Is Great Andamanese genealogically and typologically distinct from Onge and Jarawa? ☆

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Abstract

India represents five language families: Indo-Aryan, Dravidian, Austroasiatic, Tibeto-Burman and Andamanese. The origin of Andamanese tribes and its relationship with Southeast population have been the subject of speculation for centuries. Latest research by geneticists [Thangaraj, K. et al. Reconstructing the origin of Andaman Islanders. Science 308, 996] of complete mitochondrial DNA sequences from two out of three accessible tribes, i.e. Onges and Great Andamanese populations, revealed two deeply branching clades that share their most recent common ancestor in founder haplogroup M, with lineages spread among India, Africa, East Asia, New Guinea, and Australia.

Linguistic evidence indicating such a bifurcation among the Andamanese languages had been proposed earlier as well [cf. Radcliffe-Brown, 1914; Radcliffe-Brown, A.R., 1922, 1929, 1948 (3rd print). The Andaman Islanders. Free Press, Glencoe, Illinois]. Much later, Abbi [Abbi, A., 2003. Vanishing voices of the languages of the Andaman Islands. Paper presented at the Max Planck Institute, Leipzig, June 13], on the basis of a pilot survey of the Andamanese languages, indicated that there are possibilities of establishing Great Andamanese language(s) forming a distinct family from the one that Jarawa and Onge belong to. Subsequently, an extensive fieldwork on the Great Andamanese language by the author and the fresh data from Jarawa further reconfirms her judgment explicated in the present paper.

The present paper, after taking into account the lexicon and morpho-syntactic complexities of the three endangered languages of the Andaman Islands, such as Great Andamanese, Onge and Jarawa, provides (1) enough pieces of evidence that Great Andamanese is an isolate which constitutes the sixth language family of India. It is very different from Onge and Jarawa genealogically and linguistically; (2) unlike vertical transmission of genes, linguistic transmission can both be vertical and be horizontal. In the case of Great Andamanese, horizontal transmission had been mostly within the same language family; (3) the genetic tree retains traces for a much longer period than the linguistic tree. The result is that at a particular point of time in human history, genetic and linguistic parallels may not match. The author arrives at her results on the basis of the tools provided by the linguistic typology and the comparative lexicon of the three languages under consideration.

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1. Background

The origin of Andamanese tribes and their relationship with Southeast population have been the subject of speculation for centuries. Anthropologists (Man, 1883, 1885, pp. 253–272; Portman, 1887, 1899; Radcliffe-Brown, 1948), geneticists (Hagelberg et al., 2003, pp. 86–93; Endicott et al., 2003; Lehman and Ikin, 1954, pp. 12–15; Palanichamy et al., 2005, p. 470; Thangaraj et al., 2003, pp. 86–93, 2005, p. 996, 2006, p. 470b), linguists (Abbi, 2003, 2006a; Basu, 1952, pp. 55–70; Burenhalt, 1996, pp. 5–24; Dasgupta and Sharma, 1982; Greenberg, 1971; Manoharan, 1989; Reid, 1994, pp. 37–72) and archeologists (Cooper, 1989, pp. 22–32, 1993, pp. 394–399; Howells, 1973) all have contributed to the debate of the antiquity of the tribe and the evolution of Andamanese in general. Latest research by geneticists (Thangaraj et al., 2005, p. 996) indicates that Andamanese are the descendants of early Paleolithic colonizers of South East Asia and are the survivors of the first migration from Africa that took place 70,000 years ago. Their analyses of complete mitochondrial DNA sequences from two out of three accessible tribes, i.e. Onges and Great Andamanese populations, revealed two deeply branching clades that share their most recent common ancestor in founder haplogroup M.[1] The linguistic research on the surviving languages of the Andaman Islands, however, reveals little commonality between Great Andamanese and Jarawa and Onge (Abbi, 2003). The earlier study conducted by the author proposed two possible hypotheses (2006): (1) All three languages belong to the common mother language "Andamanese' with two daughter languages, Great Andamanese and Jarawa–Onge (Fig. 1); (2) there are two distinct language families coexisting in the Andaman Islands independent of each other, Great Andamanese and what the author called "Ang" comprising Jarawa and Onge (Figs. 2 and 3). These hypotheses are represented in the tree diagrams 1–3.[2]

In both cases one fact is overwhelmingly present, i.e. Great Andamanese is distinct from Jarawa or Onge.

Since then, the comparative analysis of Jarawa and Great Andamanese (fresh data from Jarawa (Kumar, in preparation) and from the ongoing project on *Vanishing Voices of the Great Andamanese*) compels me to adhere to the second hypothesis. We shall, in this paper, attempt to show that while Jarawa and Onge share cognates as well as morphological systems among themselves, Great Andamanese does not share linguistic features with either Jarawa or Onge. In fact, Great Andamanese reveals very unique structures not similar to any language family represented in South Asia and South East Asia. The present research is based on the field work conducted in 2001–2002[3] and subsequently in 2005–2006.[4] Only a few selected morphological features are taken into account in this paper due to limited data available in Jarawa and Onge.

2. Introduction

The language of the present-day Great Andamanese is a mixture of a number of Great Andamanese languages spoken by tribes such as Aka-Jeru, Aka-Cari, Aka-Khora, Aka-Bo and many more from the list of 10 tribes once lived in the mainland of the Andaman Islands known as the Great Andaman (Abbi, 2006a). Great Andamanese, thus, is a generic term representing languages of a family once spoken in the north, south and middle Andaman Islands (consult Map Fig. 1 on Andamanese Indigenous people. Also see Map Fig. 2). At present, only eight speakers[5] (not all are fluent in the language) out of the population of 53 speak a kind of

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[1] Their research, however, did not take into account mtDNA samples from Jarawa.

[2] *Source*: Abbi (2006a, p. 96).

[3] During the period of 2001–2002, a pilot survey of the languages of the Andaman Islands was conducted by the author and by two of her students, Shailendra Mohan and Pramod Kumar. The research was supported by the Max Planck Institute of Evolutionary Anthropology, Leipzig, Germany.

[4] Extensive fieldwork in Strait Island and in the city of Port Blair was conducted by the author and by her team members, Alok Das, Narayan Chaudhury and Abhishek Avatans, in the project *Vanishing Voices of the Great Andamanese.* The project is in progress and is supported by the Hans Rausing Endangered Language Fund, SOAS, University of London, UK.

[5] The author is grateful to the informants especially Nao Jr., Boa Sr., Peje and Lico to have allowed her to experience their world.
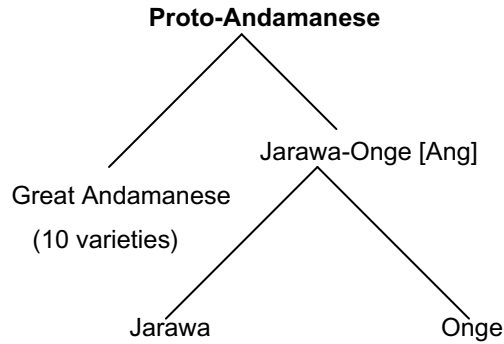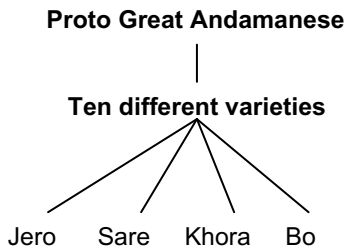
Proto-Andamanese

Jarawa-Onge [Ang]

Great Andamanese

(10 varieties)

Jarawa

Onge

Fig. 1. (Proto) Andamanese languages.

Proto Great Andamanese

Ten different varieties

Jero   Sare   Khora   Bo

Fig. 2. Proto Great Andamanese.

