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Body divisions in Great Andamanese

Possessive classification, the semantics of inherency and grammaticalization*

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Great Andamanese has a dual semantic system for body part categorization: one that is expressed in various terms for concrete body parts and another more abstract one that is expressed in grammaticalized morphemes represented in seven body division possessive classes that classify body part terms based on the area of the body they occupy. These classes also classify other inalienables, with some semantic connection to the body part system. Further, body part semantics pervade the lexical and grammatical system of the language as this dual system is extended to other form classes, viz. verbs, adjectives and adverbs. The body division class markers occur as proclitics attached to all content word classes. Thus, all content words in Great Andamanese can easily be divided into bound and free, the former necessarily imbued with the semantics of "inherency" and "dependency". I conclude by proposing that the Great Andamanese conceptualize their world through these interdependencies and hence the grammar of the language encodes this important phenomenon in every part of speech expressing referential, attributive and predicative meaning.

0.1 Introduction¹

The Andaman Islands are a cluster of approximately 250 islands, running from north to south, and located southeast of the Indian subcontinent in the Bay of Bengal. They are separated from the Malay Peninsula by the Andaman Sea, an extension of the Bay of Bengal, and are part of the Indian union territory of the Andaman and Nicobar Islands (Map 1). Geographically, the Andaman Islands are closer to Myanmar and Indonesia than to mainland India. However, no contact between the Andamanese and the populations of the neighboring countries can be established at the present time. The capital city of the Andaman Islands is Port Blair and is situated in the south of the Islands at a distance of 1255 km from



Map 1.

Kolkata. Present-day Great Andamanese (PGA henceforth) is spoken in parts of Port Blair and on Strait Island which is 53 nautical miles away from Port Blair.

Great Andamanese constitutes the sixth language family of India (Abbi 2006a, 2006b, 2009, Blevins 2007). The other five language families are Indo-Aryan, Dravidian, Tibeto-Burman, Austroasiatic, and Austronesian. The status of "Austronesian" categorizing Onge-Jarawa (argued by Blevins 2007 as the Ongan group) is far from universally accepted. Although it is not conclusively established whether



Figure 1. Present Great Andamanese and its regional varieties

the Jarawa-Onge group belongs to Austronesian, its typological and genealogical distinction from Great Andamanese has been established by Abbi (2006a) as the "Ang" group and corroborated by geneticists (Thangraj et al 2005). The Great Andamanese family is represented by ten languages, which can be grouped into three varieties: southern, central and northern. Refer to Figure 1 and Map 2, the latter distinguishing the Great Andamanese languages from the Jarawa-Onge, Ang group of languages.

Except Jeru and Sare² (previously known as Aka-Cari) all Great Andamanese languages are now extinct. I was fortunate enough to elicit data from Jeru, Sare, Bo and Khora (Aka-Kora) as the speakers of Bo and Khora were alive when I started my work. Not all languages were mutually intelligible because the languages of the Great Andamanese tribes formed a "dialect continuum" so that each language was closely related to its neighbor on each side but those at the extreme ends of the geographic continuum were mutually unintelligible. Hence, Aka-Cari (Map 2), a North Great Andamanese language, was mutually unintelligible with Aka Bea, the southern variety. The PGA language is a mixture of four northern varieties³ with sporadic interferences from the central variety such as Aka Pucikwar.



A recent study shows that PGA shares a large percentage of its vocabulary with Aka-Kede, the central variety of the Great Andaman Islands (Mayank 2009). Great Andamanese is thus a generic term that represents the mixture of four northern varieties (Figure 1) with several linguistic inputs leveled to generate the current speech, a koiné (Manoharan 1989).

I witnessed a great degree of variation in the inventory of vowels and consonants among the Great Andamanese speakers because of the "koiné" or "mixed" nature of the language. It is no longer being transferred to the younger generation and as such is a moribund language with five speakers left in a community of fifty-five.⁴ These five speakers use the language mostly as a code language in the presence of the people from outside the community. The remaining members who have a passive knowledge of the language are above the age of forty-five years. Active use of language can no longer be observed in the community.

o.2 Outline of the paper

The paper is divided into nine broad sections. After giving a brief sketch of the typology of PGA in section one, I move on to section two on possession where I describe the system of body division classes that obligatorily attach to body part terms and other nouns. In the next four sections, I try to show how the body division classes individuate other form classes in the language, viz. nouns, verbs, adverbs and adjectives. The seventh section deals with the process of the grammaticalization of various body class markers. I analyze their status in the grammar of PGA and give reasons for them being labeled as Proclitics in the eighth section.

Finally, I propose that the attachment of body class markers to various form classes expresses the semantics of "inherency" and "dependency" which are necessary to comprehend referential, attributive, and predicative meaning in the language.

1.0 Typological background

As said before, PGA derives its lexicon from four mutually intelligible varieties: Sare, Khora, Jeru and Bo. The syntax of Great Andamanese appears to be based on that of Jeru, although the influence of the other three cannot be ruled out. PGA is a double marking polysynthetic and agglutinative language with an SOV pattern.

 ajoe atoŋ nu taracɔre eole inciko a-joe a-toŋ-nu taracɔr-e ARG-Joe ARG-Tong-PL spring-ABS 'Joe and Tong went to see the spring'

As PGA is a double marking language, one finds evidence of head marking on inalienable possession but dependent marking on alienable possession (§ 3.4) as well as noun arguments taking suffixal cases. The verb complex includes a large amount of information in multi-morphemic strings that include subject and object pronominal clitics, incorporated nominals in causative constructions, reflexive and reciprocal prefixes, as well as suffixes expressing tense, aspect and mood. Overt external NPs are present in addition to the verb complex. However these are optional and often dropped in discourse.

- (2) ot^hobsyamo t^huitertakom
 o-t^h=o=bsi
 amo t^hu i(t)=terta-k-om
 3sg.DIST.INVIS-1sg.= CL 7=ask COND 1sg OBJ = tell-FA- NPST
 'If he asks me, I will tell him (the whole story).'
- (3) t^h amaıka t^h it bolo

 $t^{h}=a=mai$ (i)ka = $t^{h}i$ (i)t-bolo 1sg=poss=father OBJ.CL 1=search OBJ-went off '(They) went off to search for my father.'

All major word classes such as Nouns, Modifiers and Verbs have bound and free forms.

Bound forms are preceded by one of the seven inalienability marking body class markers that divide the human body into different divisions/sections (discussed in § 2). In other words, all parts of speech have dependent and independent forms. For instance, dependent nouns refer to the typical inalienably possessed items, i.e. body parts as well as those which refer to the objects or results of an

action, e.g. *ik-jira* 'it-tell.story', i.e. 'a story'. All body-part terms, kinship terms, part-to-whole, part-to-component, as well as nouns referring to time, direction and depth are dependent nouns. Alienable possession is expressed by a GENITIVE CASE construction with a suffix *-ico* ~ *-ifo* attached to a pronominal proclitic as in n=ifo ko 'their-GEN bow' or to a possessor noun *kata-ico julu* 'girl-GEN clothes'.

There are three numbers encoded in pronominal forms. However, nouns in general are not marked for duality and plurality. Number is marked for plurality on a few common animate nouns, e.g. 'dogs', 'children'.

1.1 Basic Case Marking

Great Andamanese maintains an ergative vs. absolutive distinction, with absolutive being overtly marked. That is, subjects of transitive verbs are in the ergative case *-e* suffixed to agent nouns while subjects of intransitives and direct objects are in the absolutive case *-bi*, which is attached to the subjects of unergative intransitive verbs, the subjects of unaccusative verbs, and object nominals. It was observed that, in discourse and in fast speech, speakers tend to elide these markings. Thus:

- (4) k>tp^hεcbi kanticole belekom
 k>t-p^hεc-bi kantico-l e=bele-k-om
 clay-vessel-ABS fill-PCPL CL 5=overflow-FA-NPST
 'Having filled, the vessel is overflowing with water.'
- (5) t^hire bi ηolom
 t^hire-bi ηol-om
 child- ABS cry- NPST
 'The child cries.'

Pronouns are left unmarked for argument marking. Plural subject nouns are also not marked for their argument functions.

- (6) t^hirenu ŋolom
 t^bire-nu-ø ŋol-om
 child- PL cry- NPST
 'The children cry'.
- (7) t^hu tonbi rap^ho
 t^hu tonbi rap^h-o
 lsG tree-ABS cut-PST
 'I cut the (particular) tree'.

PGA maintains a dual semantic system: one that is expressed in various terms for concrete body parts such as 'tongue', 'ear', 'leg' etc., and other in more abstract

grammaticalized morphemes that designate higher-level classification of various body divisions (see Table 1). These classes include a large number of body parts. In addition, body division classes pervade the lexical and grammatical system of the language. Linguists such as Majid (2010:61) have reported languages with a dual semantic system categorized by human body parts, e.g. Tarascan and Totonac spoken in Mexico. PGA appears to be similar to these languages, although the system described here is unusual and atypical. I will discuss and elaborate on this in the following section.

2.0 Body division classes and possessive classification

The body division classes have relevance to the concept of "inalienability" (INA). The concept of inalienability has been much discussed in the linguistic literature (Allan 1975–76, Barker 1997, Hyman et al. 1976, Wierzbicka 1976, Seiler 1983, Haiman 1985, Diem 1986, Nichols 1988, Chappell & McGregor 1989, 1996, Hinnebusch & Krisner 1981, Heine 1997, Spanoghe 2001 to mention a few). Because the phenomenon has been considered language and culture specific (Bally 1926 [1996], Chappell & McGregor 1996:9) there is no consensus as to the number or nature of the objects to be considered inalienable (Stolz et al 2008).

An investigation into the field of inalienability began with the research of classifying nouns in terms of their distinct patterns of possessive markers (Levy-Bruhl 1914:97–98 as quoted in Chappell & McGregor 1996) namely those for alienable possession and the others for inalienable possession. Subsequent research in the area highlighted various grammatical devices to represent INA, and among them the most significant ones had been bound inalienables or obligatorily possessed nouns (Nichols and Bickel 2008: Chapter 58) and appositive possessive nouns or possessive classifiers (see for example, Paamese as described by Crowley 1995).

Classes	Partonomy of human body	BODY CLASS MARKERS
1	mouth and its semantic extension	а-
2	major external body parts	Er-
3	extreme ends of the body like toes and fingernails	01)-
4	bodily products and part-whole relationship	ut-
5	organs inside the body	е-
6	parts designating round shape/sexual organs	ara-
7.	parts for legs and related terms	0- ~ <i>Э</i> -

Table 1. Seven basic zones in the partonomy of body

Nouns in PGA are classified on the basis of inalienable versus alienable criterion; the latter, as stated earlier, is expressed by a GENITIVE. However, for inalienable possession there is a very elaborate system of marking inalienability, realized by seven body division possessive classes that classify different body divisions/sections. These classes have phonetic realizations in bound morphemes attached to the left of the possessed head noun. They are referred to as BODY CLASS MARKERS in the present paper. For instance, 'dog's tongue' is *cao a=tat* 'dog CLASS= tongue' where body class marker *a*- refers to 'the mouth cavity', but 'dog's head' is *cao* $\varepsilon r=co$, 'dog CLASS= head' where body class marker εr - refers to 'major external body part'. Thus, the major criterion that determines the choice of a particular possessive class is the partonomy of the body (for detail refer to § 2.2). These seven body division classes expressing inalienability also classify other inalienables, with some semantic connection to the body part system (cf. Table 1).

