(_c\) (generic verb): the Australian language Jaminjungan

In Tuam, the locative mode/path is incorporated as a semantic component of the verb, and manner is typically expressed by a separate verb in a serialized or coordinate construction as in (5). So it would seem to be an instance of Slobin’s equipollent\(_a\) (verb serialization) category.

(5) I-laagh reki\(a\) mon i-la i-vot tooni.
3SG-walk quickly only 3SG-go 3SG-reach 3SG.LOC
‘He walked quickly over to him.’

The primary motion predicates indicating a deictic orientation are listed in table 1. Other verbs not distinguishing a deictic orientation are:
1. -ndari 'descend, go down at not so steep an angle'
2. -pul ‘leave (from)’
3. -ghau ‘go away (from), flee, run away (from)’
4. -loŋ ‘enter, go (into), go upstream, go in an inland direction’
5. -vot ‘go out (from), go downstream, in a seawards direction, happen (to) arrive at, reach’
6. peria\(^5\) ‘arrive at, reach’
7. -gharau ‘approach, go near to’
8. -mbut ‘pass through, go through (a geographic area, body of water)
9. -vool ‘cross over to the opposite side of something’
10. -taghon ‘follow, go alongside something’
11. -ŋarui ‘go, be directed towards’
12. malmali\(^6\) ‘go directly (to), go straight to, go right away to’ (i.e., with no delays or diversions)
13. -livut ‘be around, go around, encircle something, surround something’

Table 1: Primary motion predicates indicating a deictic orientation

<table>
<thead>
<tr>
<th>Deictic orientation</th>
<th>not necessarily directed to either speaker or hearer</th>
<th>directed to speaker</th>
<th>directed to hearer</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘go (to)’</td>
<td>-la</td>
<td>-lam / -nima</td>
<td>-lat</td>
</tr>
<tr>
<td>‘ascend, rise, go up vertically (to)’</td>
<td>-zaa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘ascend, rise, go up at a steep angle (to)’</td>
<td>-zala</td>
<td>-zalam</td>
<td>-zalat</td>
</tr>
<tr>
<td>‘climb, ascend, go up at not so steep an angle’</td>
<td>-nau</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘descend, go down vertically (to)’</td>
<td>-zi</td>
<td>-zilam</td>
<td>-zilat</td>
</tr>
<tr>
<td>‘descend, go down at a steep angle (to)’</td>
<td>-zila</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With the exception of malmali, all of these are more-or-less pure motion predicates, expressing various paths of motion and nothing else. They all have inherent modes (in Kracht’s sense of the term) associated with them. In most

\(^4\)Ghau is also the verb normally used to express the motion of vehicles like canoes, ships, cars, and planes.

\(^5\)Peria is a member of a class of non-inflecting verbs. The members of this class only function predicatively, but lack the normal Subject-Indexing morphology.

\(^6\)Malmali inflects like an inalienable noun (malmali-g, malmali-m, malmalimai, malmali-in, malmali-mim, malmali-si, but is always used predicatively.
Talking about motion and location in Tuam cases, the mode is coterminus; they express motion inherently directed towards some locale. So they take GOAL complements. Formally, these GOAL complements may be noun phrases (6), locative prepositional phrases (7), or oblique prepositional phrases (8).

(6) Ti-gham-u  gha  malmali-zi  ti-la  ti-vot  nugh  tana.
    3PL-take-TR CSB go.directly-3PL.GEN 3PL.go 3PL-arrive place that
    ‘They took him and went directly to that place.’

(7) Na-zaa  toozi  i-zi  eez  livuugha.
    1SG-ascend LOC.3PL 3SG-descend road middle + 3SG.GEN
    ‘I came upon them in the middle of the road.’

(8) Ti-raav  ti-la  ti-vool  pa  Margheev.
    3Pl-sail 3Pl-go 3Pl-cross.over.to.other.side OBL N.W. New.Britain
    ‘They sailed along [from Umboi Island crossing over the ocean] and
    arrived at northwest New Britain on the other side [of the ocean].’

Although -la normally takes GOAL complements, there are a few instances of it in serialized constructions where the serialization expresses a SOURCE semantic role (as in example (24) below).

The verb -garui expresses motion directed towards some locale but not yet reaching it (i.e., Kracht’s ‘approximative’ mode).

The verb -pul ‘leave (from)’ takes an obligatory NP complement expressing a SOURCE role, and the verb -ghau ‘flee, run away from, go away from’ takes an optional oblique prepositional phrase complement expressing a SOURCE role. The semantic role of the complement of the verb -vot varies, depending on the sense of the verb. When it has the sense ‘exit, go out from’ (also ‘go out from the center of the island towards the sea’), the complement exhibits a SOURCE role. When it has the sense ‘arrive at, reach’, the complement has a GOAL role. This second sense has the synonym peria. When it has the sense ‘happen’, the complement can be either BENEFACTIVE/MALEFACTIVE ‘happen to’ or CAUSAL ‘happen because of’. These could, of course, be plausibly viewed as, respectively, abstract GOALS and SOURCES. Schematic representations of the paths indicated by the primary senses of these verbs are given in figure 2.

Most of the other verbs also have an inherent locative mode/directional component as part of their meaning. Some verbs are inherently oriented away from a GROUND, while others are inherently oriented towards a GROUND. Examples of verbs inherently oriented away from the GROUND include: -ngooz ‘hide something from someone or something’, -yooj ‘hide, be hidden from’, -zir ‘send someone away, drive away, dismiss’, -walaav ‘remove, take off from’, -mus ‘wipe something off’, -pas ‘take out of’, and -san ‘snatch away from’. Examples of verbs inherently oriented toward the GROUND are: -ur ‘put’, -urla ‘believe (in)’, -gham ‘do, cause, give, take, bring’, -yambaar ‘send something to someone’, and -mbaan ‘send someone’. Other predicates are not inherently directed either towards or away from the GROUND. Instead, their complements exhibit a SITE/POSITION
semantic role. The positional verbs discussed in the next section are canonical examples of this. But there are also activity verbs which take a SITE/POSITION complement, expressing the location where the activity takes place (9). The verb -laagh ‘walk’ is one such verb.