Proto Ang (Jarawa-Onge)
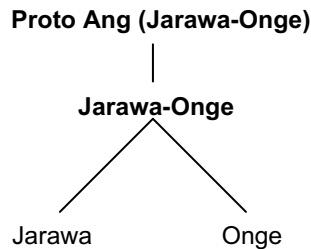
Jarawa-Onge

Jarawa   Onge

Fig. 3. Prot Ang (Jarawa–Onge).

mixed language derivative of these varieties. Unlike Jarawa and Onge, Great Andamanese is a moribund language and is breathing its last (Annamalai and Gnanasundaram, 2001). In such a situation, historical and comparative study is difficult to make but not impossible. All efforts are made to collect as comprehensive data as possible. The author is aware of the fact that no further collection and confirmation of data is possible as the language is vanishing faster than the community itself. As far as the situations of Onge and Jarawa are concerned, though the languages are transmitted to the next generation, yet the depleting number, 96 Onge and 250 Jarawa in all, does not build hope of seeing the community as living a long life. The beaurocracy prevalent in the Andaman administration does not allow any researcher to augment further the already collected data.

It is believed that the languages of the Great Andamanese tribes formed a "linguistic continuum" – in the sense that each language was linguistically closely related to its neighbor on each side but totally unintelligible at the extreme ends of this continuum. Hence, Aka-Cari (referred to as Sare by the present Great Andamanese speakers, the northern most territory in Map Fig. 2), a North Great Andamanese language, was mutually unintelligible to Aka-Bea (the southernmost territory adjacent to Jarawa in Map Fig. 2), the South Great Andamanese language speakers.
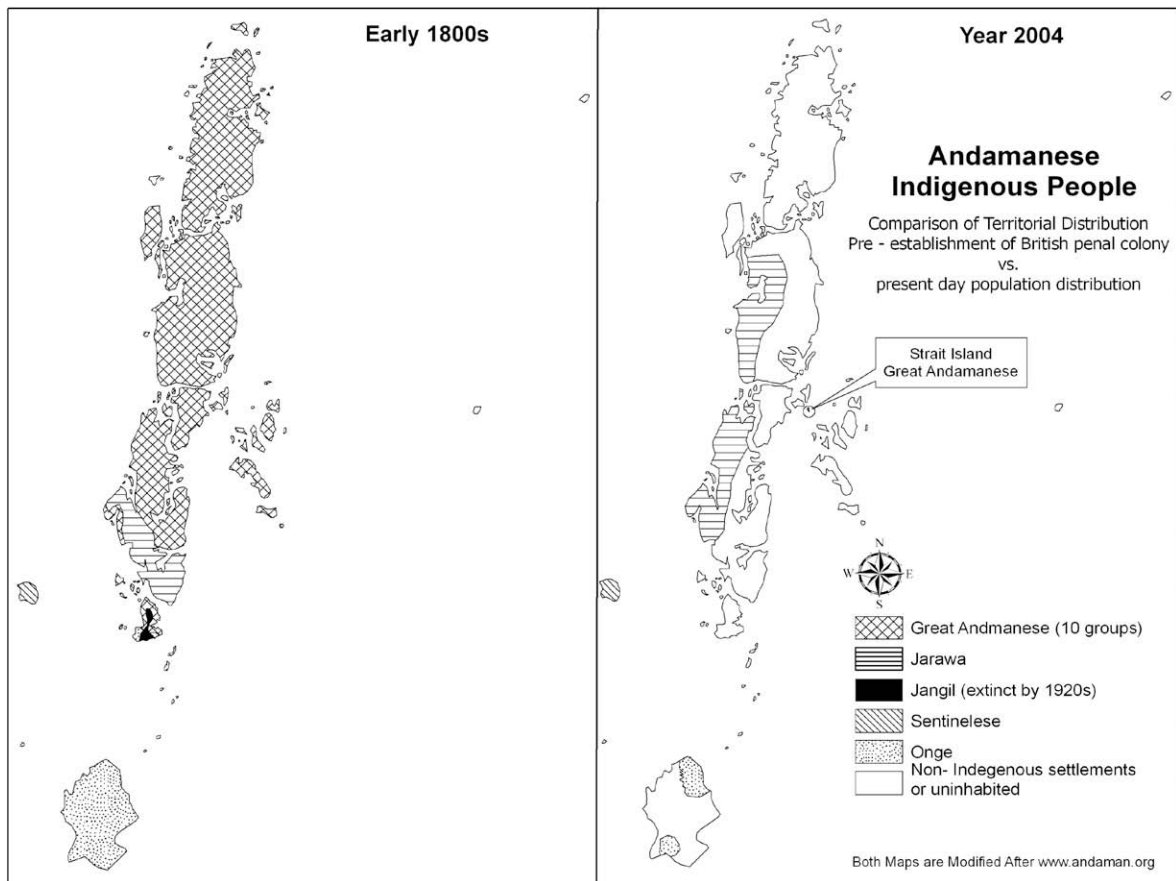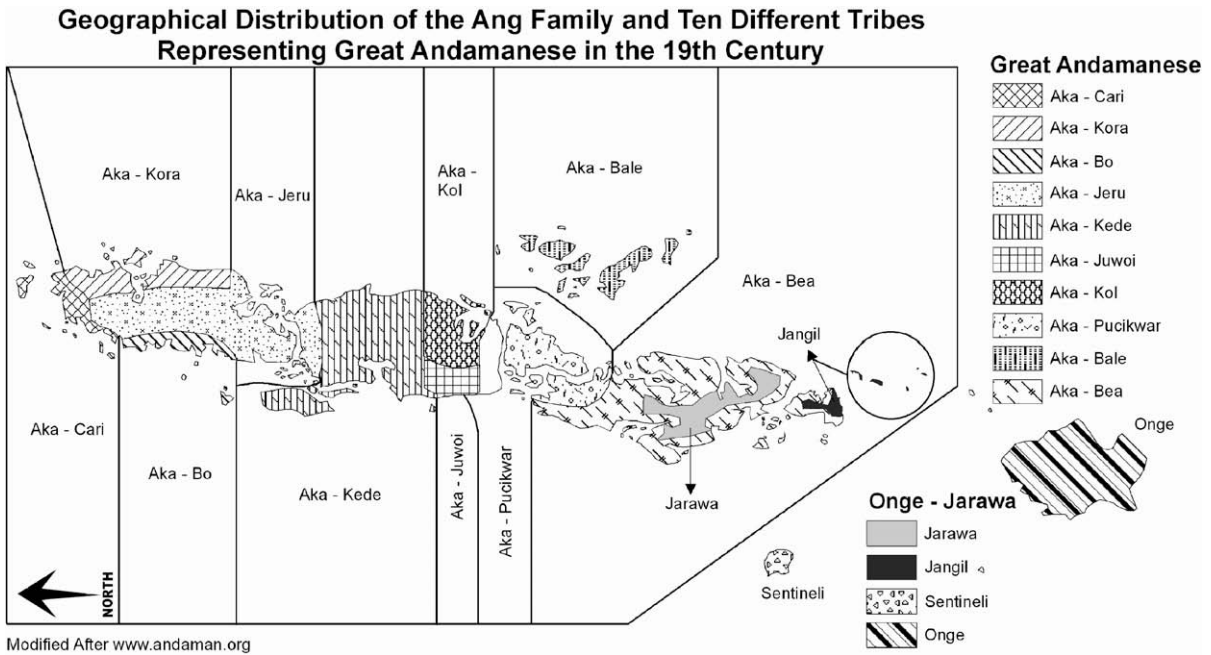
Map 1.

The pilot survey conducted in 2001–2002 of Great Andamanese (East Andamanese (territory marked in the extreme east of the Islands by the name of Strait Island in Map Fig. 1), see also Fig. 4) and other accessible languages of the Andaman Islands, such as Jarawa (West Andamanese shown in Fig. 4 and the area marked for Jarawa in the South and the Middle Andaman Islands in Map Fig. 1), and Onge, i.e. Southern Andamanese (territory marked by the northern most tip of the Little Island, represented in Map Fig. 1 as the last island in the south) by Abbi and two of her students (see Abbi, 2003, 2004) gives us a fairly good crosslinguistic comparison to raise a significant and probing question as to whether Great Andamanese is a typologically divergent and genetically distinct language from Jarawa and Onge. The parentheses shown in Fig. 4 indicate the latest population figure as was recorded in 2007. The number of extinct tribes is indicated by the symbol ø. This indicates that out of ten distinct varieties, only four of the Northern Great Andamanese remain in the present population. The demographic scale of these islanders is inversely related to the amount of contact with mainlanders: the broader the contact, the smaller the population. The map Fig. 1 indicates the territory occupied by the Great Andamanese in the 19th century as opposed to the present situation which charts an inevitable journey towards extinction.