2.1 The typical structure of a noun phrase with body part terminology is:

(S 1) Possessor pronominal clitic/ Noun body division class = dependent noun

The structure can be abbreviated as:

(S 2)
$$R CLASS_n = D$$

An \mathbb{R}^5 is a possessor which, in this case, is a pronominal clitic or a proper noun followed by an appropriate body class marker attached to the dependent noun D, which can be a body part term or other inalienable noun as listed below in §3.0. In the examples henceforth, each numbered class marker serves the POSSESSIVE function and classifies the noun under consideration.

(8) t^h=ot=bo
1sG=CL 4.POSS=back
'My back.'

These class markers are further used to denote various diverse ethno-semantic categories defining the relation between the possessor and the possessed nouns. Factors such as the part-whole relationship, part-to-component, intimate/non-intimate relations, human/non-human relations, the independent household of the possessum, and the notion of possessum being part of the possessor, play an important role in deciding the appropriate body class marker. The class marker that relates the possessor and the possessed is therefore appropriately selected by the semantic categorization of the two nouns that it relates to.

2.2 Primary possession and body division

I shall now examine each and every body division class listed in Table 1. These are numbered according to the seven classes of body divisions.

The unique feature of the language is that each division/area of the body is symbolized differently by a distinct class marker. These are grammaticalized morphemes that attach to several nouns pertaining to body part terms. Great Andamanese, surprisingly, maintains seven divisions within the partonomy of body and then further extends these seven body division classes (exemplified in Table 12 given later in the paper) to include a variety of other terms including kin terms, spatial relational terms, closely related object terms, human attribute/propensity terms, and terms concerning actions, manner and states (denoted by verbs). However, their prime function is classificatory. In this function they are lexically determined by the possessed noun and result in distinct and overt markings of possession.

I will use the specific class number (as given in Table 1) in the glosses so that readers can immediately associate the class of the word form that is being discussed. Thus CLASS 2 (abbreviated as CL 2) will mean body class marker 2 which has been designated for a particular body division term. I will specify the morpho-syntactic function of the particular class marker where required. I will first describe the range of each class marker and then exemplify it with a select few phrases. This is followed by tables of body part terms and divisions pertaining to each body class. The tables have been made as comprehensive as possible so that readers may find some duplication of examples given in the table with those given in illustrations.

2.2.1 *Class 1: Mouth cavity (a-)*

When the possessed entity or D is the mouth and its extensions, e.g. 'tongue' and 'throat'.

- (9) *t^h=a=tat*1sG=CL1.POSS=tongue'My tongue.'
- (10) t^h=a=foŋ
 1sG= CL1.POSS=cavity
 'My mouth cavity.'
- (11) $t^{h}=a=k\varepsilon r$ 1sg =cll.poss=throat 'My throat.'

Consider Table 2.

Great Andamanese	English Gloss	English Translation
$t^{h}=a=p^{h}o\eta$	1sg=class 1= cavity	My mouth cavity
t ^h =a=tεiŋ	1sg=class 1= liquid	My saliva
$t^{h}=a=p^{h}up$	1sg=class 1= excretion	My sputum
t ^h =a=lae	1sg=class 1= surface	My palate
$t^{h}=a=tat$	1sg=class 1= tongue	My tongue
t ^h =a=ker	1sg=class 1 = neck	My throat/neck
$t^{h}=a=c3k^{h}3$	1sg=class 1= face	My area around face

Table 2. Body part terms with *a*- body class marker

2.2.2 Class 2: Major external body parts and face-related ($\varepsilon r - \epsilon r$ -)

A large number of bound nouns are included in this class and these designate major body parts that pertain to the head, the face, arms and bones. The body part term 'bone' invokes polysemous interpretation of the term 'major external body parts' as it refers to protruding and visible bones such as that of calf and nose (cf. Table 3).

- (12) *t^h=ɛr=co* 1sg= cl 2.poss=head 'My head.'
- (13) $t^h = \varepsilon r = t \sigma e$ 1sg= cl 2.poss=bone (calf) 'My bone.'

Table 3 gives noun forms with the *er*- or *er*- body class marker.

Great Andamanese	English Gloss	English translation	
$t^{h} = \varepsilon r = co$	1sg=class 2= seed/ head	My head	
t ^h =er=k3b3	1sg=class 2= skin	My scalp, skin	
<i>t</i> ^{<i>h</i>} = <i>er</i> = <i>mine</i>	1sg=class 2= brain	My brain	
t ^h =er=beŋ	1sg=class 2= forehead	My forehead	
t ^h =er=buo	1sg=class 2= ear	My ear	
t ^h =er=jili	1sg=class 2= flower	My area above eyebrow	
<i>t</i> ^{<i>h</i>} = <i>er</i> = <i>ulu</i>	1sg=class 2= eye	My eyes	
t ^h =er=kɔt ^h o	1sg=class 2= nose/trunk	My nose	

Table 3. Body part terms with er-, er- body class markers

Great Andamanese	English Gloss	English translation
$t^{h}=er=k\mathfrak{I}t^{h}\mathfrak{O}-t\mathfrak{I}$	1sg=class 2= nose-bone	My sinew
$t^{h}=er=tap$	1sg=class 2= chin	My lower jaw/chin
t ^h =er=tap-bεc	1sg=class 2= chin-hair	My beard
$t^{h} = \varepsilon r = n \Im k^{h} o$	1sg=class 2= cheeks	My cheeks
$t^{h}=er=p^{h}ile$	1sg=class 2= teeth	My teeth
$t^{h} = \varepsilon r = juk^{h}u$	1sg=class 2= space above upper lip	My area between upper lip and nostrils
t ^h =er=boa	1sg=class 2= land	My lips
$t^{h}=er=k^{h}um$	1sg=class 2= side	My shoulder's edge
$t^{h} = \varepsilon r = bala$	1sg=class 2= arms	My arms
$t^{h}=er=k^{h}it$	1sg=class 2= biceps	My biceps
$t^{h} = \varepsilon r = t \Im \eta$	1sg=class 2= branch	My forearm
t ^h =er=me−tei	1sg=class 2= mother- liquid	My breast
$t^{h}=er=l\sigma$	1sg=class 2= mole	My mole
t ^h =er=layu	1sg=class 2= wrinkle	My wrinkle
t ^h =er=bel3e	1sg=class 2= pimple	My pimple

Table 3. (continued)

2.2.3 Class 3: Extremity of the body $(u_7 - o_7)$.

When the possessed entity is any part of the hand or arm, e.g. 'finger', 'palm', 'wrist', 'nail', or other extremity, the class marker $u\eta - o\eta$ - is attached to the D.

- (14) *t*^h=*sŋ*=*kors* 1sG= CL 3.POSS=palm 'My palm.'
- (15) *t^h=uŋ=ka:ra* 1sg=cl 3.poss=nails 'My nails.'
- (16) t^h=uŋ=kenap 1sG= CL 3.POSS=finger 'My finger.'

Table 4 gives other noun forms attached to the *uŋ*- or *oŋ*- body class marker.

Great Andamanese	English Gloss	English Translation
t ^h =0ŋ=kenap	1sg=class 3= finger	My fingers
t ^h =oŋ=kara	1sg=class 3= nails	My nails
t ^h =oŋ=kərə	1sg=class 3= hand	My palm, hand
t ^h =0ŋ=t31	1sg=class 3= bone	My wrist bone
t ^h =0ŋ=kenap-c3k ^h 3	1sg=class 3= finger-face	My thumb
t ^h =0ŋ=kərə-tot=bə	1sg=class 3= hand- class 4=back	My backside of palm
$t^{h}=o\eta=p^{h}o\eta$	1sg=class 3= cavity	My armpit

Table 4. Body part terms with on- body class marker

2.2.4 Class 4: External body products or extension 5t - ut - ot - vt

This set of body class marker attaches to the D for entities that include (a) those that can be considered to show a part-to-whole or part-to-component relationship, (b) the body parts forming the torso like the 'chest', 'back' and 'heart' and (c) body products such as 'hair', 'life', 'sweat', and 'breath'.

- (17) $t^{h}=ut=bec$ 1sg= CL 4.Poss =hair 'My hair.'
- (18) $\eta = ut = k^h irme$ 2sg=cl 4.poss=sweat 'Your sweat.'
- (19) $t^{h} = ut = t^{h}i$ 1sg=cl 4.poss=breath 'My breath.'

Table 5 gives noun forms with body class marker 4.

Great Andamanese	English Gloss	English Translation
$t^{h}=ot=b\varepsilon c$	1sg=class 4= hair	My hair
t ^h =ot=teŋ	1sg=class 4= branch	My nape of neck
t ^h =ot=loŋɔ	1sg=class 4= lower part	My lower part of neck
t ^h =ot=tst	1sg=class 4= bone	My neck bone
$t^{h}=ut=k^{h}um$	1sg=class 4= shoulder	My shoulder
$t^{h}=ot=bs$	1sg=class 4= back/heart	My back (upper)
<i>t</i> ^{<i>h</i>} =ot=car	1sg=class 4= chest	My chest

Table 5. Body part terms with ot-, ot-, ut- body class markers

Great Andamanese	English Gloss	English Translation
t ^h =ot=k3rno	1sg=class 4= lungs	My lungs
<i>t</i> ^{<i>h</i>} = <i>ut</i> = <i>bo</i> - <i>it</i> = <i>dello</i>	1sg=class 4= овj-ball	My heart
$t^{h}=ot=co-to=bat$	1sg=class 4= seed- class 4=night	My nipple
t ^h =ot=k3b3	1sg=class 4= skin	My skin
$t^{h}=ut=k^{h}irme$	1sg=class 4= hot/heat	My sweat

Table 5. (continued)

2.2.5 Class 5: Internal organs $e - \sim i$ -

Body class marker 5 attaches to the terms which pertain to entities that are inside the body, and these include 'blood', 'ribs', 'liver', 'covering around intestines', 'hip bone', 'belly/stomach' and 'bile'. In other words, the concerned entities are invisible body parts, mostly inside the stomach and abdomen. However, words for 'knee' and 'thigh' are also expressed by this body class marker. Some examples are given below:

- (20) *cao e=tei* dog cL 5.POSS =blood 'Dog's blood.'
- (21) $t^{h}=e=sudu$ 1sg = cl 5.poss=intestine 'My intestines.'
- (22) t^h=e=tedu
 1sG-= CL 5.POSS=pancreas
 'My pancreas.'

Cf. Table 6.

Great Andamanese **English Gloss English Translation** $t^{h}=e=tei$ 1sg=class 5= liquid My blood t^h=e=bursno ts: 1sg=class 5= fruit-bone My ribs $t^{h}=e=p^{h}ilu$ 1sg=class 5= belly My stomach $t^{h}=e=p^{h}ilu-p^{h}et$ 1sg=class 5= belly-big My belly $t^{h}=i=\eta et$ 1sg=cLAss 5= breathe in My naval $t^{h} = e = sudu$ 1sg=class 5= intestines My intestines

Table 6. Body part terms with *e*-, *i*- body class markers

Great Andamanese	English Gloss	English Translation
t ^h =e=baene	1sg=class 5= covering	My covering around intestine
t ^h =e=bi-tɔlɔn	1sg=class 5= obj-flower	My kidney
<i>t</i> ^{<i>h</i>} = <i>e</i> = <i>meca</i>	1sg=class 5= liver	My liver
$t^{h}=e=tedu$	1sg=class 5= pancreas	My pancreas
t ^h =e=buc⊅	1sg=class 5= lap/man- grove	My lap
$t^{h}=e=c3r3k^{h}$	1sg=class 5= joint	My knee
те <i>ңе=i=</i> ∫о <i>ң</i> о	1pl=class 5= body	Our bodies

Table 6. (continued)

2.2.6 Class 6: rounded or curved structure ara-, ra-

These body class markers of possession precede the possessed entity which is a circular and curved structure such as 'cheeks', 'bladder', 'scrotum', 'heel' etc. It is also used for sexual organs. Surprisingly, the words for 'knee' or 'head' are outside this list.