(9) Yes ti-laagh [nugh loolo] / [taan].
3PL.NOM 3PL-walk place/village inside + 3SG.GEN / land/earth
‘They walked [around inside the village]/[on land].’

Figure 2: Schematic representations of the paths indicated by the primary motion verbs in Tuam.
Since the inherent orientation of -laagh is SITE/POSITION, it is impossible to construct a monoclausal utterance expressing “Person A walked to some destination B.” Instead, a serialized construction with a following motion verb must be used (10).

(10) Ti-laagh ti-la pa ruum tooi.
3PL-walk 3PL-go OBL house 3SG.LOC
‘They walked to his house.’

This matter of inherent directional orientation is quite constrained for most verbs; they only express a single locative mode. For example, in the case of a verb like -ghau ‘flee, go away from’, there is no way to express in a single clause an utterance like ‘They fled to their village.’ One must add an additional, usually serialized, clause with a motion predicate that is oriented towards a GOAL (11).

(11) Ti-ro i ve ti-ghau ti-la pa nugh toozi.
3PL-fear and 3PL-flee 3PL-go OBL place/village 3PL.LOC
‘They were afraid and fled away to their village.’

Similarly, one cannot express in a single clause “He went from his village to the city.” Instead, must say something like “He left his village and went to the city,” or “He was in his village and went to the city.”

With predicates expressing conveyance/transport of something, a following motion verb serialization specifies the location to which the item is being conveyed (12).

(12) I-waz serembat anoona
i-lam pa nughei.
3SG-carry.hanging.from.head sweet.potato edible.part+3SG.GEN
3SG-come OBL village
‘She carried sw. potato tubers [in a netbag hanging from her head] back here to the village.’

Knowing the inherent orientation of verbs is crucial for the correct interpretation of the semantic role of prepositional phrases. Because there are very few prepositions in the language, the grammatical meanings associated with the prepositions are quite generic. So the preposition, by itself, does not indicate much about the precise semantic role of the prepositional phrase. The meaning of the verb plus the semantic characteristics of the referent of the noun phrase governed by the preposition are much more important in determining the semantic role of the prepositional phrase (13)–(16), and (17).
(13) I i-roi pa taama ve
   3SG.NOM 3SG-afraid OBL father + 3SG.GEN and
   i-ghau pani.
   3SG-flee.from 3SG.OBL
   ‘He was afraid of his father and fled from him.’ (Oblique PP = SOURCE)

(14) Yes ti-leep pa taan ziige ite.
   3PL.NOM 3PL-be.at OBL land side+3SG.GEN other.
   ‘They live on the other side of the area of land.’
   (Oblique PP = SITE/POSITION)

(15) Yamru a-muul a-la pa nugh tsiam.
   2DU.NOM 2PL-return 2PL-go OBL place/village 2PL.LOC
   ‘The two of you go back to your [own] village.’ (Oblique PP = GOAL)

(16) Pataŋan-i tiina i-vot pani pa mboŋ.
   be.heavy-NMZ big 3SG-happen.to 3SG.OBL OBL night
   ‘Great hardship happened to him at night.’ (An Oblique PP with an
   animate referent cannot encode Site or Goal. So the sense ‘arrive, reach’
   is precluded for -vot. Here the Oblique PP pani = Malefactive.)

(17) Ti-la ti-vot toozi.
   3PL-go 3PL-appear 3SG.LOC
   ‘They went [and] reached them.’ (Locative PP can only encode a SITE
   or a GOAL. This forces the interpretation that –vot must have the
   sense ‘arrive at, reach’).

3.2.1 Wind directions, ‘up’ and ‘down’ in sea travel, and directional axes

An additional comment is in order regarding the semantics of the motion verbs
that have a vertical component in their meanings. They exhibit special senses
when used in the context of sea travel.

For Tuam speakers, there are four cardinal winds: ragh ‘southeast wind’,
yavaar ‘northwest wind’, kaagu ‘north-northeast wind’, and daudao ‘south-
southwest wind’. Of these, the most important are ragh and yavaar. There
are two primary seasons in the area. During the time of the southeast monsoon,
the weather is cooler, there are strong winds, large waves on the sea, and it is quite
rainy. The Tuam islanders were traditionally seafarers who went on long sea
voyages for trading purposes (Harding 1967). During the ragh season, however,
they were more or less trapped on their island until the weather calmed down.
The ragh season is also the time when Canarium nuts ripen, the tasty oil of which
is used the preparation of a wide range of different foods. It is also the time of
the yam harvest. The yavaar season is much warmer, and Umboi Island blocks
much of the wind for the Siassi Islanders. So the waters are calmer, and it is a
good time for fishing. The transition between the ragh and yavaar seasons is the
time for planting yams, and the end of the yavaar season (before the yams ripen) is frequently a time when food is in short supply.

The yearly cycle between ragh and yavaar has traditionally been very important for the Tuam islanders, enabling them to go on long, circuitous (and very profitable) trading voyages. Because of the importance of the winds for their daily lives, they are highly conscious of the four wind directions.

Even though the sea surface is objectively level (for a westerner), when travelling on the sea or on level land following the coast, it is almost as if, on a broad scale, the world is viewed as a large inclined plane with the high end being in the ragh direction and the low end facing in the yavaar direction. Thus, motion having some sort of an east-southeast-southwest component is considered to be ‘up’ (i.e., the verbs -zala or -nau are used), while motion having some sort of west-northwest-north-northeast component is considered to be ‘down’ (i.e., the verbs -sila or -ndari are used). This ragh/yavaar distinction is the basis of one of the primary directional axes for Tuam speakers. Table 2 lists some uses of ‘up’ and ‘down’ in narratives of sea travel and may be correlated with the locations as shown on the map.