While Jarawa and Onge are autonomous groups speaking individual and specific languages named Jarawa and Onge, respectively, the situation of Great Andamanese is very intriguing and challenging to describe and analyze. As the population started declining, intermarriages[6] among the variety of speakers began and this was

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[6] The present generation of Great Andamanese speakers is the result of intermarriages among North Andamanese tribes. The Government of India encouraged this practice in order to save the depleting population and settled the entire population in 'Strait Island', a tiny island with 53 nautical miles north of Port Blair. Consult Map Fig. 1.

Geographical Distribution of the Ang Family and Ten Different Tribes Representing Great Andamanese in the 19th Century
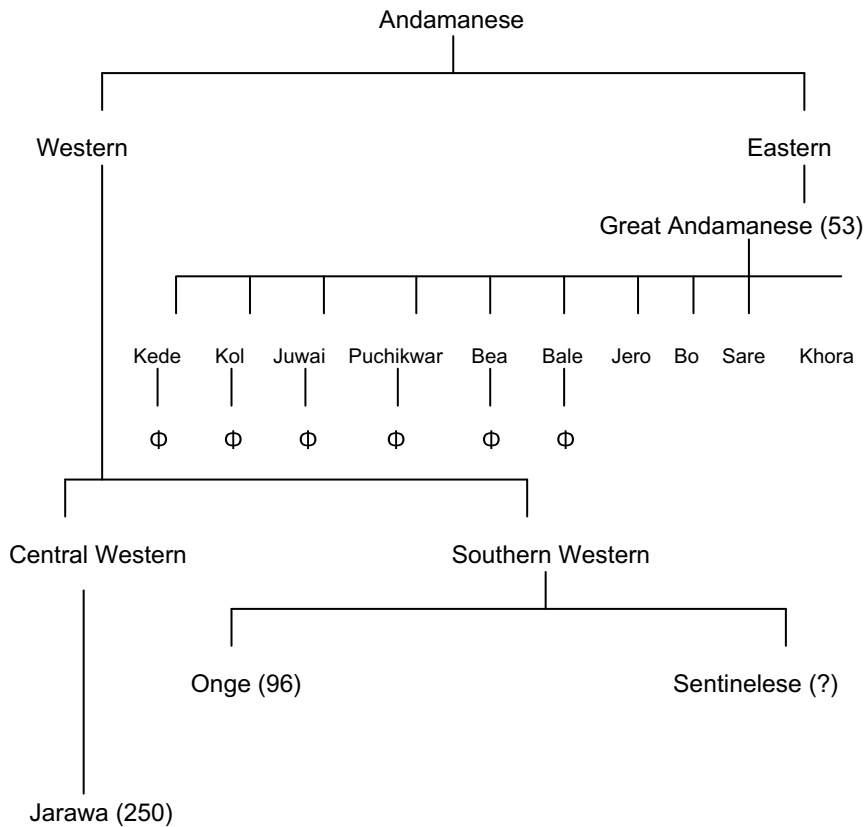
Map 2.

Fig. 4. The present state of the languages of the Andamans. *Source*: Abbi (2003).

Table 1
Cognates in Jarawa and Onge but not in Great Andamanese

No.	English	Onge	Jarawa	Great Andamanese
1	boat	ɖaŋɛ ci	(*cagiya paɖa*)-*taŋ/daŋ*	rowa
2	bow	ɪya	a:w	ko
3	child	iciɭi	iciɭə	tʰire
4	crocodile	ʈɔyəɡɨ	torogiyəi	sare-ka-teo
5	crows	wawa-le	wa:raw	pʰaʈka
6	dog	wə:me, uame	wɔm	ca:w
7	goat	ʈikʷabuli	tʰikʰwa-gopejayo	–
8	laugh	iɲya	ənia:	kʰole
9	water	iɲe	i:ɲ	ino
10	1sɢ 'I'	mi	mi	tʰu
11	2sɢ 'you'	ɲi	ɲi	ɲ

the genesis of the present Great Andamanese (Manoharan, 1986) and their language which has many alternate forms in lexical items, varying phonetic shapes of the same word, and a distinct morphosyntax. The sociological situation in this case, unlike in the case of the creation of pidgins and creoles or mixed languages, is very different. The domination factor of one linguistic group over the other is entirely missing, and intermarriages are the result of demographic need and the urge to save identity. The contact with the other variety group has been voluntary; the only force that one can conceive of is that of nature.

Though Great Andamanese is characterized by a mixture of linguistic features of several (perhaps four if not all 10 that once existed) varieties, what we notice in today's Great Andamanese speech is a kind of levelling of different linguistic systems. Perhaps several grammatical inputs have contributed to generate the Present Great Andamanese. The linguistic system of the Present Great Andamanese appears to be close to Koineization (Manoharan, 1989). As the language is highly endangered with eight terminal speakers, it is very difficult to say how far the language is mixed and what elements are mixed. The view was advocated by Siegel (1985, p. 363) that Koineization results in reduction and simplification of grammar is attested in some areas of grammar. However, the verb morphology that we present here is rather complex and elaborate.

This paper is divided into three parts. In the first part, we shall discuss linguistic evidences to prove the major differences between Great Andamanese and what the author named as the ***Ang***[7] family comprising of Jarawa and Onge (and possibly of Sentinelese too). We have achieved this by applying the historical and comparative methods of identifying cognates and establishing sound meaning correspondences in the basic vocabulary as well as by a comparison of the structural typology of three languages under consideration. In the second half of this paper, we attempt to give evidences for the antiquity of the Andamanese tribes as well as the genetic relationship that may exist between various Andamanese tribes from the research reported in disciplines other than linguistics. This is warranted to bring forth the comparison of the results arrived at by linguistic, anthropological and genetic research. We conclude our findings in the final part.

Let us now consider the linguistic evidence in detail to explore the relationship between three accessible languages of the Andaman Islands. As said earlier, we will be applying the comparative method for identifying cognates across three languages as well as typological comparison of grammars. We shall try to prove that the existence of two very distinct grammatical systems with no evidence of cognates does suggest a rather long distance relationship (if any at all) between the Ang languages and the Great Andamanese.

3. Lexical items

Words drawn from the basic word list[8] as well as those pertaining to body parts are strong examples of cognates shared by Jarawa and Onge. See Tables 1 and 2.

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[7] Abbi (2006a, p. 96). As both Jarawa and Onge refer to themselves '*əng*' meaning thereby 'we people', this term seems appropriate. 'Jarawa' is the name given to the tribe by the Aka-Bea tribe which meant 'stranger' with no reference to animosity or hostility as recorded in *Radcliffe-Brown (1929), and Onge is the anglicization of the term 'əng'*.

[8] Basic word list consists of words which are known to be resistant to change over a long period of time and is found universally in all spoken languages. The list consists of all possible grammatical categories.

Table 2
Comparative terms for body parts[a]

	Jarawa	Onge	Great Andamanese	Gloss
1	-ejea	-ejale	-beŋ	'forehead'
2	-ejebo	-ejebo	-ulu	'eye'
3	-ikʰəwə	-ekʷagɨ	-boa	'ear'
4	-itʰo-ha	-ito-ge	-bala-tara ɖole	'elbow'
5	-eɲia	-moɲa-ge	-ʈʰo	'wrist'
6	-obaŋna	-obanaŋ-ge	-koro	'palm'
7	-obotha	-oboʈa-ge	-kənap	'thumb'
8	-ibə	-ibo	-buco	'thigh'
9	-olak ∼ -ola	-ola-ge	-curok	'knee'
10	-ugɖaga	-ubtəga-me	-moʈora-ɖole	'sole'
11	-agiʈho	-aŋgiʈo	-loŋɔ	'neck'

[a] The hyphen (-) indicates that these noun stems never occur in isolation but are prefixed by personal prefixes which are omitted in the table.

The palatal nasal for second person pronoun exists in many languages across the globe and is no indicator of cognacy.