- (23) *ŋ=ara=karap*2sG=CL 6.POSS=rib cage'Your rib cage.'
- (24) $\eta = ara = p^h u$ 2sg = cl 6.poss=stool 'Your stool.'

Table 7 gives some of the noun forms with ara- body class marker 6.

Great Andamanese	English Gloss	English Translation	
t ^h =ara=t3l3	1sg=class 6= flower	My large intestine	
<i>t</i> ^{<i>h</i>} =ara=karap	1sg=class 6= lower back	My waist, lower back	
<i>t</i> ^{<i>h</i>} =ara=t ^{<i>h</i>} 3mo	1sg=class 6= fat/flesh	My buttocks	
t ^h =ara=karap−t ^h omo	1sg=class 6= lower back- flesh	My groin	
t ^h =ara=karap-jiriŋe	lsg=class 6= lower back-??	My pelvis	
$t^{h}=ara=t\varepsilon t$	1sg=class 6= anus	My anus	
<i>t</i> ^{<i>h</i>} =ara= <i>d</i> iletmo	1sg=class 6= ball small	My urinary bladder	
t ^h =ara=domo	1sg=class 6= testicles	My testicles	

Table 7. Body part terms with *ara*- body class marker

Great Andamanese	English Gloss	English Translation
tot=k3b3	1sg=class 6= testicles- class 5=skin	My skin of testicles
<i>t</i> ^{<i>h</i>} =ara=ili	1sg=class 6= urine	My urine
aka-ara=p ^h u	3sg-class 6= excretion	His stool

Table 7.	(continued)
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2.2.7 Class 7: Body part with o- ~ >- class marker

The body class marker 7 classifies those body parts which are visible and refer to lower parts of the body, such as 'leg', 'toe', 'sole', 'heel' (cf. Table 8).

- (25) $t^{h}=o=mztz$ 1 sg = cl 7. poss=leg'My leg.'
- (26) *t^h=o=roŋo* 1sg=cl 7.poss=ankle 'My ankle.'
- (27) $t^{h}=o=mztz-to=mik^{h}u$ 1sg = CL 7.Poss= leg- CL7.Poss=centre'My sole.'

Table 8.	Body part	terms with o-	, <i>э</i> - bod	y class	markers
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Great Andamanese	English Gloss	English Translation
$t^{h}=s=msts$	1sg=class 7= leg	My leg
t ^h =∋=m⊃tj>-tu=juk ^h u	1sg=class 7= leg-class 4=extension	My toe
t ^h =o=m⊃t⊃-to=mik ^h u	1sg=class 7= leg-class 4 = centre	My sole
t ^h =o=m⊃t⊃-tara=dole	1sg=class 7= leg-class 6=ball	My heel
t ^h =3=m3t3-t31	1sg=class 7= leg-bone	My bone below knee
t ^h =o=roŋo	1sg=class 7= ankle	My ankle
t ^h =o=tɔnno	1sg=class 7= semen	My semen

2.2.8

The Great Andamanese language has seven body divisions that relate to the perception of the community of human body and its basic divisions. The issue of the perceptual partitioning of body has been discussed by psychologists, anthropologists and linguists because the human body and its parts play a crucial role in interacting with the environment (Shelton et al., 1998). This issue needs further semantic research in the context of Great Andamanese.

It can be argued here that inalienable possession of anatomical terms is the basic semantic relation of this domain. It can be inferred from the forms given in these tables that the body part terminology in PGA represents the relationship of parts of a body to a 'person' or 'self' and not as a part-whole relationship. This is reflected in a majority of simplex morphemes. The possessor in this context is the human being, not the body. Thus, 'my leg' or 'his head' are more readily elicitable expressions in Great Andamanese than say, 'the leg is part of my body', or 'leg-ankle'.

All of the primary body parts are possessed by the individual and thereby have the obligatory pronominal clitic or a noun as the possessor. The choice of the body division classes in the case of the first order body parts is semantic in nature and varies according to the perceptual division of the entire human body by the Great Andamanese. In this sense the clustering of body parts into divisions/areas of the body and the consideration of each division/area as an inalienable is a culturally specific phenomenon.

There are some anomalous class markings in the words 'urine' and 'stool' by class 6, 'knee' and 'pubic hair' by class 5, which cannot be explained. Similarly, the word for 'armpit' could have belonged to class 6 marked by *ara*- but it belongs to class 4 marked by *ot*-. These are some of the unexplainable areas.

2.2.9 Kinship terms

Most of the body division classes that I discussed in the previous section are also used with different kinship terms. With the exception of terms for 'son' and 'daughter' all other terms are attached to body class markers.⁶ These two are marked by GENITIVE suffixed to the possessor noun as in *nu-ico kaţa* 'Nu-GEN daughter' 'Nu's daughter'. Let us consider each of the seven body class markers in the context of kinship terms.

2.2.9.1 Class 1: Mouth cavity (a-)

This body class marker is used to indicate primary kin relationships like 'mother', 'father', 'grandmother', 'grandfather'.

- (28) t^h=a=may 1sG= CL1.POSS=father 'My father.'
- (29) t^h=a=mimi
 1sG= CL1.POSS = mother
 'My mother.'

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2.2.9.2 Class 2: Major external body parts and face-related ($\epsilon r - \epsilon r$ -) The kin term that is defined by this body class marker is 'spouse'. It is also used to express elder siblings.

- (30) $t^{h} = \varepsilon r = boi$ 1sg= cl 2.poss =spouse 'My spouse.'
- (31) t^h=εr=toa-thu-kaţa
 1sG=CL 2.POSS=earlier-born girl
 'My elder sister.'

2.2.9.3 Class 3: Extremities of the body $(u_7 - o_7)$.

This marker does not attach to any of the kin terms, as being exclusively used for the parts of the body.

2.2.9.4 Class 4: External body products or extension 5t - ut - ot - vt

Befitting its semantic focus on body products this body class marker is used for kin born of the body such as 'child'. It is interesting to note that while child is considered inalienable 'daughter' and 'son' are not as they take alienable GENITIVE SUFFIX.

(32) *lico ut=thire* Licho CL 4.POSS=child 'Licho's child.'

2.2.9.5 *Class 5: Internal organs e- ~ i-* This body class marker is not used for kinship terms.

2.2.9.6 Class 6: Rounded or curved structures ara-, ra-

This class marker is used for relational possession and for indicating younger sibling relations. The elder sibling relations are indicated by CLASS 2.

(33) *t^h=ara=sulu-thu-tɔta/kata* 1sg=CL 6.Poss=later-born boy/girl 'My younger brother/sister.'

2.2.9.7 Class 7: Body parts with $o - \sim 3$ -

The body class marker 7 classifies relations such as *o=toni* 'son-in-law' or 'younger sister's husband'.

While speakers were able to provide kinship terms through direct elicitation, they were not used in natural speech any longer. Elicitation of these terms was not

easy and this explains the significant variation in the terms elicited from different speakers. Most, if not all the speakers, now use Hindi terms.

Kinship Terms	English translation
<i>t</i> ^{<i>h</i>} = <i>ico a</i> = <i>kata</i>	My daughter
t ^h =ico a=tota	My son
t ^h =o=toni	My son-in-law / younger sister's husband
$t^{h} = \varepsilon = toa - t^{h}u - e$	My elder sibling
t ^h =∋t=toa-t ^h u-e-akaoi	My elder sister
t ^h =ε=toa-t ^h u-e-totta	My elder brother
t ^h =a=mai-ra=tob	Grandfather-like elderly person
t ^h =a=mai ka t ^h =a=mai	Grandfather
$t^{h}=a=mai\ ka\ t^{h}=a=mimi$	Grandmother
aka-maya	(someone's)late (deceased) old person, used as a title
ara=lep ^h a-ka	Widow or widower
$t^{h}=e=b \mathfrak{I} e \sim b \mathfrak{I} i$	My wife or husband (spouse)
korɔm-olɛ-bik	Wife of the first man
η=ara:=bε:loka	Your wife's younger brother
ŋ=a=mai-exe	Your wife's father 'father-in-law'
ŋ=a=mimi-exe	Your wife's mother 'mother-in-law'
<i>t</i> ^{<i>h</i>} =ara=sulu-t ^{<i>h</i>} uo	My younger sibling
t ^h =ara=sulu-t ^h u-totta	My younger brother
t ^h =ara=sulu-t ^h u-e=kata	My younger sister
t ^h =a=mai	My father
t ^h =a=mimi	My mother

Table 9. Kinship terms

2.2.10 Parallels between body part terminology and kinship terms

Only five of the seven body class markers are used to represent the kin terms. It is challenging to discover why only these are reserved for kin terms while others are rejected. They are: *a-*, *er-*, *ut-*, *ara-*, and *o-*. An additional factor to be considered is that 'higher (generation)' kin are designated by 'mouth cavity and related' body parts.

Table 10 summarizes the parallel relationship that exists between the body part terminology and the kin terminology.

Body class markers	Body parts	Kin terms
er-	major body parts	spouse
а-	mouth cavity	parents
ut-	extensions of body parts / body products	child
ara- + ut-	nodular structure	younger/older siblings
0-	lower body	son in law/ husband of younger sister

Table 10. Parallel between body parts and kinship terms

2.2.11 Is there a hierarchy?

A study made by Avtans (2006: 97) reports some interesting statistics about the frequency in the use of these body class markers as given in Table 11. This implies that the body class marker $er - \sim \epsilon r$ - is most commonly or widely used. This has guided me to frame the hierarchical scale of the various body division classes in the language.

Body division class markers	Frequency of use
er-, ɛr-	36%
e-, i-	17%
ot-, ɔt-, ut-	13%
ara-	12%
<i>a</i> -	9%
0-, 3-	7%
0ŋ-, uŋ-	6%

Table 11. Frequency of occurrence of body class markers with body part terminology

The last two body division classes o- and $o\eta$ - listed in Table 11 not only occur less frequently as far as the reference to the body part terms is concerned but also have limited distribution across the lexicon of the language. The potential that these will be grammaticalized is low when compared to the other five classes. As I proceed, this fact will become clearer. Hence, on a hierarchical scale of frequency, o-and $o\eta$ - occupy the lower ends of the scale.

2.3 Formation of secondary possession

The possessives function at two levels in Great Andamanese (Som 2006), referred to as **primary and secondary**. I will briefly present the formation processes involved in obtaining secondary possession but a detailed discussion is beyond the scope of this paper.

Those with a primary level of function are used with reference to the "self", which denotes the major body divisions/areas and the main kinship terms that I just considered. Those with a secondary level of possession are used for denoting those body parts that are extension of the major parts, e.g. 'eyelashes', and those kinship terms that are descriptive, e.g. the ones used for siblings. These are added to the basic ones.