Table 2: The use of ‘up’ and ‘down’ in narratives of sea travel

<table>
<thead>
<tr>
<th>Travelling From</th>
<th>To</th>
<th>‘up’ or down’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lablab</td>
<td>Aramot, Mutu Malau</td>
<td>up</td>
</tr>
<tr>
<td>Aramot, Mutu Malau</td>
<td>Lablab, Yaagha</td>
<td>down</td>
</tr>
<tr>
<td>Mandok Is.</td>
<td>Aronai Is., Bunsil Station</td>
<td>down</td>
</tr>
<tr>
<td>Lablab</td>
<td>Marile, Kampalap, Kabi, Sakar Is.</td>
<td>down</td>
</tr>
<tr>
<td>Kampalap, Marile</td>
<td>Lablab</td>
<td>up</td>
</tr>
</tbody>
</table>
Map: Saveeng/Metu Language Area
Clockwise motion paralleling the eastern coast of Umboi Island is expressed as going ‘upwards’ until one reaches the very southernmost tip of the island. From that point onwards, clockwise motion parallel to the southern coast is expressed as going ‘down’.

Similarly, counterclockwise motion along the eastern and northern coast is expressed as going ‘down’ until one reaches the northwest tip of the island. From that point onwards, one goes ‘up’ until the southernmost tip is reached. This is true for travel on the sea, as well as travelling on level land following the coastline. If, however, the person walking on land and following the coastline encounters real hills or valleys, then -zala/-nau will be used to talk about going up, and -zila/-ndari will be used to talk about going down.

The view of the world reflected in such language recalls somewhat Levinson’s (2003:148) observations about the Tzeltal speakers of Chiapas, Mexico. He notes that in talking about space, they reflect a coordinate system in which their world, too, is viewed as an idealized inclined plane pointed down at 345 degrees north.

Special uses of forms expressing the notions of ‘up’ and ‘down’ are not uncommon in the Austronesian world. Françoise Ozanne-Rivierre (1997:84-85) cites data from a number of Polynesian languages in which the expression for ‘up’ is associated with ‘east’, while the expression for ‘down’ is associated with ‘west’ (85), noting Henri Lavondes’ (1983) hypothesis that this association is due to a weather pattern in which the prevailing wind is easterly. In the Tabal language, which is spoken in the northern Maluku region of Indonesia, the directional for upwards movement expresses anti-clockwise southerly movement along the west coast of Makian island, while the directional for upwards movement expresses clockwise southerly movement on the east coast of the island (Bowden 1997:262-264). Tuam seems to be another instance of this association.

The Longgu language of the Solomon Islands also has a primary southeast-northwest directional axis, expressed by the two directional terms ala’a and toli. Deborah Hill (1997:106) glosses these as ‘east’ and ‘west’, however, because she says that Longgu speakers indicate that the two terms are derived from the direction of the rising and setting sun.

A second directional axis is indicated in Tuam by the remaining two wind terms: kaagu ‘northeast/east wind’, daudao ‘southwest/south wind’. Use of this axis is relatively rare, however. Much more common is the ‘entering/inland/upstream’ axis versus the ‘exiting/seawards/downstream axis’. For horizontal travel, this inland-seawards axis seems to be more salient than the northwest-southeast axis. So if it is possible to conceive of motion as somehow being directed radially inward towards the largest body of land in the area or radially outward from the center of that body of land, then the motion will be expressed using the verbs -looŋ ‘enter (an enclosed two or three dimensional space), go upstream, go inland’ and -vot ‘exit’ (from an enclosed two or three dimensional space), ‘go downstream, go away from land further out to sea’, even if the motion also happens to be in a southeast or northwest direction. In the Tuam language area, the large island of Umboi is clearly the focal body of land. Thus, travelling from Aramot Island, Mutu Malau Island, or Mandok Island to
Tuam Island will be expressed with the verb -vot, while motion from Tuam Island back to those inner islands will be expressed with -looŋ. Similarly, travelling from the shore of Umboi Island near Yangla village to Aramot Island will be expressed with the verb -vot, even though the motion is in a southeast direction.

Where motion on land is simultaneously downwards and seawards, or simultaneously upwards and inland, then there are two equally acceptable possibilities: -vot ‘go out’/-zila ‘go down’ and -looŋ’go in’/-zala ‘go up’.

A number of the papers in the volume edited by Gunter Senft (1997) demonstrate the importance of the inland/seawards distinction for Austronesian languages. Ozanne-Rivierre states (1997:84) that the spatial orientation systems of Oceanic languages commonly reflect such distinctions as: (1) inland/seaward, (2) upstream/downstream (along a river valley), (3) toward the coast/high seas, and (4) inside/outside (of a house). She notes that in many New Caledonian languages the terms for ‘up’ and ‘down’ subsume all of these categories. In Tuam, too, all four of these semantic oppositions are conflated. However, the forms expressing them, -looŋ and -vot, are distinct from those expressing ‘up’ and ‘down’. In this respect, it resembles the Longgu language of the Solomon Islands. Deborah Hill (1997:106) notes that the inland/seawards axis is expressed by the terms longa ‘inland’ and asi ‘sea’. She claims that whereas Longgu speakers make use of the ‘east-west’ axis in descriptions of locations both within and without the language area, the inland-seawards axis only applies to locations within the Longgu language area itself (1997:116).

This is definitely not the case in Tuam. Speakers of the language make use of both the southeast-northwest axis and the inland-seawards axis in descriptions of locations both within and without the language area. Thus they talk about ‘entering/approaching the shore’ (-looŋ) and ‘exiting/leaving from the shore’ (-vot) when telling stories about travelling by ship to cities like Lae, Madang, and Wewak, which are geographically quite removed from the Tuam language area. And when Tuam co-workers were translating chapter 27 in the book of Acts in the Bible—a detailed account of the apostle Paul’s sea voyage which ends in a disastrous shipwreck—saw maps of the Mediterranean Sea and the route of the voyage, they easily transferred their whole locative system to that new setting as they were translating.

Robert Blust (1997:39) states that the reconstructed Proto-Malayo-Polynesian system of macro-spatial orientation makes reference to two directional axes: (1) southeast-northwest monsoons and (2) land-sea. Tuam obviously reflects this system.