Attestation of cognates in Jarawa and Onge cannot be ascribed to chance resemblance or borrowing. Various words drawn from the basic vocabulary show systematically sound meaning correspondences between the Ang family of languages.

Vocabulary drawn from the basic words list as well as the commonly used words by the hunter-gatherer tribes of the Andaman Islands for Jarawa and Great Andamanese is given in Table 3. This list undoubtedly establishes the distinct nature of the Great Andamanese language from Jarawa as in virtually no case are the equivalents in the two languages even similar.

We shall consider typological characteristics among the Ang family of languages as well as of Great Andamanese (see Abbi (2006b) for characteristic typological features of Great Andamanese). As we proceed it may become clear that two sets of languages are not even typologically similar.[9] We will proceed in this fashion: first, we will analyse the sound systems of all the three languages, then the areas where the differences between these languages are wide, such as verb morphology and noun morphology of genitives and of pronominal clitics.

4. The sound system in three languages

While Onge and Jarawa share their inventory of sounds at the phonetic level, as well as at the phonemic level, the Great Andamanese offers very unique sounds not shared by Onge and Jarawa. It has a large inventory of sounds at the phonetic level, primarily because a high number of consonants and vowels occur in free variation in the speech of the Great Andamanese. Thus, whereas Great Andamanese offers evidence for bilabial fricatives, both voiced and voiceless [β], [φ], and labialized lateral [lʷ], Onge and Jarawa do not offer a single trace of these sounds. Conversely, Great Andamanese is marked by the total absence of back unrounded vowel [ɤ] and central high unrounded vowel [ɨ], common sounds found in Onge and Jarawa. Interestingly, the phonemic inventory of vowels and the vowel quality in Jarawa and Onge is identical (see Table 4).

We witnessed very high variation in the inventory of vowels and consonants among the Great Andamanese speakers because of 'Koine' and "mixed" nature of the language. Another factor leading to such a variation could be the fact that the language is on the verge of extinction and community members do not remember many words and their exact pronunciations. The indifference attitude of the speakers towards the language could also lead to such a variation. Despite such a variance, phonemic inventories of vowels and consonants

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[9] Readers should note that typological similarity is not considered a reliable signal of common ancestry. However, typologically similar languages of an area may, at the most, define a linguistic area indicative of languages in contact.

Table 3
Comparative lexicon of Great Andamanese and Jarawa[a]

No.	Great Andamanese	English	Jarawa
001.	mot-cor	smile	n-agulemelegune
002.	ara-iʃe	boil	oʈʰay-le-yə
003.	solo	walk	cawa:ya
004.	kar-ʈaʈe	run fast	əhapela ʈʰuhumə
005.	o-ʃorɔ	(he) sings	gəgapa/gəgaba
006.	et-pʰoŋ	dig out	hi-ipine-yə
007.	notrosup	sound is coming (noisy)	iʈʰəhəʈʰe-yə
008.	terɛn-ceo	fight	əniɲa-yə/əniya-gə/ən-iya-yə
009.	ɛk-tɛro	push	ədəyag/ oɖəwə
010.	ɛk-tɛno	pull	oy~iʈʰege/ən-ipəʈʰeŋe
011.	om-boracɛ	angry	ʈʰ-ero-gə/ ʈʰero-ga
012.	e-bit-kʰe	carry (on shoulder)	ənena/ ənəyale
013.	e-kalu	lift	aʈʰokagʈʰe-yə/ aʈʰokaʈʰe-yə
014.	e-raɲe	assemble	calahe
015.	ɛr-mole-me	writes	ən-obeliyahiye-yə
016.	ek-jira	speak	aʈiba
017.	be-ce-beliŋ	haircut	ən-oʈʰay-gə/ən-oɖ-kali-yə
018.	nyo-cop	hut making	caɖɖa-le-yə
019.	ot-camo	hide	hə-əya
020.	e-boʈho	fall	huwaji-yə
021.	e-pʰil	throw	hogi-yə/apine
022.	borlɛ	forget	oʈʰa ən-iɲiyacʰe-gə/m-iniyacʰe-yə
023.	ɛ-ʈowɔkɔme	dig with spade	pela-yitʰə
024.	beliŋ	cut	icilo-wa
025.	kʰuro	come here	allema-gə
026.	e-ta-biɲo	remember	oʈʰa ən-iyelaŋ-gə
027.	tajio-cɔr-be-ʃɔron-ce	fish with adze	ullelɖa
028.	tajio-cor-be-ʈopʰen-ce	fish with arrow	hʷaɖə
029.	jo-ke	take	eŋge-yə
030.	ye-ke	hold	kʰo:
031.	kocop	tie	aɸle-yə/akʰle-yə
032.	et-lo:be	untie	hi-ilibua
033.	ʈʰu-cua-pʰoro-be	come closer (me)	buʈʰə tʰame-yə/ ən-uhuwə
034.	et-ino	wet	ən-aŋgtʰə/ ənənʈʰə kaneha
035.	i-ʃobo	bad smell; stench	aʃu/ acʰu-yə/ acʰu-gə
036.	ʈʰu-pʰai	thirsty	əbulə:
037.	u-ku-bi:ᴶ	burn wood	ʈʰuhəb-le-yə
038.	tʰu-ŋ-era-ile	bring (I bring it to you)	ʈʰ-ekane/ ʈʰ-eŋge-yə
039.	ʈok-kara	climb	capʈʰe-yə/ cagʈhe-yə
040.	lɛbe	descend	jagi-yə
041.	ʈʰɛŋɔc	scratch myself	eweewe
042.	e-pʰile	kill with arrow	aikʰwa
043.	ʈop-om	steal	uiɡəle
044.	ŋɔʈo	swim	waɽa/ h-waɽa
045.	ʈʰu-kun-ci	wash hands (my)	ən-ahopaho-le-yə
046.	ɛra-liu	finish	hoyata/ icʰeba
047.	bɛ-tɛc-tɛ;no	pull hair	ənoɖəh-igəʈʰe-ya
048.	it-ʈole	pluck flower	h-pakjawaji-yə
049.	ŋu-ɖebe	keep quiet	ən-aholagʈʰi-yə
050.	tʰe-pʰilu-kuruɖe	stomach gurgling	ən-ihʷeɖə
051.	tʰo-kʰun-tɛr-cɔk	scratch/pick teeth	ən-ahuglu-hə
052.	tʰoba-be	spit	tʰuwə
053.	ɛrɔŋ	hammer (v)	inɖe/tʰ-ənɖ-gə/kʰocalelu-hə toa
054.	lele	swing	tʰui-le-yə
055.	e-kʰiŋ	rub	acʰile-le-yə
056.	ɛr-teiŋ	kiss (v)	ənimunəji-yə
057.	ta-i-ole	show	untopine

Table 3 (*continued*)

No.	Great Andamanese	English	Jarawa
058.	oco̞r-no	make net	uluhə patʰo
059.	supir-no	make basket	ɓod
060.	tanʈop-no	make necklace	hagulume
061.	ko̞t-b-om	cough (v)	əna-uɖu-le-yə
062.	karac-pʰo	far	no:ɖə
063.	cua-pʰoro	near	buʈʰə
064.	ɖiu-tara-lɛ	sun down	ʈʰepale
065.	ɖiu-meŋer-co	midday sun	heyauiyə
066.	tara-sulu-tambikʰir	morning before yesterday's morning (day before yesterday)	celati
067.	ʈʰu-julu-tambikʰir	morning after tomorrow's morning (day after tomorrow)	yakeka
068.	e-tʰile	heavy	anponi
069.	ɛr-to̞rɔ	mad	ənanacʰe-gə
070.	bo-be-reŋco	happy	əmpoəʷə
071.	ot-bo-nol-pʰo	sad	iʲan-piʈʰi
072.	pʰoŋ-ʈɔi	pipe	ʈʰahə
073.	pʰir-balo	cane (tree)	halog
074.	buliu	creek, big drain	hʷətʰol
075.	ʈʰimikʰu	forest	kɨyə/gɨyə
076.	taŋol	fishing hook	ʷuʲ
077.	bɛi	bottle	olo olo
078.	bɛi-ta-pʰul/bei-ta-rom	cap of a bottle	olo olo de dubə
079.	aʈ-pʰai	dry wood	nam/name
080.	tar-boreŋa	plane/helicopter	talahʷə/tugənulə
081.	tɛr-en-co-pʰole	looking glass	ənohabag
082.	ɖulo	moon	tape
083.	ɖowlo	red ant	caɖapa
084.	ʈʰi-tɛr-pʰoŋ	pit	oɖuəlleü
085.	ʈʰumel	honey	lə:w
086.	ʈaɔ	sky	paŋgaŋ/paŋnaŋ
087.	ɔrɔ	leaf string around a woman's waist	kaŋgapo
088.	ɛ-bec	honeycomb	cilemal
089.	kʰue	drink	inco-wa
090.	ji	eat	ita
091.	cone	go	beiʈʰe-yə
092.	beno	sleep	omohə
093.	ole	see	əyoyəba
094.	tɛʃe	give	iya
095.	kʰole	laugh	əni-yə
096.	aono	sit	ən-ə:təhə
097.	ʈoy	stand	ɖokəkte-yə
098.	jicɛr	rain	wəwə-le-yə
099.	ʈɔpʰ	bathe	inɖə
100.	ʈʰeʈʰɛ	be hungry	m-aŋgi-yəacʰuə/m-aŋgiyacʰu
101.	ɛm-boi	marry	əna əŋga-le-yə