For example, the language uses double markings to refer to words for 'eyelashes', 'tears' etc. The kin terms, perceived as of secondary nature, are similarly marked. I shall now briefly discuss the formation of these constructions. It can be argued in this light that there are certain body parts that are less salient than the others and hence are treated as second order body parts and they derive their names either by means of descriptive terms or by juxtaposing two primary part names, whereas the primary body parts are primary lexemes used with an appropriate body class marker with reference to the possessor.

In addition to attaching the various class markers to the possessed nouns, the language offers two more strategies to derive inalienable constructions: (1) compounding or juxtaposition of two nouns and, (2) syntactic derivation where a combination of more than two devices is used. Examples of compounding are given below:

2.3.1 Juxtaposition/Compounds

In the examples given below the second noun, i.e. the head noun, designates a generic entity, while the first noun (a dependent noun) indicates the type or class to which the designated entity belongs.

	Great Andamanese	Literal translation
(34)	cokbi t ^h omu	turtle meat
(35)	cokbi mulu	turtle egg
(36)	məcə mulu	hen egg
(37)	kʰidɛr t̥ɔŋ	coconut tree
(38)	kʰidɛr ino	coconut water
(39)	tsk⁺o tei	tree blood (gum)
(40)	ra thire	pig children (piglets)

Secondary possession indicates that the nominal body part term on the left is the possessor of the noun on its right, which is an extension of the former. This is true of the compound formations that were cited above and also of the following

examples where the rightmost constituent of the compound as *bec* in *tap bec* 'chin hair' is the extension of the former *tap* 'chin', the possessor.

2.3.2 *Complex Structures*

Non-basic body part terms are derived by several morphological processes.

(i) Lexical compounding with BODY DIVISION CLASSES

- (41) $[t^{h}=\varepsilon r=[tap \ bec]]$ 1sg=cl 2.poss=chin hair 'my beard'
- (42) $[t^{h}=\varepsilon r=[juk^{h}u \ bec]]$ 1sg=cl 2.Poss= above upper lip-hair 'my moustache'
- (43) [t^h=ara=[karap [5]] 1sG=CL 6.POSS=waist bone 'my waist bone'

(ii) Double marking

Terms for different parts and sub-parts of the eye are not simply juxtaposed to the term for 'eye'. Instead, the nouns in this category, which are subordinate to the 'eye', obligatorily need the use of the suffix $-t^h u$, which literally means, 'born of' (as in $t^h=ut=t^h u$ 'born of me') and has been grammaticalized as the second POSSESSIVE marker in these constructions. These are symbolized by small caps (BORN.POSS II), the first being symbolized as POSS I.

- (44) *t^h=εr=ulu-t^hu ino* 1sg=cl 2.poss I=eye –Born.poss II water
 'My tears.'
- (45) *t^h=εr=ulu-t^hu bec* 1sG=CL 2.POSS I=eye- BORN.POSS II hair
 'My eyelashes.'
- (46) lico εr=ulu-t^hu bɔ:k
 Lico CL 2.POSS I=eye- BORN.POSS II behind
 'Lico's eyelids.'

In addition to morphological processes, PGA takes recourse to syntactic derivation by using adverbial phrases to derive secondary possession.

(iii) Adverbial structure

Expressions for sibling relations are derived by using an adverbial phrase *ut-toathu* 'born earlier' or *ara-sulu-thu* 'born later' where *thu-* 'be born' describes the temporal relationship between the possessor and the possessed.

(47) t^h=ut=toa-t^hu kaţa
1sG=CL 4=earlier-born girl
'My elder sister.' (Literally: 'Earlier me born girl.')

(48) t^h=ara=sulu-t^hu tɔta
1sG=CL 6=later-born boy
'My younger brother.' (Literally: 'Later me born boy.')

It is interesting to note that two different body class markers (i.e., *ut-* and *ara-*), originally designated for body products and the area below the waist, are chosen for designating elder and younger sibling relationship respectively.

Double marking possessives can also be derived by employing two different class markers in the same NP, without using adverbial phrases and the grammaticalized *-thu* 'born of'. Consider the following where the choice of the body class marker is progressively decided by the head noun. The structure can be represented as:

(i) (S 3) $[[R[R \text{ poss. } I=D_R] \text{ poss. } II=D]]$

For an explanation as to why the POSS *tut*- is used instead of *ut*-, or *tara*- is used instead of *ara*-, the reader shall refer to § 2.4.

(49)	η=er=	$p^{h}ile$ -tara= $p^{h}o\eta$
	2sg=cl 2.poss I=	teeth-CL 6.POSS II=cavity
	'Your dental cavity.'	

- (50) $t^{h}=er=$ $ulu-tut=t_{0}btmo$ 1sg= CL 2.POSS I= eye- CL 4.POSS II=white 'The white of my eye (sclera).'
- (51) $t^{h}=er=$ $jili-tot=b\varepsilon c$ 1sg= CL 2.POSS I= bone above eye- CL 4.POSS II=hair 'My eyebrows.'
- (52) $t^{h}=er=$ $p^{h}ile-tara=t^{h}arale$ 1sg= CL 2.POSS I= teeth- CL 6.POSS II=ON (DEIXIS OF CONTACT) 'My gums.'
- (53) t^h=er= k5t^ho-tara=p^hoŋ
 1sG= CL 2.POSS I= nose- CL 6.POSSII-cavities
 'My nostrils.'
- (54) $t^{h}=0=$ $m \circ t \circ t = j u k^{h} u$ 1 sg= cl7.poss I= leg- cl 4.poss II=end 'My toes.'

To summarize, one can deduce that there are two levels of possession functioning in Great Andamanese, the primary and the secondary. Cliticization, juxtaposition/ compounding and syntactic derivation are three processes that are employed in relating the possessor and the possessed nominals. Although some languages are known to offer multiple grammatical devices to designate body part terms (cf. Ndjebbana or Kunibidiji, a non-Pama-Nyungan language as described in McKay 1996), the variety offered by the Great Andamanese language appears to be unusual in that it consists of seven grammaticalized morphemes operating as body division classes, attached to different and various body part terms. Each body class marker includes not one but several terms for body parts. It is not the body part terms but these grammaticalized morphemes which appear as body division classes. Such a system is indeed rare but is somewhat similar to Tarascan, spoken in Mexico (Friedrich 1971). In Tarascan, body part suffixes are attached to verbs to indicate the location of experience. Thus, the verb root for 'pain' can attach to different body part suffixes to indicate the location of pain in the body. However, in PGA, it is not the body part terms but the body division classes that are attached to verbs, nouns and adjectives.

Despite the fact that there was a substantial amount of variation of forms noted among speakers, I found that all speakers were consistent in using the body class markers with body part terms and kin terms. The available variation in body class marker and its associated D (for example, I have no idea why 'head' and 'arm' are expressed by the same class marker) does not give a very coherent semantic and cognitive explanation as yet. The language being a koiné and of 'mixed' nature could be one of the explanations for variation.

2.4 Animate vs. Inanimate and semantics of inalienability

The fundamental division of animacy plays an important role in deciding the phonetic shape of the base form of the class marker. If the possessor noun is nonanimate, the class marker is prefixed with a dental consonant *t*-, whereas with all animate possessors, both human and non-human, class markers otherwise begin with a vowel. Thus, the class markers *ara-*, *ot-* etc. which are indicators of animate possessors, will be rendered as *tara-*, *tot-* respectively if the possessors are inanimate beings. This entails that an intact body part belongs to one particular class while a detached one is treated differently but belongs to the same class. Consider:

a.	ra ɛr =co	ʻpig's head'	but	<i>ra t-ɛr=co</i> 'pig's head' [cut]
b.	moco ara =mot ^h o	'hen's leg'	but	<i>moco t-ara=mot^ho</i> 'chicken leg' [cut]
с.	k ^h eŋe ra =uli	'cat's tail'	but	<i>k^heŋe t-ara=uli</i> 'cat's tail' [cut]
d.	егеп e =meca	'deer's intestines'	but	eren t-e=meca 'deer's intestines' [ex-
				tracted]
e.	kərəip e =tei	'dugong's blood'	but	kərəin t-e=tei 'dugong's blood' [ex-
				tracted]

One interesting observation being made here is that despite being alienated from the body the cut-up part remains within the realm of the inalienable and is not considered at par with the alienated possession for which there is a separate marking *-ico* \sim *-ifo*. This is because body parts are considered **inherent** to the body. There is less conceptual distance between R and D and thus a more intimate bonding between the two is realized. This bonding is retained even after physical separation. Consider the following examples which express three different meanings.

While (55) expresses a body part separated from its source, (56) describes an intact body part. Both of them are attached to the class marker 4, suggesting that physical separation of the object belonging to the 'inalienable' noun category does not place it in the category of 'alienable'.

- (55) cokbi tot=t^homu turtle CL 4=flesh
 'turtle meat' [cut-up for consumption]
- (56) cokbi ot=t^homu turtle CL 4=flesh
 'turtle meat' [still on its body]
- (57) cokbi t^homu
 'turtle meat' (compounding: modification by noun defining nature), (i.e., used in a sentence that 'he has gone for turtle meat').
 But not *cokbi-ico t^homu turtle-GEN flesh (alienable suffix)

Sentences such as 'my turtle's meat' will use the compound form in (57) preceded by first person possessor as in t^{h} =*ico cokbi* t^{h} *omu*. Although grammatically correct, this form does not exist in the language as the author never observed anyone claiming ownership on food items or other consumables.

The objects that are prototypically alienable and can be owned are: goods in the market and household goods of not very intimate nature. See also 3.4.

3.0 Applying the body division classes to other dependent nouns

As said in the beginning of the paper, the language makes a distinction between bound and free forms. Nouns that are not obligatorily attached to any class markers are free and more often than not refer to terms for flora and fauna and many environment related words. See also 3.4.

In addition to nouns referring to body parts, PGA marks the following nouns as dependent categories and thus body part semantics can individuate noun reference. One of the seven classes discussed above classify the following nouns in such a way that each of them is obligatorily preceded by a body class marker. These nouns thus also fall into the paradigm of bound inalienables.

- i. Kin terms (exceptions are 'son' and 'daughter')
- ii. Tattoo, body paint
- iii. Home, village, courtyard
- iv. Language, words, tales, narrations
- v. Ailments, both physical and mental
- vi. Boats, head gear, caps, coverings for private parts made of leaves, clothes
- vii. Spatial terms

BODY DIVISION CLASS MARKERS		Body parts	Kinship terms	Other objects	Types of Classes	Semantic axioms
ANIMATE	NON ANIMATE					
<i>a-~at-</i>	<i>ta- ~ tat-</i>	tongue,	mother,	language	Primary 1	MOUTH AND EXTENSION OF MOUTH, SOURCE
<i>ɛr- ∼ er-</i>	ter-	major body parts, head, side, calf etc.	_	Side of riv- er/sea shore, near, name, above, cap, headgear	Primary 2	EXTERNAL OR- GANS, DEICTIC
01-	toŋ-	fingers, nails	-	-	Primary 3	EXTENSION OF HAND, EXTREM- ITIES
u- ~ut- ~ ot-	tu- ~ tut ~ tot-	chest, back, hair, sweat	child, brother	house, skin diseases	Primary 4	EXTENSION OF SELF, PRODUCTS OF SELF
e-	te-	blood, pancreas, ail- ments	Spouse, el- der sibling	fever, leaf- covering	Primary 5	INTERNAL ORGANS
ara- ~ ra-	tara-	waist and hip area and its extensions like tail	sister	village, boat	Primary 6	RELATIONAL, CIRCULAR, CURVED
0- ~)-	to-~ -tɔ	leg, heels, calf	Son-in- law/young- er sister's husnband	_	primary 7	LOWER PART OF THE BODY

Table 12. Possessive classification defining primary possession

- viii. Parts of a whole or parts of a component
- ix. Seascape and landscape terms
- x. Incorporeal, viz. spirits, ghosts, supernatural beings and the soul

Please consult Table 12 to obtain an idea of the range of inalienable nouns in PGA. It is difficult to establish a one-to-one correspondence between body division classes and the other nouns that these classes represent. Some of them are transparent as the words for 'head gear' and 'head' take the same class marker, but why the words for 'village' and 'boat' take the class marker reserved for 'waist' and 'hips' is anyone's guess.