3.2.2 Morphosyntactic means of specifying location in Tuam

3.2.2.1 Prepositions

The most semantically generic formal means of specifying location in the language is with prepositions. An important distinction is made between
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animate—especially human—locations and inanimate ones. Animate sites (18) and goals (19) are both encoded as prepositional phrases headed by the locative preposition to ‘at, to, with’ or the locative pronouns (which transparently consist of to plus a pronominal formative).

(18) Maet i-gheen to Konili.
    money 3SG-lie LOC Konili
    ‘Konili has the money.’ (Literally, ‘The money is at/with Konili.’)

(19) Olman tana i-la to naatu, ve i-sav-ia
    adult that 3SG-go LOC child +3SG.GEN and 3SG-say-APPL
    sav-e-en raraate mon pani.
    speak-SV-NMZ same only 3SG.OBL
    ‘That fellow went to his child and said the same thing to him.’

On their own, the locative preposition and locative pronoun never express a source semantic role (20).

(20) I i-ghau [payau/**tsiau].
    3SG.NOM 3SG-flee.away.from 1SG.OBL/**1SG.LOC
    ‘He fled away from me.’

However, in combination with the motion verb –la ‘go’ in serialized constructions, the combination ila to has the potential of expressing either goals (21) or sources (22).

(21) I-ghur gabua tana i-la to naatu
    3SG-put thing that 3SG-go LOC child +3SG.GEN
    gha i-baad-o.
    CSB 3SG-carry-TR
    ‘He gave that thing to his son, and he carried it.’

(22) Na-ghol taan tane i-la to yes Birik-a.
    1SG-buy land this 3SG-go LOC PL Birik-ASS
    ‘I bought this land from the people of Birik [village].’

Prepositional phrases headed by the all-purpose oblique preposition pa and the oblique pronouns serve as the default encoding for the vast majority of non-core arguments. They potentially encode a wide variety of semantic roles including: time, recipient, addressee, benefactive/malefactive, instrument, experiential stimulus, cause, and purpose/‘for’, as well as more loosely associative notions like ‘concerning, regarding, about’. With regard to location, they are used with non-animate goals (23), and both inanimate (24) and animate (25) sources.
A third, more collocationally restricted locative preposition is ta. It commonly governs deictic locative adverbs like sene ‘here’, sena ‘there (near the hearer)’, sewe ‘there (away from both speaker and hearer)’, saaŋa ‘above here’, siiŋa ‘below here’, as well as place names, locative nouns like nugh ‘place’, and temporal adverbs. Like the preposition to, it never encodes SOURCES; it is only used to encode SITES/POSITIONS and GOALS (26) and (27).

3.2.2.2 Positional verbs

Positional verbs (termed ‘existential verbs’ by some authors) are the primary means for asserting the locations of things. Each of them has the semantic component “X is at,” but they also have additional components which express the nature of the FIGURE—whether it is a living creature or not—and its orientation. The subjects of these verbs encode FIGURES, and their complements encode GROUNDS that functioning as SITES/POSITIONS; i.e., places where the FIGURE is located. If the GROUND’S referent is inanimate, it is expressed as either a locative object (28), or a prepositional phrase headed by the preposition ta (29). If the GROUND’S referent is animate, then it must be expressed by a prepositional phrase headed by the locative preposition to or a locative pronoun (30).

(23) I-la pa su to i-il aniŋ ziiga.
    3SG-go OBL forest PURP 3SG-search.for food game + 3SG.GEN
    ‘He went to the forest to search for game to go with the food.’ (GOAL)

(24) I-zii r zi ti-ghau pa nugh tooni.
    3PL-send.away 3PL.ACC 3PL-go.away OBL place 3SG.LOC
    ‘He sent them away from his village.’ (SOURCE)

(25) Na-ŋguaz natu-g i-ghau pazi,
    1SG-hide.to.save child-1SG.GEN 3SG-go.away 3PL.OBL
    leso ti-rav-u sov.
    ‘I hid my child from them.’ (SOURCE) ‘so they would not hit him/her.’

(26) Ti-leep ta saaŋa we.
    3PL-be.at LOC above REMOTE
    ‘They are way up there.’

(27) U-ghe u-muul u-la ta sewe?
    2SG-want 2SG-return 2SG-go LOC over.there
    ‘Do you (SG) want to go back there?’

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(28) Maet eta i-gheen ruum loolo mako.
    stone/money NON.REF 3SG-lie house inside + 3SG.GEN not
    ‘There is no money in the house.’ (Locative Object)
(29) Nugh tana i-gheen ta loloz we.
   Place that 3SG-lie LOC mountain REMOTE
   ‘That place is way up on the mountain.’

(30) Ŋgar tiina i-gheen tooni.
   thinking/knowledge big.one 3SG-lie 3SG.LOC
   ‘He has a lot of knowledge.’ (lit. ‘Much thinking lies at/with him’)

The principle verbs expressing position are:

1. -leep ‘be at/in, live, exist’ (of people, animals, and other creatures that
   are thought of as being alive). It also can refer to living creatures in
   any posture: sitting, standing, sleeping, etc.
2. -gheen ‘lie’, ‘stay’, ‘be at’ (for figures that are oriented horizontally
   with regard to the earth’s surface and are conceived of as having tops
   not significantly above their bottoms). It also expresses existence for
   inanimate referents—money, knowledge, kerosene, trouble. It
   explicitly indicates that human beings or animals are lying down,
   sleeping, dead.
3. -yooz ‘stand, be at, exist’ (for referents that are conceived of as having
   tops that are significantly above their bottoms like trees, houses,
   chairs, tables, clouds, and cars). It is also used of living creatures that
   are standing, or who have been walking and then come to a halt and
   remain in a standing position. It has a number of more idiomatic uses.
   For example things that are put aside in reserve for some future
   purpose are said to ‘stand’. A talk or message which is viewed as
   having some sort of on-going authority is said to ‘stand’. Candidates
   seeking election to some office are said to ‘stand’. Advocates ‘stand’ for
   the people whose interests they promote.
4. -pot ‘exist, be at’ (of things floating on the top part—i.e., surface—of a
   body of water like boats and canoes, or of liquids that are in some sort
   of container)
5. -tuuk ‘hang down from’
6. -paak ‘be attached to, be in contact with, be touching, be flat against’
   (where multiple points on the FIGURE and GROUND are in contact)

When -leep occurs without a locative complement, it expresses the notion of
‘live’, or the ‘state of being alive’ (31).