[a] Jarawa data are from the ongoing work of Pramod as well as from the fieldwork conducted by the author in 2001–2002.

could be arrived at by eliciting minimal pairs for most of the sounds. Where minimal pairs were not available, judgments of the native speaker about the phonological contrasts were taken into account.

The phonemic table for vowels given below certainly exhibits the great difference that exists between Great Andamanese and Jarawa and Onge. Mark the total absence of central vowels (see Tables 5 and 6).

While the Present Great Andamanese does not attest consonant sounds[10] /g/, /h/. /ʃ/ and /cʰ/, these sounds exist in Jarawa and Onge. Conversely, sounds such as [β], [φ], labialized lateral [lʷ] exist in Great Andamanese but are conspicuously absent in the other two.

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[10] Voiced velar /g/ and glottal fricative /h/ existed in the extinct Great Andamanese languages, Aka-Bea and Pujukar (termed Pucikwar by the 19th century linguists).

Table 4
Vowel phonemes of Jarawa and Onge

	Front	Central	Back	
	UR	UR	UR	RD
High	i	ɨ		u
Higher mid	e		ɤ	o
Mean mid		[ə]		
Lower mid	ɛ			ɔ
Low			a	

Table 5
Vowel phonemes of Great Andamanese

	Front	Central	Back
High	i		u
Higher mid	e		o
Mean mid			
Lower mid	ɛ		ɔ
Low		a	

Table 6
Unshared sounds between the Great Andamanese and the Ang family

Sounds	Jarawa	Onge	The Present Great Andamanese
ɨ	+	+	−
ɤ	+	+	−
ə	+	+	−
g	+	+	−
h	+	+	−
l̪	+	+	−
cʰ	+	+	−
kʷ	−	+	−
β	−	−	+
φ	−	−	+
lʷ	−	−	+

The last three sounds in the table uniquely define Great Andamanese.

5. Verb complex in Great Andamanese, Onge and Jarawa

We shall begin by discussing the verb schema in the three languages. This is one of the areas where the two sets of languages differ most.

Verb morphology in Great Andamanese is very complex. Verbs belong to different classes based on the nature of the consonant of the verb formative suffix. Each of these formative suffixes is identified by a specific consonant and is followed by a vowel that represents aspect or mood, which in turn is followed by a tense marker. Verb roots, thus, could be followed by any of the following consonants marking the verb class

–b or –l or –k or –r or -pʰ or, -m

The reason for such a division in verbs belonging to a **b** class, or a **l** class or to a **k** class, etc. is not very clear as yet.

The tense marker is designated by the presence or the absence of the final consonant of the verb stem. The language makes past/non-past distinction. The zero marking represents past and /-m/ represents non-past. The verb schema could be presented as given in (1). No other Indian language has even a slight resemblance to such verb structures.

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(1) Verb Schema of verb stem in Great Andamanese
Verb root + Cons Class + [Aspect/Mood] + [Tense]

1. *aka*   *mimi*   *vɛsɛrɛ-**b**-o-m*
   his   mother   hits-CL–IND-PRS
   '(child's) mother hits'

2. *ɛkʰu-**l**-ɛ*
   lift-CL-IMP
   Lift up in lap

The various class-marking consonant seems to have been derived from some semantic classification which has either been lost in the Present Great Andamanese or appears as a converged set of semantic fields from four varieties still represented in the islands.

It is not very clear as to what kinds of verbs are marked by a –**b** and a –**k** classes. However, a speculation can be made that verbs which are inherently non-durative are marked by –k and those which are inherently durative, i.e. have the potentiality of being continued over a period of time are marked by –b class. For instance, /tɛrtɔ-k-om/ 'shoot an arrow'; /kara-k-om/ 'rising of sun or moon'; but /ŋolo-b-om/ 'cry'; /kʰu-b-e/ 'drink', etc. Verbs with 'l' class invariably represent dislocation and directional reading, e.g. /tʰitbo-l-ɔ/ '*search on the ground*'; / le-l-om/ ' 'he swings; *tʰirbe-l-om* '(he) sweeps'; ɛfi-l-ɔ '(he) threw it'.

A more recent development has been observed about the indiscriminate use of the consonant class by some speakers as well as the dropping of the consonant class altogether. Thus, /iji-k-om/ 'he is eating' can be rendered as /iji-om/ as well as /iji-b-om/ 'he eats/he is eating' in the present speech of Great Andamanese. It would not be a surprise if this consonant class marking is lost in future thereby eliminating a strong evidence of the unique structure of Great Andamanese.

Verbs in Jarawa, on the other hand, show neither any kind of class distinctions nor any overt marking for tense distinctions as given in 3 and 4.

Jarawa

3. *mi/li*   *caɖa*   *bɨtʰɛ*
   1/3SG   home   Go
   'I/s/he goes home

4. *mi*   kekahəʈə   *bɨtʰɛ*
   1SG   tomorrow   Go
   'I will go tomorrow'

Onge verbs follow the pattern of Jarawa verbs, in not showing any class distinction. However, it offers a clear contrast with Jarawa in marking the tense distinctions. The language makes four way distinctions between past, present, future and distant future /-ka/. The tense markings are suffixed to the verb roots. For example, see the sentences given in (5–8).

Onge

5. *ɲe*   *leti*   *cogɨ*   *ʈoʈoro*   -ka
   2SG   ?   fish   catch   DISTANT FUT
   'You will go for fishing [in distant future]

The past tense marker is -*be* or –*abe*

6. *mi*   *ga*   *cogɨ*   *ʈa*   -*be*
   1SG   3d ACC   fish   give   PAST
   'I gave him fish'

7.   *mi*   *likʷale*   *nene*
          1SG   eat   FUT
          'I will eat'

8.   *ge*   *ɲam*   *e*
          3SG   come   PRS
          'S/he is coming/comes'

6. Clitics

Another area where the three languages seem different is the encoding of nominal/pronominal subject or object. While Great Andamanese shows the use of subject and/or object clitics prefixed to verbs as well as to adverbs, a grammatical subsystem that is undergoing erosion in today's speech, the other two languages of the Ang group do not cliticize object pronominals, and do not offer pre-adverbal nominal/pronominal clitics. Prototypically, all transitive verbs are prefixed with object clitic in Great Andamanese. There are many forms available in the third person object clitic such as /ik- ∼ iku-, ut- ∼ ot-, ɛr- ∼ er-, ɛm-, ɛ- ∼ ɛk- ∼ e- ∼ ek-, ara-, and i- ∼ it- ∼ et- ∼ ɛt-/ depending upon the nature of the verb and its argument. In isolation, each transitive verb is prefixed by one of these clitics. For instance, /it-lub/ 'grow'; /i-pʰirik/ 'kill'; /i-ʃire/ 'wash'; /ara-liu/ 'pull out something'; /ɛ-colol/ 'roll it down'; /ɛk-tɛreu/ 'tie a bundle'; /ɛk-thoba/ 'spit'; /ɛm-boe/ 'marry'; /ut-lub/ 'open', and /ot-cam/ 'arrest'. Some examples given below will clarify the proposition. No such object clitics prefixing to verb forms are recorded in Onge and Jarawa.
    Great Andamanese

9.
u itʰudi uijiko
u   i-tʰudi   u-i-ji-k-o-ø
3SG   3SG.OBJ.CLT-having killed   3SG.SUBJ-3SG.OBJ.CLT-eat-CLS-IND-PST
He killed and ate it.