3.1

Various body division classes can attach to the same nominal reference, modifying it further to indicate the various **locations** of the object noun. Thus:

ot=cala	(CLASS 4=scar) 'scar left by arrow-head'
er=cala	(CLASS 2=scar) 'scar on the head'
oŋ=cala	(CLASS 3=scar) 'scar on the limbs'
e=tei	(CLASS 5=blood) 'blood inside the body'
ot=tei	(CLASS 4=blood) 'blood outside the body' [when bleeding]
oŋ=tei	(CLASS 3=blood) 'blood on finger or from finger'
	ot=cala er=cala oŋ=cala e=tei ot=tei oŋ=tei

3.2

Nouns designating different **kinds of ailments** take different class markers depending upon experience and the affected part of the body. For instance:

a.	ara=mik ^h u-tei	(CLASS 6=middle-blood/pain) 'stomach ache'
b.	er=bel3 ε	(CLASS 2=pimples) 'pimples'
с.	er=co bie	(CLASS 2=head-pain) 'headache'
d.	er=e=t ɛŋe	(CLASS 2=CLASS 5=measles) 'measles'
e.	ot=tei	(CLASS 4=pain) 'splitting headache'

The terms for spatial distances and directions are also divided into several classes as each takes a body class marker, e.g., *firo* 'sea' and *firo* $t\epsilon r = lik^h ui/lik^h u$ 'sea CL 2=lap', or 'deep sea'; *firo* $tara=c\epsilon rel$ 'sea CL 6=green/blue' or 'open sea'.

Spatial orientation terms in many languages of the world appear to be on the top of the hierarchy scale of inalienability as in Ewe (Ameka 1996) and Mandarin (Chappell & Thompson 1992). In PGA, body part terms seem to be at the top of the scale as they offer variety and classify other nouns in the language unlike other languages cited here.

3.3

Part-to-component relationships follow the same principle of reference. Any part of a component which itself is a part of a whole can be represented by body class marker with an initial *t*- to indicate inanimacy. Consider sentences (58–62) where one can establish a one-to-one correlation between the segregated parts of an animal body and the non-segregated parts of an object in question.

- (58) *fεc* ta=p^hoŋ
 vessel CL 1=cavity
 'The mouth of the vessel.'
- (59) bun ter=pⁿIr
 shell CL 2=sharp edge
 'The sharp edge of a shell.'
- (60) k^hidεr tεr=tɔŋ
 coconut CL 2=branch
 'The branch of a coconut tree'.
- (61) *jicεr tot=tɛk^ho* rain CL 4=sound
 'The sound of rain.'
- (62) buruin ter=p^heţ mountain CL 2=back
 'Back of the mountain.'

We can see the extension of each body division class used with body part terminology to objects and then various parts. The analogy is very clear in examples like (61) where sound emission is considered equivalent to products of the body. The body products are obligatorily possessed by the body class marker ut- $\sim ot$ -. Here again, sound emits from a source and is hence marked by tot-, or in (58) the mouth of a vessel and mouth of a human take the same class marker, and in (62) 'behind' of a human body and 'behind' a mountain are marked similarly.

As far as the analogy is concerned, there is no surprise that the hunter-gatherer society visualizes 'tree' as a body and its different parts as belonging to the tree as a whole. Consider Table 13, which provides the names of different parts of a tree attached to appropriate body class marker. It is to be noted that while describing the partonomy of a tree the word t_2k^ho 'wood' is used more often than the word t_2n 'tree'.

Interestingly, these analogies could be bidirectional. For example *3r3* means 'bushy flower' or 'blossom of large fruit' as in the case of Pandanus flower, but the word can also be used to denote 'tail' of big animals as in *cao-tara-3r3* 'dog's tail'

and *teo-tara-ɔrɔ* 'crocodile's tail'. Conversely, one never knows if the term for 'tail' was the original sense of the word *ɔrɔ* and the secondary sense is used for 'bushy flowers' and 'blossoms of large fruits'.

Great Andamanese	English Gloss	English translation	
təŋ	Tree	tree	
t∋k ^h o-ter=tek	Tree-class 2=wood	trunk of a tree	
tɔkʰo-ta=bεc	Wood-CLASs1=hair	canopy of trees	
t∋k ^h o-tara=cεt ^h o	Wood-class 6=root	root of a tree	
tɔkʰoɔtot=cɛ	Wood-class 4=thorn	thorns of a tree or a plant	
tɔkʰɔ-tɛc	Wood-leaf	leaf	
t∋k ^h o-te=i	Wood-class 5=blood	gum	
tɔŋ-e=ka=t ^h ire	Tree-CLASS 5=class 1=child	saplings	
tɔkʰo-ot=tɔŋ	Wood-CLASS 4=hands/tree	branch	
tɔŋ-i=mik⁵u	Tree-class 5=middle	inside of a tree	
tɔkʰo-et=kɔbɔ	Wood-овj=skin	bark of a tree	

Table 13. Terms for the parts of a tree or a plant

A summary of the preceding discussion on inalienability marking body class markers and possessed nouns is represented in Figure 2.



Figure 2. Body division classes and possession

3.4 Alienable nouns and genitives

Alienable nouns are independent and do not obligatorily attach to a body class marker. Thus, the word for 'coconut' is not preceded by any body class marker in (63).

(63) *u k*^h*ider-bi ta-ut=p*^h*ay-om* 3SG coconut-ABS APPL-CL 4=dry-NPST 'She is drying coconuts.'

Alienable possession in the language is designated by a GENITIVE morpheme which is suffixed to the possessor noun. This genitive has two allomorphs; *-ico* ~ *-ifo*. These variations occur across speakers from different language backgrounds. For example, the Sare speaker always used *-ico* while the Khora speaker used *-ifo*. Most of the typical alienable nouns designating 'land', 'jungle', 'upper garments', 'lower garments', 'dog', 'friend', 'God' as well as some kinship terms, as mentioned earlier, such as 'son', and 'daughter' are considered alienable possessions. All objects from the jungle such as trees, plants, creepers, nouns of flora and fauna, household objects, and other objects of natural environment are alienable nouns. These are not bound morphemes and are thus not preceded by class markers. These may be considered independent nouns.

The encoding of possession pertaining to alienable objects draws our attention to the fact that one finds evidence of both head marking and dependent marking in PGA; the former for inalienable possession and the latter for alienable possession.

- (64) *du-ifo* cao 3sg.dist.vis-gen dog 'His dog.'
- (65) *n=ifo ko* 3PL=GEN bow 'Their bow.'
- (66) *t* ^{*h*}=*ico boa* 1sg=gen land 'My land.'

3.5 Conclusion

To conclude, there are, in all, **eleven different varieties** of possessive classification depending upon the semantic nature of the possessor, the possessed, the relation between the two, and the type of word formation processes. Out of these eleven,

only one marker is used for alienable possession: the GENITIVE. The rest are body class markers. The basic semantic division in the language appears to be between inherent and non-inherent, the former being coded into various body-zones that can pertain to both animate and inanimate possessors as well as in incorporeal nouns such as 'spirits'. By taking into account a large inventory of nominal objects (see the list given above in 3.0), it becomes eminently clear that the terms alienable versus inalienable are not particularly appropriate for the language under analysis. Until we find an appropriate term, these nouns can be formally described as obligatorily marked nouns. There is no doubt that the large range of possessive classification as observed in PGA is unusual across languages.

A summary of all the body class markers and genitive is provided in Table 14. These are divided into two hierarchical levels, the primary and the secondary. The decision to categorize them as primary or secondary is based on their morphological shape. Monomorphemic constructions are primary possessions while those that use derivation or compounding are secondary. Another reason to divide them into primary and secondary is the semantics of the body part. The secondary body part terms define part of a whole or part of a component or a combination of the two or three parts of the body.

Classes	Word formation type	Morphemic structure	Possession	Hierarchical level
1	Clitics	a-~ ta-	Inalienable	Primary
2	Clitics	ϵr - ~ $t\epsilon r$ -	Inalienable	Primary
3	Clitics	о <i>ŋ- ~ toŋ-</i>	Inalienable	Primary
4	Clitics	<i>ut-~ot-~</i>	Inalienable	Primary
		tut- ~ tot-		
5	Clitics	e- ~ te-	Inalienable	Primary
6	Clitics	ara-~ tara-	Inalienable	Primary
7	Clitics	0-~ 2-~	Inalienable	Primary
		to-~tɔ-		
8	Suffixation	-ico ~ -i∫o	Alienable	Primary
9	Compounding	Possessor Noun -Possessed Noun	Inalienable	Secondary
10	Compounding with CLITIC	class = N-N	Inalienable	Secondary
11	Complex Double marking	Possessor Noun –CL.POSS I=(Adv) -POSS II-Possessed Noun	Inalienable	Secondary

Table 14. Varieties of possession in Great Andamanese

We will now explore how the classificatory process used for body divisions permeates down to other word classes, viz. verbs and modifiers in the language.

4. Body part semantics and verbs

A large number of verbs are individuated by body class markers, in which the body part semantics shifts into event-type semantic categories of various kinds. The body-class markers combine with both transitive and intransitive verbs. A similar phenomenon has been observed in Papantla Totonac (Levy 1999), a language of northern Veracruz, Mexico, and in Matses, a Panoan language spoken in Amazonian Peru and Brazil (Fleck 2006), with a difference that the prefixation in Panoan is of the body part term itself and not of the grammaticalized morphemes pertaining to the division of the body. Nor the semantics in that language is as intricate as in PGA. Some languages of the world have been observed to incorporate body part terms into verbs as in the languages of the Americas and Australia (Evans 1996:66), however the structures in PGA are different from the phenomenon of incorporation mentioned by Evans. The dual semantic system of PGA type appears to be similar to Tarascan (Lathrop 2007) as reported by Majid (2010:61) where in addition to distinct nouns for body parts there exists a system to combine a couple of body part terms into a single term. However, unlike Great Andamanese, these grammaticalized morphemes are not extended to all form classes.