(31) Timbu-m i-lepleep, ma i-maat wa?
   grandrelative-2SG.GEN 3SG-live + RED or 3SG-die PERF
   ‘Is your (SG) grandfather alive, or has he died.’

   -Leep occurs in presentative constructions in narrative discourses, introducing
   key participants (32).
(32) Nugh ṭana, ɲeer ee i-leleep, eeza Mote.
    place that man one 3SG-be.at name + 3SG.GEN Mote
    'In that place, there was a man named Mote.'

With the positional verbs, the GROUND may also be expressed by a serialized motion verb construction following the positional verb (33), (34), (35), and (36).

(33) Mbiaañ i-la i-tuuk i-la ai booga.
    flying.fox 3SG-go 3SG-hang.from 3SG-go tree branch + 3SG.GEN
    'The flying fox went and hanged [upside down] from a tree branch.'

(34) Nuz i-potpot i-la te paavo.
    squid 3SG-float + RED 3SG-go ocean surface + 3SG.GEN
    'The squid floats on the surface of the ocean.'

(35) Yaa i-pot i-la tin patu-zi.
    water 3SG-be.at 3SG-go tin container-3PL.GEN
    'There is water in the tins.'

(36) Boboim i-paak i-la rumei ziige.
    butterfly 3SG- 3SG-go clan.house side + 3SG.GEN
    'The butterfly is on the side of the clan house.'

The choice of which motion verb to use is determined to some extent by the geometry of the situation. The generic motion verb la 'go' is the unmarked choice; it can be used with almost any sort of configuration of FIGURE and GROUND.

When the FIGURE is physically touching the top of the GROUND or above the top part of the GROUND, an alternative to la is the compound motion verb za-la 'ascend-go'. Either of the two verbs is used in conjunction with the inalienable locational noun paavo 'upper surface' (37) and (38).

(37) i-la te paavo
    3SG-go sea/ocean upper surface + 3SG. GEN
    'go on/above the (surface of the) sea'

(38) i-la/i-zala waan paavo
    3SG-go/3SG-ascend.go canoe upper surface + 3SG. GEN
    'go on the canoe'

If the GROUND is conceived of as a container having two or three dimensions and the FIGURE is inside the GROUND, then either the verb -la 'go' or the serialized sequence -lool -la 'enter - go' is used, often with the inalienable locational noun loolo 'inside' (39), (40) and (41).
The distinction between the use of the motion verbs -la ‘go’ and -zi ‘descend’ in locative serializations expressing sites is somewhat difficult to pin down. Judgments by native speakers frequently vary as to which is a better choice in particular contexts. However, zi seems to be the preferred choice for sites whose edges are far apart and whose boundaries are ill-defined, whereas la is preferred when the site is more compact (i.e., its edges are closer together) and has well-defined boundaries. Thus, zi is preferred with names of large regions like America, Jerusalem, Papua New Guinea, (which are often preceded by the noun nugh ‘place’), the noun taan ‘ground, land, earth’ (when it has the sense ‘the whole earth/world’ or ‘a large area of land’), sisi ‘island’, sambam ‘heaven’, the noun nugh plus a demonstrative when it is used as an anaphoric substitute, and the deictic locative adverbs sene ‘here’, sena ‘there near you’ and sewe ‘over there (away from both you and me)’.

The serial verb -la, on the other hand, is preferred for grounds that are smaller and whose boundaries are relatively well-defined. Such grounds would include entities like: rau ‘leaf, letter’, yaa ‘water (i.e., a particular body of freshwater)’, river, stream’, eez livuugha ‘middle of the road’, um ‘garden’, niima ‘hand, arm’, aavo ‘mouth’, niia ‘position’, ai ‘tree, piece of wood’, taitai ‘cloud’, puugh ‘net’. -La is favored with locational nouns like: ziige ‘edge/side of something’, naagho ‘face/front of something’, muuri ‘outside/back of something’, paavo ‘top surface of something, area above something’, saamba ‘bottom surface of something, area underneath something’, loolo ‘inside’, puughu ‘base of something’. The locational noun saamba ‘bottom, area underneath’ is used in conjunction with the noun sambam ‘heaven’ in the phrase sambam saamba ‘underneath heaven’ to refer to: (1) the sky (location of flying birds and clouds) and (2) outer space (location of the sun, moon and stars). Even though this would seem to be a somewhat ill-defined ground, either the verb -la ‘go’ or -zala ‘ascend’ co-occur with it in serial constructions, because of the presence of the locational noun. -La is also used with nouns referring to entities that are more abstract like tutuun ‘law’, ngar ‘thinking, behavior’, saveen ‘speech, talk, words’.
3.2.2.3 Demonstratives and deictic locative adverbs

Deictic forms are very frequently used to locate the GROUND, especially when it is reasonably close to the speaker or hearer.

The deictic locative adverbs and the demonstratives evoke a relative spatial framework, locating a region in space with respect to the speaker or some other viewpoint that functions as the GROUND. Three of the adverbs are purely deictic. The adverbs and the respective demonstratives are: *sene* and *tane* ‘here, this place (near the speaker)’, *senha* and *tana* ‘there, that place (near the hearer), *sewe* and *tawe* (over there away from both the speaker and the hearer). Two of the adverbs add a vertical component: *siiŋa* ‘below here / this place’ and *saanja* ‘above here /this place’. The remaining two, *potla* and *loonga*, indicate a directional vector from the speaker/viewpoint either in a seawards direction, or in an inland direction. The importance of the inland-seaward directional axis for Oceanic languages in general has already been noted above. The deictic formative *we* (remote from speaker and hearer) can be added to *siiŋa, saanja, loonga*, and *potla* and the corresponding *e* can be added to the demonstrative *tawe* to indicate a greater degree of remoteness.