10.
Reya   rengi   stret-ak   ɔt   n-ambikhir   cɔni-b-ɔm
Reya   Renge   Strait-DIR   GEN/EXP   3PL CLT-morning   go-CL-NON-PAST
'Reya and Renge will go to Strait tomorrow'

11.
ʈʰu   ʈʰ-aono-l   ʈʰ-olam-o- ø
1SG   1CLT-sit-STAT   1CLT-tire-IND-PST
'I got tired sitting'

12.
beibi etʈɔlo
bei-bi   et-ʈɔl-o- ø
bottle-ACC   3SG.OBJ.CLT-break-PST
The bottle broke.

13.
mɛŋo kʰider-bi   mɛŋo-ɛt-bɔl-o- ø
1PL   coconut-ACC   1PL-3SG.OBJ CLT-peel-IND-PST
'We all [inclusive] peeled the coconut'

14.

tʰo-tʰom-bi	e-butʰ-e	ɛr-ʃolo-k-e
1SG.GEN-cap-ACC	3SG.OBJ.CLT-fall-IND	3SG-CLT-hang-CL-IMP

My cap has fallen down, please hang it (on the peg)'.

7. Genitives/possessive

All three languages follow the dependent marked system. Inalienable possessed nouns do not appear in bare forms but rather are prefixed by the possessor nouns in all Andamanese languages. This is not a unique feature as many other languages in the world, including Austroasiatic languages spoken in Jharkhand, Central India, attest this feature. All three languages follow two distinct processes, i.e. juxtaposition and prefixation for forming genitive constructions.

7.1. Genitives in the Ang family

Inalienable possessions in the Ang family are formed by juxtaposition of the possessor and the possessed. In the languages of the Ang family, personal pronoun in a reduced form is attached to the inalienable, e.g. kinship terms and body part terms. Alienable possessions in Onge are also formed by juxtaposition of the possessor and the possessed noun. However, if the possessor is a third person, a separate genitive morpheme such as /-wa/ in the case of Jarawa is suffixed to the possessor noun/pronoun for both alienable and inalienable possessions. Great Andamanese, on the other hand, has a very elaborate system of marking genitive constructions both in inalienable and in alienable possessions. Let us first consider the languages of the Ang group. We shall first consider the bare pronominal forms in each language and then its use in genitive constructions. Onge distinguishes between singular and plural pronominal forms. First person is marked for inclusive/exclusive distinction.

(**1**) **Onge pronouns**

	Nominative
1SG	*mɨ*
1PL	*etɨ*
1PL.INCL	*eta-koṭoṭ*
2SG	*ɲi*
2PL	*ni*
3SG	*gi*
3PL	*ekʷi*

(**2**) **Onge genitives**

m-ejale	'my forehead'
ɣn-ejale	'your forehead'
ɣn-ejebo	'your eye'
m-ejebo	'my eye'
ɣn-oranaŋ	'your nose'
m-oranaŋ	'my nose'
ɲ-arebai	'his/her daughter'
ɲ-oṭəlaŋ	'his/her brother'
ɲ-okuṭə	'his/her sister'

The final vowel of the personal pronoun is dropped if the possessum word it attaches to begins with a vowel. In others, the initial vowel of the pronouns changes its shape according to the vowel harmony rule.

Thus /mɨ+-ejale/ > [mejale] 'my forehead' but /ɤn-oranaŋ/ > [onoranaŋ] 'your nose'. As stated earlier, simple juxtaposition of possessor and possessed is applied in the case of alienable possessions.

mɨ-cɨkʷɤn	'my clothes'
m-inkinaŋ	'my pocket'

14.

mɨ	*cɨkʷa-le*	*kuʈu*
1SG	cloth-PL	many

'My lots of clothes'
'I have many clothes'

(**3**) **Jarawa pronouns**

1SG	*mi ~ ma ~ m*
2SG	*ɲi ~ ŋa ~ ↔ n ~ ni ~ na ~ n*
3SG	*li ~ hi ~ h ↔ ~h*

Pronouns in Jarawa are not found in plural forms. To distinguish between human and non-human body parts, Jarawa uses a specific prefix /ɤnɨ/ (+ human) which is attached to the term for a body part of human beings. The terminal vowel of this prefix is dropped if the next morpheme begins with a vowel. Thus, we attested /ɤn-odu/ 'human head' but /odu/ 'head of an animal', /ɤn-iyanbo/ 'man's nose' but /iyanbo/ '(elephant's) trunk'. The same prefix is attached to the word for ego's house/home/dwelling. It is the use of this prefix that indicates the distinction between 'house' and 'home', the latter being considered as inalienable.

It appears that the personal prefix /ɤnɨ-/ is a grammaticalized form of a personal pronoun, which originally meant 'yours'. Onge has a cognate meaning/ɤnɨ-/ 'yours' and perhaps it can be postulated that Onge–Jarawa had a common proto form in 'yours'.

Suffix –*wa* is added to the third person possessor noun both in alienable and in inalienable possessions.

ni-caɖa	2 SG-house	'Your house'
mi-caɖa	1 SG-house	'My house'
mi-n-caɖa	1 SG-HUM-house	'My own home'
noha-wa-caɖa	'bird's nest'	
hi-wa-caɖa	'his house'	
tango-wa-oɖə	'Tango's hair'	

7.2. Genitives in Great Andamanese

We shall first consider the pronominal forms and then their use in genitives.

(1) **Great Andamanese pronouns**: The bare pronominal forms in Great Andamanese are more elaborate than the other two languages. Consider

1SG.EXCL	*tʰu*
1PL.EXCL	*ma*
1DU.INCL	*tʰɛɲiyo*
1PL.INCL	*meŋ ~ meŋamboro*
2SG.EXCL	*ŋu*
2DU.EXCL	*ŋole*
2PL.EXCL	*ɲilie*
2SG.HON	*naŋe*

2DU.HON	*naŋela ∼ ŋoli ∼ ŋamboro*
2PL.HON	*ŋale ∼ ŋele*
3SG.DIST.VIS	*ɖu ∼ ɖuio*
3DU.DIST.VIS	*ɖuini*
3PL.DIST.VIS	*ɖuniyo*
3SG.DIST.INVIS	*u ∼ o* (used only as a reference)
3PL.DIST.INVIS	*ɖune*
3SG.PROX.INT	*kʰudi*
3PL.PROX.INT	*diya*
3SG.PROX.CLOSE	*kʰidi*

(2) **Genitives**

The language offers a wide variety of genitives unlike the other two languages just considered. The distinctions in various forms do not depend upon the simple binary oppositions of alienability/inalienability but on various diverse ethno-semantic categories defining the relation between the possessor and the possessed nouns. It is not surprising then that one finds prototypical inalienable categories which are found in other Indian languages being reclassified in Great Andamanese, each by a distinct genitive suffix [GEN]. Factors such as part–whole relationship, intimate/non-intimate relations, independent household of the possessum, and the notion of the possessum being part of the possessor play an important role in deciding the appropriate genitive suffix [GEN].

Under various genitive forms lie the semantic typology of categorization of the human body parts. Great Andamanese differentiates body parts terms into six categories each marked by a distinct possessive marker. The same markers are then used in representing other possessions in the world, indicating a unique nature of categorizing and conceptualizing the very same world represented very differently by Jarawa and Onge. In other words, partonomic structure of the human body and its associated genitive forms govern various other forms of genitive markings in Great Andamanese.[11]

Affixation and juxtaposition of the possessor and the possessed nominals are the two processes involved in forming genitive constructions. The affixation process takes care of a large body of the relation existing between the possessor–possessum. As the language is dependent marked, the genitive suffix is attached to the possessor pronominal root/noun. The entire unit may be termed as a personal prefix [PP]. This entails that the PP in the language is constitutes of two parts, pronominal clitic [PC] indicating the possessor and the specific [body part classifying] genitive affix, which serves as a host to the clitic. The possessed noun follows the PP.