4.1 Transitive Verbs

A large number of transitive verbs are obligatorily preceded by the body class markers. The nature of the body class marker decides the specific meaning of the verb and at times signifies a multiple **location** and **manner** of the action as exemplified below. In addition to the seven basic CLASSES considered above, the language offers additional object clitics that attach to transitive verbs. These are: *et*- \sim *it*- \sim *ik*- \sim *ek*- \sim and *en*- \sim *en*- indicating more often than not, a resultative action, where the result is being symbolized by the object clitic.⁷ Many times the phonetic shape of each of these clitics is decided by the nature of the action designated by the verb and the associated object seen in the context of the partonomy of the body. Consider the following examples. The verb 'aim' can denote various ways of aiming at an object in a hunter-gatherer society and in Great Andamanese each is marked differently. The spatial interpretation of body division terminology can be applied to justify the occurrence of class markers 4 and 5.

a.	ut=∫ile	b.	ek=∫ile	с.	e=∫ile
	CL 4=aim		овј=aim		CL 5=aim
	'aim from above'		'aim at' (resultative)		'aim to pierce'

In many usages the body class markers seem to indicate 'manner' of the action. The verb 'cut' and 'hit/slap' can have many manifestations signified by body class markers.

a.	ara=p ^h o	b.	$\epsilon r = p^h o$	с.	$ut=p^{h}o$
	CL 6=cut		CL 2=cut		CL 4=cut
	'cut down', 'fell'		'hit with a stick		'separate from the source'
			(in the front)'		(e.g. betel nut from its branch)
a.	<i>er=bate</i> CL 2 =slap 'slap on the face'	b.	<i>ek=bate</i> овј=slap 'slap suddenly, u	ınex	rpectedly'
c.	ut=bate CL 4=slap 'slap (hard)'	d.	<i>eren-bate</i> REFL-slap 'slap oneself'		
((57) meo-e nyarai	по і	ıt=bate-k-o		

(67) meo-e nyaramo ut=bate-k-o
 Meo-ERG Nyaramo CL 4=slap-FA-PST
 'Meo slapped Nyaramo hard.'

A related phenomenon with the word *lubom* 'pluck' or 'pick' designated by different clitics has varying readings. English equivalents emerge as phrasal verbs with spatial terms. Each verb form occurs with a distinct body class marker.

a.	εr/e=lubom	b.	<i>it=lubom</i>
	CL 2=pick		овј=pick
	'pick up' (from the ground)		'pick out' (stones in 'daal'), 'weed out'

(68) *u k*^{*h*}*ider ut=lub-om* 3sg coconut CL 4=pluck-NPST 'He plucks coconuts (from the tree).'

Both the OBJECT CLITIC and the BODY CLASS MARKER can coexist as in the following examples. Although case markings are dropped in fast speech as mentioned earlier in the paper, it may also be dropped when the object noun is not a specific one. The object noun 'box' in (70) is accompanied by an overtly marked absolutive case as it refers to a specific box.

- (69) *ik=t εr= ɔlo-k-e* OBJ=CL 2= send- FA-IMP 'Send (goods/something).'
- (70) $p^{h}e_{f}i-bi$ $ik=t \epsilon r= olo-k-e$ box-ABS OBJ= CL 2= send-FA-IMP 'Send the box.'

The verb to pluck 'break, or 'disengage' is *tol* which can be employed with a large number of body class markers and object clitics to convey the nature of the action and the object concerned. In (a-b) below, body divisions pertaining to 'back' and 'head' are maintained respectively. Similarly, the basic meaning of 'emission' or 'separation' is retained in (c). Each body class marker expresses different **locations** of action depending upon the body division it originally classifies in referring to various body part terms.

a.	>t/t=t>l−e	b.	εr=tɔl−e	с.	ut=tɔl-e
	CL 4=tattoo-imp		CL2=tattoo-imp		сl4=pluck-імр
	'Tattoo the back of the body	?	'Tattoo the forehead.'		'Pluck it.'

The combination of various body class markers and verb root express diverse meanings, sometimes rendering very idiomatic phrases as in (71). A few examples are given here:

- (71) *bei-bi it=tɔl-o* bottle-ABS OBJ=break-PST 'The bottle broke (into pieces)'.
 (72) *caybi* εn-tɔlo-ke < un-tɔloko 'bloomed flowers' wherever RESULT-bloom-COP 'Flowers bloomed everywhere'.
- (73) εn -t-t-bi $ik/t=(\varepsilon)$ t-te $< \varepsilon$ -t-t-t-e 'pluck flowers' RESULT-bloom-ABS OBJ=pluck 'Pluck the bloomed ones.'
- (74) totoe srobit tenom
 totoe = sro-bi ut=tenom
 Pandanus-CL 5=flower-ABS CL 4=smell
 '(I) smell the flower of Pandanus.' Or 'The Pandanus flower smells'

The verb 'to see' which is marked by internal body class marker 5, i.e. $e_- \sim \varepsilon_-$, changes the meaning if relational body class marker 2 εr_- is attached to it.

a.	εr=ole	b.	$\varepsilon = ole$
	CL 2=see		CL 5=see
	'call someone by gesture'		'see'

All these examples indicate that the body division classes are semantically coded with a wide range of meanings pertaining to each division of body and can thus be attached to a variety of verbs obtaining the appropriate modification in each case. This needs an intensive cognitive-semantic analysis of body division classes which can form an independent study in future.

4.2 Intransitive verbs

Body part semantics also permeates intransitive verbs designating various psychological predicates, experience, and state. Some intransitive verbs are attached to body class markers explicating a world of events and states that can be considered on par with the distinctions made on the scale of inalienability with regards to body part terms. Hence verbs with a marker ot- $\sim ut$ - would refer to an action of motion away from the speaker, such as 'go', 'exit'. Thus th=ut=cone-bom 1sG=CL 4=go-NPST 'I am going', or, where something (not necessarily tangible) is being generated as in experiential verbs 'feeling sad/happy/hungry/thirsty/' etc. as in *thire ut=thete-bom* 'child CL 4=hunger-NPST', 'the child is hungry'. These objects of experience, namely 'hunger', 'thirst' etc, are inherent parts of the experience [hence inalienable] and emerge involuntarily in a person. They are seen as products of the body or 'self'. Similarly, verbs like 'shake' and 'kiss' have body class marker 2 *er*-while verbs like 'pound' or 'beat to a pulp' use *e*-, the body class marker 5, which allows us to extend the analogy given into the semantics of body partonomy.

a.	$a=jet^h$	b.	$\varepsilon = colol$	с.	e=biŋe
	CL 1=vomit like		cl 5=roll		CL 5=think/remember
	'feel nauseated or uneasy'		ʻroll down'		'think'

(75) $t^{b}=e=$ ta-bine ISG=CL 5= APPL-think 'I am thinking (of something).'

a.	ε=jome	b.	ut=jome
	CL 5=scare		CL 4= scare
	'be afraid'		'get startled'

The body class markers are very productive and not very selective as they attach to a large number of verbs. Their distribution makes sense in terms of the body division classification of the basic seven. Consider one and the same body class marker 4 attached to different verbs retains the primary meaning of 'genesis' or 'body product'. Although many usages are lexicalized (h), in many cases the body class markers can be productively attached to several verb forms to create new lexemes.

a.	ut=thu	'be born'	[CLASS 4=born]
b.	ot=cone	'go', 'exit'	[CLASS 4 = exit]
с.	$ut = t^h e t^h e$	'feel hungry'	[CLASS 4 =hunger]
d.	ut=p ^h ae	'feel thirsty'	[CLASS 4 = thirst]
e.	ot=bo:lo	'peel off'	[CLASS 4 =peel]
f.	ot=cobi	'shoot at large crowd'	[CLASS 4 = shoot out]
g.	i=ji:te	'tremble'	[CLASS 5 = tremble]
h.	ijube	ʻfly' n	

Thus, what strikes us most from the examples given above is that the basic division in verbs is not between +/- transitive but between +/- dependency, i.e. whether they are preceded by a body class marker or not. Verbs are either dependent or independent. The dependent ones can take any one of the seven body division classes and/or an object clitic. Although it is very difficult to distinguish one kind of meaning from the other while analyzing each of the seven divisions represented in verbs, partly because the body class markers are grammaticalized in varying degrees over a period of time of language development, one can still arrive at a broad classification (Table 15).

Class	Body class markers	Semantics	Examples
Class 1	а-	mouth-related activity, origin	<i>a=jire</i> 'abuse', <i>a=kɔpʰo</i> 'sprout'
Class 2	<i>εr-</i> ∼ <i>er-</i>	action involving the front part of the body,	<i>era=luk</i> 'weigh'
Class 3	0ŋ- ~ 0n-	hand-related activity	oŋ=c ^h o 'stitch', un=tujuro 'trembling of hands'
Class 4	<i>ut- ~ ot-</i>	directional, experiential	ot=cone 'leave', t ^h et ^h e=bom 'be hungry'
Class 5	e- ~ i- ~ e-	action involving the interior of an object	<i>e=lεco</i> 'suck', <i>ε=rino</i> 'tear'
Class 6	ara-	action involving middle portion of the body	<i>ara=delo</i> 'be pregnant'
Class 7	0- 3-	resultative state	<i>o=cɔrno</i> 'make nest', <i>o=beo</i> 'sting'

Table 15. Body division classes in verbs

While CLASS 1 is near transparent, CLASS 7 is highly grammaticalized. Not all seven are grammaticalized in the same degree. I shall discuss the degree of grammaticalization in detail in Section 7.

In short, the relationship between body class markers and verbal roots is manifold: it can refer to (a) an object; (b) specific location of an event; (c) manner of an action and (d) result of an action.

5. Inalienability and its representation on modifiers

The case for adjectives is similar to the case of verbs. Semantic transparency, drawn on the basis of the original classificatory meaning assigned to the body divisions by the class markers, can be seen between them and the host adjectives. This, at times, leads to a certain degree of possibility of exercising the choice of the adjective with a particular class marker to express an appropriate meaning. For instance, it was observed that the body class marker 5, i = -e is attached to those terms for body parts which are inside the body, e.g. 'blood', 'intestines', etc. and the same body class marker is attached to adjectives defining internal human propensity such as in e=liu-foyo 'brave'; e=cay 'bad'; e=dirim 'black' or 'dark'; $e=bop^ho$ 'stupid'. It may also signify the internal quality of an inanimate object such as in $e=kok^hela$ 'blunt'; i=boe 'boiled'; e=motello 'thick' and $i=p^hu\eta$ 'fully ripe'. The following sentence has two modifiers each attached by the relevant body class marker. Thus, facial beauty that is overtly observable takes class marker 2 while the internal attribute of being 'bad' takes class marker 5.

(76) a-lep^hai εrcsk nol ecai untabolo
 a-lep^hai εr=csk nol e=cai un-tabol-o
 ARG-Lephai CL 2=face good CL 5=bad REFL-naughty-PST
 'Lephai was good but naughty'

The following sentences indicate external attribution by the class marker εr - or the inherent quality of the argument by the class marker *i*-.

- (77) *a- k>bo cr=t>l>b>ŋ* (*be*) ARG- Kobo CL 2=tall COP 'Kobo is tall.'
- (78) *tele i=p^heca k^hamo-bi* elephant CL 5=old condition-сор
 'The old elephant/the elephant is old.'

(79) *a-loka er=biŋoi be ara=kata* ARG-Loka CL 2-fat COP CL 6=dwarf/short 'Loka is fat (and/but) short.'

The attributes of an object are inherent to the object and thus cannot be separated from it. The dependency of these modifiers on associated class markers is, thus, justified. The semantic category exposed by the body division classes can be seen to a large extent in other adjectives as well, e.g. mouth-related body class markers precede words for 'dumb' and 'greedy', hand-related body class markers precede words for 'lame', and words for 'pregnant woman' are preceded by the belly-related body class marker *ara*. An approximate coding of semantics embedded in the body division classes with adjectives is presented in Table 16.