The locative adverbs occur by themselves as complements of the positional verbs (42), or as the complement of a serial verb construction following a positional verb (43).

(42) I i-leep sene mako.
    3SG.NOM 3SG-be.at here not
    ‘He is not here.’

(43) Ee i-leep saanja, ve ite i-leep
    One 3SG-be.at above and other 3SG-be.at
    i-zi-la siiŋa.
    3SG-descend-go below
    ‘One was above, and the other was down below.’

When the entity serving as the GROUND is expressed by a noun phrase, then the addition of a demonstrative commonly serves to narrow down the location of the entity with respect to the deictic center (44). Many times, use of the demonstratives is accompanied with some sort of pointing gesture. Various combinations of lips, eyes, eyebrows, and the head are used to point to things relatively nearby, whereas hands are used to point to things further away.

(44) I i-leep ruum tawe.
    3SG.NOM 3SG-be.at house that.over.there
    ‘He is at that house over there (away from both you and me).’

In addition to their extra-textual/situational usage, all three of the deictics are used textually to track referents in discourse. *Tane* is used for near anaphoric
and cataphoric reference (45), *tawe* is used for the first instance of more distal anaphoric reference with non-temporal nouns and *tana* for subsequent instances (46). *Tana* is also the demonstrative normally used with temporal nouns having anaphoric reference. In reported dialogues in narrative discourses, the three demonstratives exhibit their situational functions of referring to entities near the speaker, or the hearer, or remote from both in the situational context of the embedded dialogue.

(45) Ti-loonŋ sav-e-en tane le ate-zi yavyav kat.
3PL-hear say-SV-NMZ this TEL liver-3PL.GEN hot very
‘When they heard this talk (refers to a quotation that immediately precedes this sentence in the discourse), they became very angry.’

(46) I-muul pa mboŋ ee-mon
3SG-return OBL night one-only
that i-lam peria Tuam muul.
3SG-come reach Tuam.Island again
‘He returned that same night; he came back to Tuam Island again.’

3.2.2.4 Proximity adverbs

With the positional verbs, it is possible to specify varying degrees of proximity of the FIGURE to the GROUND by the use of adverbs like: *tatangan* ‘near’ (47), *soghan* ‘away from’ (48), and *malau* ‘far from’ (also ‘for a long time’). Absence of such adverbs indicates that the FIGURE is located right at the GROUND. So there are four degrees of proximity: ‘right at’, ‘near’, ‘away from’, ‘far from’.

(47) Ti-yooz tatangan pani.
3PL-stand near OBL-3SG
‘They stood near him.’

2PL-stay away OBL-3SG 2PL-approach-TR PROHIB
‘Stay away from him. Don’t go near him.’

Note that when the proximity adverbs are used, the GROUND is always expressed by an oblique pronoun or oblique prepositional phrase headed by the preposition *pa*, even if the referent is animate.

A serialized construction with the verb *-gharau* ‘approach’ is an alternative means of encoding close proximity that is actually more common than the adverb *tatangan*. Note that the GROUND is expressed by the locative Object of the serial verb (49).

(49) Rorov i-lepleep i-gharau nari.
fish.type 3SG-be.at + RED 3SG-approach shore
‘The rorov fish lives near the shore.’
3.2.2.5 Locational nouns

As is the case in many Oceanic languages (Bowden 1992), to more precisely specify a directional vector from the ground to the figure, a number of locational nouns indicating particular parts or facets of the ground are used. Use of such terms evokes an intrinsic frame of reference.

The locational nouns are nearly all members of the inalienable noun form class. Such nouns are normally inflected with a set of suffixes indicating the person and number of an associated genitive argument. The identity of the genitive may be further specified via the addition of preceding NP specifier (50).

(50) NP specifier Inalienable Head Noun
Maet i-gheen [ruum loolo].
stone/money 3SG-lie house inside + 3SG.GEN
‘The money is inside the house.’

The most important inalienable locational nouns in the language are the following:

1. naagho ‘face, appearance, front part of something, area in front of something’
2. muuri ‘area outside, behind something’
3. loolo ‘area inside something, interior’
4. ziige ‘side, edge, area to the side of’
5. paavo ‘upper surface, area above a broad and flat entity’
6. daaba ‘head, topmost part’ (of heads of people and animals, tops of mountains, roof ridge, or topmost part of a house)
7. samba ‘bottom surface, area underneath something’
8. puughu ‘base of something, area near the base of something which has radial symmetry, with no clear front, back, or sides’
9. unduuva ‘top part’ (of trees)
10. mboole ‘buttocks, back part of something, area behind something’ (the sense ‘behind’ seems to apply only to houses and vehicles like canoes, cars, and planes)
11. livuugha ‘middle part of something’ (of tree trunks, human torsos, the area between the beginning and end of a path or road, etc.)
12. maata ‘eye, area in front of something, front part or beginning of something’
13. sooso ‘space between, among’

7 One candidate for an alienable locational noun is the form bodbodaŋ ‘center, middle, between’. It takes a Locative PP complement, yielding expressions like: bodbodaŋ to uum ‘center/middle of the garden’, bodbodaŋ to Margheev ve Tindau ‘between northwest New Britain (= Margheev) and southwest New Britain (= Tindau)’.
8 Third person singular forms of inalienable nouns, however, exhibit a lengthening of the penultimate vowel of the noun rather than the addition of a suffix. Items 1-13 listed following (50) are all third person singular forms.
For two and three dimensional entities having clearly defined fronts (e.g., people, animals, houses, canoes, cars, enclosed areas with a single gate etc.), the term *naagho* indicates the front part of the entity, as well as the area extending radially outwards from the center of the entity through that front part. What constitutes the ‘front’ seems to be determined by: 1) the eyes (for people, animals, birds, and fish), 2) characteristic direction of motion (for vehicles like canoes, cars, and planes), and 3) entrances (for buildings and enclosed areas). Thus, even though crabs move sideways, their front is the part where the eyes are. Many trees are conceived of as having fronts as well, the front being the side people would normally climb up. If a tree stands at even a slight angle, the uppermost surface of the trunk would be its front. The trunks of coconut palms normally exhibit some curvature. The side near the base which is maximally concave facing upwards is the ‘front’.