(3) **Schema of genitives in Great Andamanese**

Pronominal clitic + GEN + Possessed noun = [PP + Poss N]

A detailed study of the possessive constructions in Great Andamanese shows that ethno-anatomy and kinship share the same level of categorization. The choice of genitives brings out a parallel between certain body parts and kin relations.[12] Considering the two morphological processes of affixation and juxtaposition involved in forming genitives in the languages of Andaman, one can identify seven different forms of genitives in Great Andamanese selected on ethno-semantic basis.

(4) **Seven different forms of genitives in Great Andamanese**

Two morphological processes are involved here, affixation and juxtaposition:

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[11] It is not new in the linguistic literature to find references of specific body part to serve as source domains for conceptualization of spatial location and topological relationships (Svorou, 1993; Heine, 1997).

[12] *Ethnoanatomy and Kinship: The Case of Great Andamanese Attributive Possession.* Bidisha Som and Anvita Abbi, Forthcoming.

(a) **Affixation**

(i) /**-uŋ** ~ -ɔŋ/ When the possessed entity is any part of the hand or arm, e.g. 'finger', 'palm', 'wrist', 'nail', 'arm' or other extremity, this suffix is attached to the personal pronominal root.

*ṭ*ʰ-ɔ*ŋ*   korɔ
1s-GEN   palm
'My palm'

(ii) /**-ɔt** ~ **-ut** ~ **-ot**/ This suffix is attached to pronominal root to show the part–whole relationship when the possessed entity is 'house', 'body', 'chest', 'back', 'leg', 'hair' or any other hairy part of the body. The suffix also co-occurs with words designating bodily products such as 'life', 'sweat', 'child', and 'breath'.

15.   *dia*   *nao-ɔt*   *ɲo-be*
       this   Nao-GEN   house-COP
       'This is Nao's house'.

(iii) /**-a**/ When the possessed entity is mouth and its extension e.g. 'tongue' and 'neck' as well as primary relationship designating some of the kinship relations, e.g. 'mother', 'father', 'grand mother', 'grand father', 'younger kin', this suffix is attached to the pronominal root.

16. *di*   *ṭ*ʰ   *-a-*   *may*   *bi*
     this   1SG-GEN-   father COP
     'This is my father'

(iv) /**-ɛr**/ This suffix when attached to the pronominal roots designates relational aspect and co-occurs with a wide variety of words designating body parts above the neck, as well as those below the thigh. Thus words designate 'brain', 'ear', 'mouth', 'neck', 'nose', 'teeth', 'cheek', 'chin', 'face', as well as words for 'thigh', 'calf', and 'knee'. However, terms for body parts such as 'shoulder', 'elbow', 'stomach', 'flesh/skin' also take /-ɛr/ genitive. Also included in the list are the words for 'tattoo', 'backyard', 'abstinence from food/fast', 'tears', 'bone', 'husband', and 'wife' that co-occur with this suffix. One elderly informant, Boa Sr., attested the words for 'hand', 'head' and 'jungle' co-occurring with this genitive suffix.

17.   *ṭ*ʰ   *-ɛr*   *cɔk*   *tɔl-be*
      1SG-GEN   tattoo   face-COP
      'I have a tattoo on my face'

18.   *ṭ*ʰ   *-ɔt*   *ɲyɔ*   *ṭ*ʰ   *-ɛr*   *pʰete-l*   *ɲ*   *-ɔt*
      1SG-GEN   house   1SG-GEN   front-LOC   2SG-GEN
     ɲyɔ   *be*
     house COP
     'Your house is in front of my house'

(v) /**-ara**/ When the possessed entity is a nodule-like structure or a circular and round structure such as 'cheeks', 'bladder', 'scrotum', 'heel'. this suffix is attached to the personal pronominal root. It is a kind of a relational genitive and is also used for indicating younger sibling relations.

19.   *ṭ*ʰ*-ara sulu thu tɔṭa/kaṭa*
      1SG-GEN-after-born of boy/girl
      'My younger brother/sister'

(vi) /**-e**/ When the possessed entity is in the cavity of the body, /-e/ is attached to the personal pronominal root to indicate those parts which are inside the body, e.g. 'blood', 'ribs', 'liver', 'covering around intestines', 'hip bone', 'belly/stomach' and 'bile'.

(vii) **/-ico ∼ -i-iʃo/** Most of the typical alienable nouns designating 'land', 'jungle', 'upper garments', 'lower garments', 'dog', 'friend', 'God', as well as some kinship terms such as 'son' and 'daughter' can co-exist with the genitive marked by */-ico/* or */-iʃo/*.

20.   *m*   *-iʃo/mɛn-iʃo*   *ɲyo-be*
   1SG-GEN/1PL   -GEN   house-COP
   '(It) is our house'

21.   *di*   *tʰ*   *-ico*   *boa-be*
   this   1SG   -GEN   land-COP
   'This is my land'

Despite the discrete divisions in the possessum and the associated genitive markers, distinctions are not very clear cut as there are some overlapping zones as well as some unexplainable possessions collocating with a particular genitive. The case in point is genitive /-ɛr/ and /-ut/. However, a broad general summary can be presented in a tabulated form to capture the overall system of classification of body parts. Consider Table 7.

7.3. The parallel between the body parts and the kinship terms in Great Andamanese

On the basis of the use of various genitive markers for body parts and kinship terms, it is clear that there is a parallel between some body parts and some kinship terms in that they share particular possessive markers. This perhaps indicates an interesting and unique classification of kinship terms along the lines of the terms for inalienable body parts. On the basis of the possessive marker usage, the following parallels can be drawn:

(b) **Juxtaposition**

Those inalienable possessions that are outside the domain of 'self', or designates the 'distance away from the ego' are marked by juxtaposition of the two nominals, possessor and possessed. Thus

1. *cokbi tʰomo*
'Turtle's flesh'

2. ɖ*iu taraʈɛt*
'Sun light'

Juxtaposition is also used in reference to human body parts for those terms that are considered secondary and which derive their names from the primary body part names, e.g. *juxu-be:c* 'above-lip-hair = moustache'; *tap-be:c* 'chin-hair = beard'. This strategy of juxtaposition is common across the globe and in this case also is shared by all the three languages under consideration. However, it is the first strategy, i.e. forming possessive constructions by seven different and distinct genitive markings that define Great Andamanese specifically (see Tables 8 and 9).

Table 7
Six basic zones in the inalienable category

No.	Ethnosemantic features	Gen
1	The mouth and its semantic extension	/-a/
2	The major external body parts	/-ɛr/
3	The extreme ends of the body like toe and fingernails	/-oŋ/
4	The bodily products and part–whole relationship	/-ut/
5	The inside of the body organs	/-e/
6	The round shape designating	/-ara/

Table 8
Parallel between body parts and kinship terms

Common genitive suffix	Body parts	Kinship
-ɛr	Major body parts	Spouse
-a	Mouth cavity	Parents and younger siblings
-ut	Extensions of body parts/body products	Children

Table 9
Secondary genitives in Great Andamanese

Juxtaposed	Gloss
ʈʰu-u-toa-thu-ʈɔʈa/kaʈa	my elder brother/sister
1SG-gen-before-born-boy/girl	(the one born before me)
ulu thu bːɔk	eyebrows
eye-born of- brows	
ulu thu beːc	eyelash
eye-born of- hair	(hair born of eyes)
ulu thu ino	tears
eye-born of-water	(water born of eyes)
tap-beːc	beard
chin-hair	
ʈʰ-ara sulu thu ʈɔʈa/kaʈa	my younger brother/sister
1SG-gen-after-born of boy/girl	(the one born after me)

It can thus be proposed that there are two levels of genitives functioning in Great Andamanese, the primary and the secondary. The primary ones are used with reference to the self and denote the major body parts and the main kinship terms. The secondary genitives are used for denoting those body parts that are derived from the major body parts and those kin terms that are descriptive, e.g. the ones used for siblings. Juxtaposition is the process used for forming secondary genitives.