Class	Body class markers	Semantics	Examples
1	а-	mouth-related attribute	<i>a=mu</i> 'dumb', <i>a=tutlup</i> 'greedy'
2	<i>εr-</i> ~ <i>er-</i>	external attribute	εr=buŋoi 'beautiful', εr=achil 'surprised'
3	0ŋ- ~ 0n-	attributes related to limbs	oŋ=karacay 'lame', 'handi- capped', on=toplo 'alone'
4	<i>ut- ~ ot-</i>	negative attribute	<i>ot=lile</i> 'decay', <i>ot=l5k^ho</i> / nude'
5	$e- \sim i- \sim \varepsilon-$	inherent attribute	$e=sare$ 'salty', $\varepsilon=b\varepsilon n$ 'soft'
6	ara-	belly-related attribute	<pre>ara=p^hetk^hetɔ `big bellied', ara=kaţa `stout/dwarf'</pre>
7	0 ~ Э-	attribute of shape and texture	o=baloŋ 'round', o=p ^h elaŋa 'slippery'

Table 16. Body division classes in adjectives

Near transparency of semantics of body division classes and the class markers used for a large number of nominal modifiers render adjectival class markers less grammaticalized than the verbal ones.

6. Body division classes and adverbs

Modifiers of verbs, viz. adverbs can be attached to body division classes designating various deictic meanings as well as manner of an action. In this function these markers are highly grammaticalized. The original definition of 'grammaticalization', i.e. as a process consisting 'in the increase of the range of a morpheme advancing from a lexical to grammatical or from a less grammatical to a more grammatical status' (Kurylowicz 1965:52) applies in the case of adverbs. While near transparency is seen in the use of body class markers and the adjacent nouns and adjectives, body class markers attached to adverbs do not give near transparency of original body division semantics. For example, mouth-related class markers are attached to words meaning 'prior to' or 'anterior'. Similarly, the deixis of immediate vertical or horizontal space is designated by the class marker *ara* for 'sides', and 'hurried action' is designated by body class marker for 'extremities'.

Consider Table 17 on Adverbs. The symbol X signifies 'something' or 'somebody'.

Class	Body class markers	Semantics	Examples
1	<i>a</i> =	deixis of front or back; anteriority of an action	<i>a-karap</i> 'behind', <i>a-kaulu</i> 'prior to'
2	$\varepsilon r = \sim er =$	deixis of adjacency	<i>er-betto:fo</i> 'adjacent to/near X',
3	0ŋ= ~ 0n=	haste or hurriedly done action	oŋ-kocil 'fast', 'hurriedly'
4	$ut = \sim ot =$	directional deixis	<i>ot-le</i> , 'seaward' <i>ot-bo</i> 'backwards'
5	$e = \sim i = \sim \varepsilon =$	deixis of internal space	<i>te-kʰil</i> 'in the middle', <i>e-kotra</i> 'inside'
6	ara=	deixis of immediate ver- tical or horizontal space	<i>ara-balo</i> 'behind X', <i>tara-tal</i> 'right under X'
7	0=~)=	temporal deixis	o-țɔ: 'day break', o-kara 'sunset'

Table 17. Body division classes in adverbs

'Class marker 3 is never used for designating spatial relations.' Deictic words are highly grammaticalized as the semantics of the body class markers is not very transparent except for class markers 5 and 6. Since the body class markers signify deictic meanings very significantly and systematically by attaching to adverbial class, their use is heavy in the language. Consider Table 18.

Table 18. Body division classes designating spatial relations

Class	Body class markers	Body division	Spatial relations	Reference points
1	а-	mouth cavity	surface	'front'
2	Er-	face	anterior, exterior	'front', 'out'
4	ut-	body products	posterior, superior	ʻup'
5	е-	internal parts	interior, centre	ʻin'
6	ara-	sides	periphery	'edge'
7	Э-	lower parts	inferior	'down'

Class marker 3 is never used for designating spatial relations

7. Process of grammaticalization

The concept of 'grammaticalization' has been discussed widely in literature, see for example Lessau's A dictionary of Grammaticalization (1994), but I have broadly followed the views of Heine and Reh (1984:15)⁸ whereby a lexical unit may lose several of its semantic, syntactic and phonetic characteristics in the course of language evolution. Out of the several varying parameters to identify 'grammaticalization' (Heine 1997, 2006, Heine and Kuteva 2007), two prime parameters, i.e., extension (application to new categories) and desemanticization (semantic bleaching) have been applied extensively while analyzing the PGA structures. While the body class markers appear to have been grammaticalized to a large extent, my estimates of degrees of grammaticalization present a picture of varying degrees of grammaticalization across individual class markers as well as across various form classes. For instance, body class markers 6 and 7 are more grammaticalized than is class marker 5, and body class markers with adverbs are more grammaticalized than those occurring with nouns and adjectives. My judgment of the degree of grammaticalization has been guided by the two prime parameters mentioned above.

It is clear by now that body division class markers, each with a specific meaning, are grammaticalized in the language and co-occur with a large number of form classes of content words, classifying and modifying them. The words from major class forms such as nouns, adjectives, adverbs and verbs with body class markers outnumber those that occur without them, although exact statistics are not available. This implies that there are more obligatorily possessed major class forms than free ones. It is not easy to establish a one-to-one correspondence with body division classes used for body part terms and those used with other nouns, verbs and modifiers, but the native speakers of the language have no problem in assigning an appropriate class marker in the case of new adjectives, new verbs and new nouns.

One can represent the process of grammaticalization for each category considered as follows (cf. Fig 3): The length of each arrow signifies the degree of grammaticalization. The longer the arrow, the greater the grammaticalization. Body class marker 7 has attained an equal degree of grammaticalization for verbs, adjectives and adverbs. In general, body class markers used for adverbs are more grammaticalized than other form classes and are thus semantically not as transparent as in the case of those used for nouns and adjectives.



Figure 3. Degree of grammaticalization accross grammatical categories

One can speculate that these body class markers must have been derived from full lexical items diachronically. Eventually, each developed its own semantics which governs the larger meaning of the dependent form class. This has become evident as each obligatorily class marked content word has the potentiality of taking different class markers designating distinct meanings. Conversely, the same class marker can be proclitic to several verbs, nouns and modifiers, retaining near semantic transparency and open selectivity.

In the course of language evolution some of these body class markers have been lexicalized. Lexicalization refers to a process where a non-lexemic unit becomes a lexeme, something "that belongs in the lexicon" (Lessau 1994: 534). For instance, in the words iulo 'loose', ieke 'roast', i:ople 'light', ese:kke 'change', ertolo 'half', erlela 'intoxicated', ame 'earth', ale 'lightening', odaye 'skull' and okobse 'answer', it is not possible to segregate body class markers from the rest of the morpheme as they are infused in the lexeme in such a way that the former are indivisible parts of the lexeme.⁹ This also raises the questions: Which of the form classes are independent? And which are not obligatorily preceded by body class markers? Although the whole issue involved in the process of 'lexical' to 'grammaticalization' to 'lexicalization' warrants future research in PGA and demands an independent research paper, I would like to share the information with the readers that a large number of intransitive verbs, especially those related to the concept of 'motion' are independent verbs and some modifiers given in Table 19 also occur as independent categories. A brief mention of independent nouns was already made in 2.4 and 3.4. One can speculate that a large number of these words could have been generated in the grammar through the lexicalization process.

Form Class	Great Andamanese	Gloss		
Modifiers	intajionɔl	tasty		
	p^{h} inli	throbbing		
	bek ^h a	useless		
	tanto	lean, fatless		
	то	small		
	muŋili	for a while		
	noť ^h i	uncontrollable		
Verbs	aone	come		
	ci	come		
	p ^h oro-be	come		
	meli	return		

Table 19. Independent form classes

Form Class	Great Andamanese Gloss	
	bel	pass away
	то	leave, relinquish
	ţɔl	roam around
	tɛbol	run away
	laťbo	be afraid of
	lara	hunt turtle
	loto	catch fish
	mar	gossip
	jeo	recede
	jilap	talk slowly
	bəbiŋ	know, learn
	$p^{h} \varepsilon n$	jump
	rok	crush

Table 19. (continued)

8. Are these markers clitics?

We observed that the dual semantic system in PGA offers us grammaticalized morphemes functioning as body class markers obligatorily attached to the words drawn from all form classes. I am going to justify why I refer to them as proclitics and not prefixes in this section.

Out of the six well recognized criteria that Zwicky and Pullum (1983:503) suggest for identification of clitics, the first one and the most significant one is that:

Clitics and not affixes can exhibit a low degree of selection with respect to their hosts and can attach to any word of major word class, such as nouns, adjectives, adverbs and verbs. According to this criterion, body division class markers in PGA are clitics. This criterion has also been considered a very significant one to decide the status of clitics as opposed to affixes by Aikhenvald (2002: 44) and Bickel and Nichols (2007: 174–175).

PGA class markers meet three more criteria suggested by Zwicky and Pullum (1983). They are:

ii. There are no unexpected forms or irregularities in clitics. Hosts are unaffected by clitics.

- iii. There are no semantic idiosyncracies, as they are predictable to a large extent. It has been observed that PGA speakers readily assign an appropriate class marker to a new word.
- iv. Clitics can attach to material already containing clitics, but affixes cannot. PGA body class markers are attracted by the pronominal clitics (see below).

There are a couple of other arguments one can give for the justification of body division class markers being labeled clitics:

- v. They are not as close to their host as affixes are because body class markers that attach to verbs can be separated from the verbs with several other functional categories in-between (sentences 80a, 81a, 82 and 84).
- vi. They can be characterized as an underlying determiner of the word class they are attached to, as represented in various examples in earlier sections. Body division classes provide the larger meaning to the basic meaning of the host morpheme as was observed in attributive adjectives of human propensity (sentences 76–79) or verbs of transitive or intransitive nature (examples given in Sections 4.1 and 4.2).

This concordance of class marker and host morpheme suggests that word classes such as nouns or verbs are marked typically by different kinds of classes designating in their role of modifiers the perceptual analogy that a native speaker makes between a specific body division class and the nature of the action or the nature of the modifier of a noun. For instance, transitive verbs are preceded by these class markers because each decides the nature of the action and the object associated with it. I repeat some examples here to make this point clear.

ara=p ^h o	'cut it down, 'fell' (tree)
$\varepsilon r = p^h o$	'hit with a stick' (from front)
$et=p^{h}o$	'cut or separate from the source' (betel nut from branch)
ut=p ^h o	'cut /hit from above' (coconut)
εr=ban	'hold' (stick)
ut=ban	'touch slightly'

These examples illustrate that the same verb root may take a variety of body class markers depending on the nature of the action and its effects on the object concerned. However, in case of verbs, it is not always easy to specify which particular meaning of the body division class out of an entire range of meanings, is relevant to express the specific meaning. This warrants future research in the semantic division of body classes in PGA.