To express directional orientation of FIGURES having clearly defined faces/fronts, the nouns *naagho* ‘face, front’ and *maata* ‘eye’ are used in conjunction with motion verbs and spatial landmarks. These spatial landmarks are commonly place names (51), people’s personal names, or speech act participants (52).

(51)  
Ti-pa-duduŋ waŋ leso naagho  
i-ŋaru i Malai.  
3PL-CAUSE-be.correct canoe so.that front+3SG.GEN -  
3SG-go.toward Malai.  
‘They straightened the canoe so that it was running towards Malai Island.’

(52)  
Mata-zi i-lam paıt.  
eye-3PL.GEN 3SG-come 1PL.INC.OBL  
‘They are facing towards us (INC).’

Given that something has a clear front, the backside (*muuri*) is determined as the side opposite from the front. The remaining sides are termed *ziige*. The terms *naagho* and *ziige* refer to parts of the entity (53), as well as to spatial regions projecting radially outward from the center of the entity through those parts (54).

(53)  
Boboin i-paak i-la rumei ziige.  
3SG-against 3SG-go clan.house side+3SG.GEN  
‘A butterfly is on the side of the clan house.’ (The verb -paak expresses contact between surfaces/multiple points.)

(54)  
Tamta-mon ti-leep i-la rumei ziige.  
3PL-be.at 3SG-go clan.house side+3SG.GEN  
‘People are staying beside the clan house.’
The term *ziige* ‘side’ has both a wider and narrower sense. It refers to any side of an object (i.e., front side and back sides, as well as the left or right side) or more narrowly to just the sides other than the front and back sides. It also refers to any portion of the sides of objects that exhibit genuine radial symmetry (e.g., a drum of petrol that is standing up), as well as the area projecting away from the side. The term *puughu* ‘base’ more commonly refers to the bottom portion of vertical, radial objects that are standing. Thus, to say that something is on the ground very near a tree, with no need to be more specific, then the expression *ai puughu* ‘base of the tree’ may be used.

The term *muuri* is somewhat different, in that it does not refer to a part of an entity. It only refers to a region of space, and has two senses: ‘the region behind an entity’ (55), or ‘the region outside an entity and surrounding it’ (56). Different terms, *nduume* ‘back’ (for people) and *mboole* ‘buttocks/behind’ (for animals, houses, and vehicles) are used to refer to the hindmost part of something (57).

(55) Ra na-loon bob-a-an tiina ee pa muri-g.
then 1SG-hear call-SV-NMZ big one OBL behind-1SG.GEN
‘Then I heard a loud cry coming from behind me.’

(56) Suen-u-un i-sov, ve tamtamon ti-vot ti-la
pray-TR-NMZ 3SG-end and people 3PL-go.out 3P-go
outside+3SG.GEN
‘After the worship service ended, people [inside the church building] went outside.’

(57) Ruum toozi i-yooz ruum tsiau mboole.
house LOC.3PL 3SG-stand house LOC.1SG behind+3SG.GEN
‘Their house is behind my house.’

For trees which are conceived of as having a front, sides, and a back, the back of the tree is referred to by the expression *marmaar eez tooni* ‘road of the marmaar lizard’—a largish, green lizard. In order to conceal itself, the marmaar tends to climb up the bottom-most side of trees whose trunks are inclined.

To distinguish between the two sides of entities having fronts and backs, the expressions *ziige ila pa tapir* ‘side it.goes to right’9 and *ziige ila pa ngas* ‘side it.goes to left’ can be used in a relative, or viewer-centered frame of reference. This is a means of extending intrinsic frames of reference by assigning pseudo-intrinsic facets to things which would otherwise lack them. In Tuam, the directions right and left correspond to the right and left side of the viewer as he faces the entity.

A relative frame of reference is also used to distinguish the near and far sides of things. These are indicated by the expressions *ziige ilam vene* ‘side it.comes like.this’ and *ziige ila veve* ‘side it.goes like.that.over.there’ (58).

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9The term *tapir* ‘right’ transparently resembles the inalienable noun *tapiri* ‘power, strength’. 
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(58) Ruum tooni i-yooz rumei ziige
house LOC-3SG 3SG-stand clan.house side+3SG.GEN
[i-lam ve-ne] / [i-la ve-ve10].
3SG-come like-this 3SG-go like-that.over.there
‘His house stands on [this side near me/us]/[the far side away from me/us] of the clan house.’

If the entity is located crosswise on a slope, it is also possible to distinguish the two sides by expressions like ziige tau igheen siinja ‘side that lies down’ and ziige tau igheen saaja ‘side that lies above’. Another possibility is to use the deictic locative adverbs potla ‘seawards’ and looja ‘inland’, i.e., ziige tau igheen potla ‘side that is toward the sea from here’ and ziige tau igheen looja ‘inland side from here’.


(59) Ti-leep rumei ziige ila pa daudao.
3PL-be.at clan.house side+3SG.GEN 3SG-go OBL southwest.wind
‘They are by the southwest side of the clan house.’

As was noted above, in the case of objects having radial symmetry (and thus lacking distinct fronts, backs, and sides) the term puughu is preferred (60).

(60) Pelpeel igheen wawai puughu i-la pa ragh.
basket 3SG-lie mango base+3SG.GEN 3SG-go OBL southeast.wind
‘The basket is at the southeast side of the base of the mango tree.’

Use of these locational nouns can be further modulated by the addition of one of the proximity adverbs tataŋgan ‘near’, soghan ‘apart’, malau ‘far’, or by a serial verb construction with the verb gharau ‘approach’ to express decreasing degrees of proximity between the FIGURE and the GROUND as shown in table 3.

Table 3: Locational nouns modulated to indicate degrees of proximity

<table>
<thead>
<tr>
<th>Igheen wawai puughu</th>
<th>‘It is right at the base of the mango tree.’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Igheen tataŋgan pa wawai puughu. / Igheen igharau wawai puughu.</td>
<td>‘It is near the base of mango tree.’</td>
</tr>
<tr>
<td>Igheen soghan pa wawai puughu.</td>
<td>‘It is somewhat away from the base of the mango tree.’</td>
</tr>
<tr>
<td>Igheen malau pa wawai puughu.</td>
<td>‘It is far from the base of the mango tree.’</td>
</tr>
<tr>
<td>Igheen malau kat pa wawai puughu.</td>
<td>‘It is very far away from the mango tree.’</td>
</tr>
</tbody>
</table>

10The ve meaning ‘that over there’ is the distal deictic we. Thus, weve seems to reflect a form ve-we with irregular morphophonological assimilation of /w/ to the preceding /v/.
An illustration of a maximally specified location is in (61).

(61) I-gheen i-gharau wawai puughu i-la
    3SG-lie 3SG-approach mango base + 3SG.GEN 3SG-go
    pa    ragh.
    OBL southeast.wind

‘It is near the base of the mango [tree on the side] toward the southeast.

An example like this, however, is highly artificial. Such a sentence would be produced only when speakers are confronted with a range of extremely similar locative scenarios and forced to distinguish them.

4 Spatial frames of reference

From the preceding discussion of Tuam locative expressions, it can be seen that speakers of the language make use of all three types of spatial frameworks. This accords with Senft’s (2001:545) hypothesis:

The relative, intrinsic, and absolute frames of reference can all be found and can be utilized for verbal spatial references in a given language. However, languages seem to prefer certain frames of reference in particular contexts that ask for different spatial task.

Locational nouns like naagho ‘front’, ziige ‘side’, paavo ‘upper surface’, and puughu ‘base’ evoke an intrinsic frame of reference. They indicate different parts of something which then define a spatial region which includes that part and the area projected outward from it. Muuri ‘area behind something’ and saamba ‘area underneath something’ are somewhat different, since they do not refer to actual parts of things. Instead they refer only to regions of space.

Demonstratives like tane ‘this one near me’, tana ‘that one near you’, tawe ‘that one away from both you and me’, and deictic locative adverbs like sene ‘here, this place’, sena ‘there, that place near you’, sewe ‘over there away from me and you’, saaŋa ‘above here/this place’, siinga ‘below here/this place’, potla ‘in a seawards direction from here/this place’, and loonga ‘in an inland direction from here/this place’ evoke a relative system with coordinates centered on the speaker or some other viewpoint. Similarly, with expressions like ziige ila vene ‘side it.comes like.this’, ziige ila veve ‘side it.goes like.that.over.there’, ziige ila pa tapiir ‘side it.goes to the.right’, and ziige ila pa ṣas ‘side it.goes to the.left’, ‘come’, ‘go’, ‘left’, and ‘right’ are defined with respect to the speaker or some other viewpoint. Use of this kind of frame of reference is very common in Tuam.

As already noted, the absolute system is based on four cardinal wind directions: ragh ‘wind from the southeast’, yavaar ‘wind from the northwest’, kaagu ‘wind from the northeast/east’, and daudo ‘wind from the southwest/south’. The motivation for highlighting the southeast and northwest winds in the lexicon is plain. Both of these winds persist for long periods of time during which villagers engage in very different sets of activities. The motivation for
lexically highlighting the other two winds is not quite as obvious, but it may well have to do with the traditional trading voyages of the Tuam villagers. One of their most important trading destinations was the island of New Britain, which is located due east from Umboi Island and northeast from Tuam Island. A kaagu wind makes it extremely difficult to sail to New Britain, but of course speeds one back home from New Britain to Umboi or Tuam Island. Similarly, the daudao wind would have been especially important when crossing over between Umboi and the mainland of the Huon peninsula to the east.

Although speakers of the language make use of all three types of spatial frameworks, the intrinsic and relative frameworks are the most common in everyday speech. As such, Tuam provides further evidence for the importance of egocentric spatial frameworks. The absolute frame of reference in Tuam that is based on wind directions is used much less frequently and exhibits scalar restrictions which the other two frames of reference lack. It is only used outdoors and at larger scales. So it would not be used inside houses or in small scale spatial contexts like distinguishing identical items on a table top. In such instances, the demonstratives, deictic locative adverbs, deictic motion verbs, and the terms ṇas ‘left’ and tapir ‘right’ would be used in expressions such as those in (62).

(62) Ugham rubruub… ‘Take the cup…
...tane. that is near me.’
...tana. that is near you.’
...tawe. that is over there.’
...tau igheen ilam vene. that is more this way.’
...tau igheen ila veve. that is more that way.’
...tau igheen ila pa tapir. on the right.’

The deictic locative adverbs siiŋa and saŋa can be used both inside and outside houses and at small and large scales, but the directional adverbs potla ‘in seawards direction from here’ and looŋa ‘inland from here’ and the special function of the vertical motion verbs to express southeasterly or northwesterly motion only apply to outdoor, larger scale locations.

5 Economy in locative descriptions

This paper has discussed a number of different possibilities for describing location and motion in the Tuam language, which enable the speakers to state quite specifically where something is, where it is going to, or where it is coming from. In normal conversation, however, it is rarely necessary to indicate locations with such specificity. Instead, speakers typically use the most economical means possible. The most common constructions for asserting location in Tuam are:
1. position verb NP/PP (with or without demonstratives)
2. position verb (serial motion verb) (ta) deictic locative adverb
3. position verb [NP Locational N]
4. position verb [proximity adverb POblique]/[-gharu ‘approach’ NP]

Distinguishing right and left hand sides, or southeast and northeast sides is very rare in ordinary conversation. If someone is told that a knife is by the base of a tree, that is normally sufficient for him to be able to locate the knife, assuming that the tree itself is locatable.

In contrast, the elaborate motion verb system and lack of a general all-purpose motion verb, forces continual careful monitoring of direction. This can be seen in a typical example, where five different motion verbs are used in one sentence (63).

(63) Ti-laagh ti-la le ti-nau ti-zala
loloz daaba, ra ti-ndari
mountain head + 3SG.GEN then 3PL-go.down.at.low.angle
‘They walked along and went up to the mountain, and then came over the top and started descending.’

References