Seen from a structural point of view, the fact that there is no obligatory rule that they immediately attach to the verb in all constructions and the fact that they can be moved to a position before a verb phrase as shown in (80a, 81a, 82, and 84) below, makes them good candidates for proclitics. This argument has been widely accepted as the indicator of clitics (Heggie and Ordóñez 2005). They are moveable and are attached to the subject as in the following case, distancing themselves from the verbs they are classifying. This may appear as an instance of incorporation. Affixes certainly do not behave in this manner. The (a) sentences differ from (b) sentences in focus. Verbs with clitic adjacency indicate focus on the action.

- (80) a. $t^{h}=ut$ $t^{2}p_{1}-e^{-p_{1}}oke$ 1SG=CLASS 4= tree-ABS cut'I cut the tree.' b. $t^{h}u$ $t^{2}p_{1}-e^{-}ut=p^{h}oke$ 1SG tree-ABS CLASS 4=cut'I cut the tree.'
- (81) a. ηο i=cop^he
 2sg CLASS 5=enough/how much get-PST
 'How much did you get?' or 'Did you get enough?'
 - b. *no* cop^he *i=cnp-o*2sG enough/how much CLASS 5=get-PST
 'How much did you get?' or 'Did you get enough?'

We saw in Section 4.2 that proclitics also attach to intransitive verbs. These proclitics can also be well separated from its head, i.e. the verb, as the subject noun attracts the proclitic towards itself. Intransitive verbs that are experiential in nature 'be hungry' or those of motion such as 'exit', 'leave' also allow the proclitics to be attached to the subject noun (83, 84).

- (82) reya jo-et nɛ rence-o
 Reya Joe-OBJ ЗРL fight-PST
 'Reya and Joe fought with each other.'
- (83) $t^{h}=ot$ $t^{h}et^{h}e-b-om$ 1sG-CL 4= hunger-FA-NPST 'I am hungry.'
- (84) Buli ot diglipur-ak cone-b-o
 Buli-CL 4= Diglipur-DIR go away-FA-PST
 'Buli went away to Diglipur.'

8.1 Clitic sequencing

PGA offers evidence for clitic sequencing as pronominal clitic and body division class marker clitics can combine with each other to form a word.

- (85) $t^h ut = toa-t^h u kata$ 1sg.cl 4= earlier-born girl 'My elder sister.'
- (86) $t^{h}ot = cone-b-om$ 1SG.CL 4= gO-FA-NPST 'I go.' or 'I leave.'

Examples (85) and (86) above exemplify clitic sequencing. The two clitics are strictly ordered in this combination, one of the essential conditions specified for clitic combinations (Gerlach and Grizenhout 2000: 10). The prosodic phenomena such as pause and stress that dictate the occurrence of these two clitics as one phonological word¹⁰ also qualifies the cosntruction to be of clitic sequencing (Spencer 2000: 368). The body division class marker always takes the second position when preceded by the pronominal clitic in a possessive construction. If one reconsiders the phrases given earlier in Section 2 above, the clitics sequencing will be clearly exemplified. To recall, I repeat two such examples. To show clitic sequencing, the symbol = is used twice.

- (87) t^h=a=tat
 1sG=CL1.POSS=tongue
 'My tongue'.
- (88) $\eta = ara = karap$ 2sg = cl 6.poss= rib cage 'Your rib cage'.

Pronouns in PGA always occur in their clitic form when followed by another clitic or an affix. Although the body class markers are concorded with nouns, modifiers and verbs as lexically governed categories, phonologically they move towards pronominal clitics. Thus, the word for 'back' is ut=bo but with a preceding possessor, the proclitic moves and attaches to the possessor pronominal clitic as in $t^h=ut \ bo$ 'my back'. In other constructions with a proper noun or a common noun as a subject, or when the pronominal is in full form, the body class marker in a clitic form has the option to be distanced from the host as seen in (82) and (84) or to remain attached to the host as in (80b) and (81b).

I prefer to refer to the body class markers as clitics or **proclitics**, not only because they precede the host category but also because of the reasons mentioned in (i)–(vi) above, the characteristic features, never shared by affixes. In the absence of the possibility of gathering further data to run syntactic tests, one can safely say that these are necessary if not sufficient conditions for labeling body class markers as proclitics. It appears that these body class markers are multifunctional satellite elements, which are essential for specifying the semantics of all lexical classes of content words, i.e. nouns, verbs, adjectives and adverbs.

While eliciting PGA words, whether in the areas of nouns, adjectives or verbs, it was observed that native speakers used the proclitics before the majority of content words. Thus, when asked for the word 'go' speakers gave the form ot=cone and not *cone*. Similarly, the word 'good' was not rendered in isolation as *nol* but *i=nol*. Thus, the various body division classes symbolized by body class markers can be analyzed morphologically as:

- i. Possessive proclitics
- ii. Verbal proclitics
- iii. Attributive proclitics

9. Conclusion: The semantics of body division classes and inherency

The body division classes classify nouns, attributes and actions in the language. They also define the properties of the word class they are attached to, e.g. the location of an object noun, manner of an action or the nature of an experience. The PGA grammar helps us to extend the notion of 'dependency' to areas beyond nominals. Semantically, the notion of dependency can be seen in two different ways: (1) when the body class markers appear with verbs which are prototypically transitive in nature, they signify the mode of operation and the effect of action, something which cannot be alienated from the action itself; (2) when the body class markers attach to prototypical intransitive verbs of state, they signify ambience (Chafe 1970), the resultant experience, or the patient noun which cannot be alienated from the separated from the 'action of dance', the result of 'roll down' cannot be separated from the 'action of roll down', the experience of 'hunger' cannot be separated from the state of 'being hungry'.

A consolidated table of seven divisions of body designated by BODY CLASS MARKERS representing various inter-related meanings underlying classes of nouns, verbs, adjectives and adverbs give us a very unusual structure of the language. A summary table can be drawn to show the obligatorily marked form classes in PGA.

Class	Body division classes	Body class markers	Verbs	Adjectives	Adverbs
1	mouth and its semantic exten- sion	а-	mouth-related activity, origin	mouth-related, quality of a person	deictic meaning of front or back, anteriority of an action
2	major external body parts	εr-	activity in which the front part of the body is involved.	attribute of size, external beauty	deictic meaning of adjacency or front, uncontrollable ac- tions/emotions
3	extreme ends of the body like toe and finger- nails	oŋ-	hand-related activity, action to do with extremi- ties of body	attributes re- lated to limbs	manner: 'hur- riedly'
4	bodily products and part-whole relationship	ut-	directional, away from the ego, experiential	quality of an X after a part is taken out of it	emerging out of something, deictic meaning of 'towards X', 'up'
5	organs inside the body	e-, e-	internalized action, when the effect of an ac- tion can be seen on the object, or experienced	inherent attri- bute of X	deictic meaning of 'in the middle of X', manner: 'slowly'
6	parts designat- ing round shape and sides	ara-	action that involves side or middle portion of the body	attribute of size, 'time' and belly- related	deictic meaning of something in contact with or periphery
7	parts for leg and related terms	0- ~)-	action which more often than not, results in roundish object or in a definite result	external attri- bute of an X	temporal deixis re- lating to 'sun rise' or vertical deixis

Table 20. Semantics of body division class markers and bound form classes

The dependency feature of the verbal root, modifier or noun on the preceding body division classes may be understood as the **inherency factor**. The relationship between two nominal categories or between an action and its results or between the object and its attribute, or the action and its mode of operation or resultant state is seen as inherent and inextricable. This factor is more obvious in the case of nouns designating separated body parts and a part-to-whole relationship. The notion of inherency in the language further represents conceptual dependency between the object and its possessor. The Great Andamanese conceptualize their world through these interdependencies and hence the grammar of the language encodes this important phenomenon in every form class expressing referential, attributive and predicative meaning.

Considering the structures discussed so far, one is motivated to extend the semantics of inherency to include:

- a. Inherent relationship between the R and D
- b. Permanency of the relation between the R and D
- c. Intimacy of the relations between the R and D (language and culture specific)
- d. Conceptual dependency between the two elements
- e. Inextricably linked entities (such as part and whole)

As Langacker observed (1991, 1995), one can say that inherently relational nouns are characterized by a high degree of conceptual dependency. They are conceptually dependent in the sense that they must be understood in relation to something given (Velazquez-Castillo 1996:34). It is difficult to define and identify what is inherently related and what is not; just as it is challenging to establish a correlation between the inherent relations and conceptual dependency.

The process of attaching body class markers to head nouns, verbs, adjectives and adverbs appears to be an iconic way of representing the 'inherency' factor. It cannot be denied that the perception of what is inherent, non-transferable and thus inalienable is governed by the specifics of the Andamanese culture and society. The system is unique and certainly deserves a place in dscussions of grammar.

1	first person	D	Possessed	OBJ	Object clitic
2	second person	DIST.VIS	Distant visual	PCPL	Participial
3	third person	ERG	Ergative	PL	Plural
ABS	Absolutive	FA	Formative affix	POSS	Possessive
ACC	Accusative	GEN	Genitive	PST	Past
APPL	Applicative	IMP	Imperative	R	Possessor
ARG	Argument marker	INA	Inalienability	REFL	Reflexive
CL	Class	INSTR	Instrument	RESULT	Resultative
COP	Copula	NPST	Non-past	SG	Singular

Abbreviations used

Notes

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2. There is one speaker who, although hailing from Sare, speaks the present form of the Great Andamanese language.

3. The last few generations of Great Andamanese speakers are descendents of intermarriages among North Andamanese tribes. The Government of India encouraged this practice in order to preserve their dwindling numbers when the entire population was settled on 'Strait Island', a tiny island located 53 nautical miles north of Port Blair.

4. Fortunately, I could interview some of the fluent speakers of the language while they were still alive. Special mention must be made of Jirake, the chief of the Great Andamanese tribe and Nao Jr. his younger brother, and Boa Sr who came from the Bo tribe. More than 50% of the current population of the Great Andamanese tribe is constituted of children below 14 years of age.

5. For details on the abbreviations see Dixon (2010: 262).

6. However, the nouns for 'son' and 'daughter' were marked by the body division class marker in extinct South Andaman languages such as Aka-Bea. H. Man (1923 [1883]:158–159) cites examples of kinship terms including the ones used for 'son' and 'daughter' that are preceded by possessive "prefixes".

7. Diachronically, one can hypothesize that at some point of time these object clitics could have been derived from some body part terms. At present, they appear solely as object markers and do not classify body part terms or divisions. Because of the limitation of the data in the situation of language not being spoken by all members, it was difficult to reach any definite semantic judgment on the alternating forms of the object clitics.

8. "With the term 'grammaticalization' we refer essentially to an evolution whereby linguistic units lose in semantic complexity, pragmatic significance, syntactic freedom, and phonetic substance respectively" (Heine & Reh 1984:15) quoted in Lessau (1994:417)

9. "The change whereby in certain linguistic contexts speakers use a syntactic construction or word formation as new contentful form with formal and semantic properties that are not completely derivable or predictable from the constituents of the construction or the word formation

pattern. Over time there may be loss of internal constituency and the item may become more lexical." Brinton and Traugott (2005: 96).

10. For details see Abbi *forthcoming*. The notion of a "phonological word" (Dixon and Aikhenvald 2002) or "prosodic word" (Bickel, Balthasar & Johanna Nichols. 2007, Schiering, René, Bickel, Balthasar and Kristine A. Hildrebrandt 2010) has been much debated and discussed in recent literature and offers several ways of identifying its status. I have been governed by the "pause phenomenon" and the "stress phenomenon" to identify a phonological word, the details of which are beyond the scope of this paper.

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