8. Do all three languages belong to one family?

Temple (1909), however, maintained that all the languages spoken by the Andaman tribes belong to one family. He opined that "the languages all belong to one family, divided into three groups, closely connected to the eye, but mutually unintelligible to the ear" (reprinted 1994, p. 14).[13]

Contrary to Temple's findings, the research undertaken by the 19th century linguists provides further evidence in the direction of positing Great Andamanese a distinct language family from Onge–Jarawa. The data on extinct languages belonging to Southern and Northern languages of Great Andaman as given by Man (1923) as well as those supplied by Portman (1887) do not indicate any cognate relationship with Jarawa or Onge.

Pioneering work was undertaken by Portman (reprinted in 1992) by comparing lexicon of four Great Andamanese languages such as Aka-Bea, Aka-Pucikwar the being Southern languages, Aka-Kede and Aka-Cari being the Northern languages with Onge. This dictionary is indispensable for any historical work. Though the languages reported here must have been spoken at the beginning of the last century yet, one can see the historical relationship between the present Great Andamanese and the Northern varieties of the languages spoken hundred years ago. Conversely, Onge forms appear to bear no historical resemblances with the Great Andamanese languages. Table 10 shows for a small set of examples from the dictionary by Portman.

Equally path breaking dictionary was compiled by Edward Horace Man in 1923 of a single Southern language Aka-Bea. Man's dictionary does not only corroborate the forms given in Portman but also gives many

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[13] A detailed grammar was included in the Census Report of 1901 (pp. 98–121), which has been left out from the reprint version undertaken by the Government of India, and hence not accessible to researchers.

Table 10
Forms from Northern and Southern Great Andamanese languages compared with Onge. *Source*: Portman (1887)[a]

PGA	Aka-Cari	Aka-Kede	Aka-Pucikwar	Aka-Bea	Onge	English gloss
$k^h imil$	kímil	kímil	kímil	Gummul-da	NA	Rainy season (also name for boys undergoing Turtle eating ceremony)
ʃiro	Chíro	Chíro	Chíre	Juru-da	Ingé	Sea
ʈɔrɔ	Tórāū	Tāūro	Tárá	Tāō-da	Táquátóai	A variety of turtle
ara-lep^ha	Árálépá	Áraiyépá	Árlépá	Árléba-da	NA	Widow or widower
leːp	Léb	Jéb	Léb	Molla-da	Énótaɓoi	Smoke
rɔː	Ró	Róá	Ró-da	Róko-da	Dángé	Canoe
mɔcɔ	Moicha	Moicha	Moicha-da	Télu-da	Tugoè	Fowl (now used for 'Hens')
ʈɔŋ	Áká-tongel	Kátóng	Ó tong da	Ákátáng-da	NA	Tree

[a] The orthography used for PGA data is SIL Doulos IPA 93 and for the data from all other Great Andamanese languages, the original orthography used in Portman's *Manual of the Andamanese languages,* is followed. NA = not attested by Portman. PGA data are from the ongoing work on Great Andamanese.

variations of a lexical item as well as subentries of a form in the language with examples wherever possible. It will not be practical or justified to compare the existing Jarawa data with these languages as there is a gap of more than hundred years between the two sets of languages. It is only very recently, i.e. after 1996, that Jarawa community became accessible to linguists. We can, at best, compare the present Great Andamanese with the present Jarawa lexicon as we have attempted to do so as shown in Table 3, which clearly establishes that the two sets of languages are not related genealogically.

As the Present Great Andamanese appears typologically and historically a distinct language from Jarawa–Onge (Abbi, 2005) it may be proposed that Great Andamanese is the distinct sixth language family of India. Fig. 5. Physical separation of two different population subgroups and sustained isolation in this case has generated independent course of linguistic development. Each language in the two subgroups witnessed internal innovations. The languages of the Ang group, i.e. Jarawa and Onge, offer enough proofs of genealogical relatedness. Despite the geographical proximity of the languages of the Ang family and the languages of Great Andamanese, we do not attest any substantial linguistic instances to prove sustained or intense contact of the latter with the Ang group.[14] Unfortunately, most of the languages in the Great Andamanese group are extinct, and the one that survives today appears to be a Koine as well as a mixed variety of at least four related language/dialects such as those of Khora, Jeru, Cari and Bo. The lexicon and grammatical features from these four languages seem to have contributed to create the amalgam which is the present Great Andamanese.

9. Non-linguistic evidence

Genetic and anthropological studies on the population of the Andamans and their various tribes have suggested a close affinity between the Andaman tribes and the Negritos of Southeast Asia rather than that with the African pygmies (Thangaraj et al., 2003, pp. 86–93). Studies have also shown that the Jarawas and the Onges have distinct physiological and genetic signatures from the Great Andamanese like low blood pressure profile, body temperature, pulse rate and very low frequency to absence of B gene in ABO blood group. The Onges have a high incidence of HbsAg (Kumar, 1987; Sarkar and Sahani, 2002).

Kashyap et al. (2004) explored the origin and affinities of the Andaman Islanders, and their relation with similar ethnic groups of India, Southeast Asia and Africa. The uniqueness of this particular research was that it studied nuclear DNA (nDNA), mtDNA and Y-chromosome polymorphisms. The study revealed low diversity of the Andaman and Nicobar tribals which also showed that (1) the Negrito populations of Andaman Islands have remained in isolation for a longer period, even more than the descendents of the founder populations of Africa. (2) Studies confirmed the recent admixture of the Great Andamanese with the settlers and

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[14] The available material clearly shows that there was no contact between the Great Andamanese and the speakers of the Ang group. Jarawas being considered 'strangers' and feared by the tribes Aka-Bea living in the south of Andaman (Radcliffe-Brown, 1929) perhaps signals the state of non-contact situation. Consult Map Fig. 2.
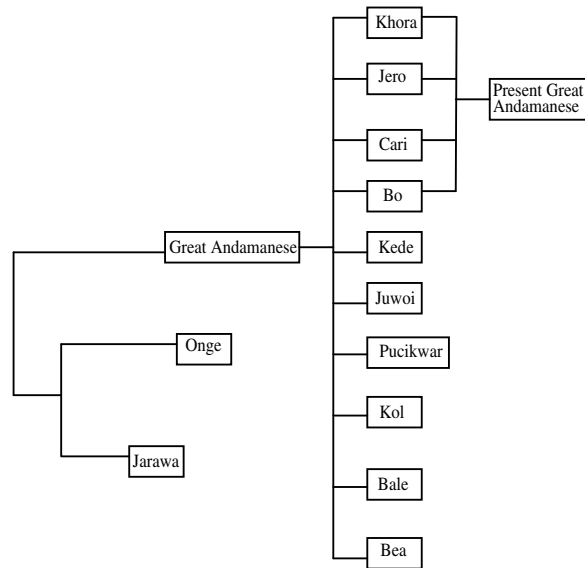
Fig. 5. Independent language families of Great Andamanese and Onge–Jarawa.

people from mainland India. (3) It also revealed that the Jarawas and the Great Andamanese form a distinct separate branch which could be due to the much earlier separation of the ancestral population of these tribal groups. (4) This research also indicated that the Andaman tribes maintained a separate genetic identity among the world populations. (5) Onge was left out from the current study. Consult Fig. 6.

Thangaraj et al. (2003, pp. 86–93) suggested that "Andamanese have closer affinities to Asian than to African populations and suggest that they are the descendants of the early Palaeolithic colonizers of Southeast Asia". However, their latest research (May 13, 2005) on mtDNA indicated that the two ancient maternal lineages, M31 and M32 in the Onge and the Great Andamanese, have evolved in the Andaman Islands independently from other South and Southeast Asian populations. These two haplotypes are not found among the Indian populations. They arrived at this result by sequencing the complete mitochondrial DNA (16,365 base pairs[15]).

These M haplotype lineages are likely to have been isolated since the initial penetration of the northern coastal areas of the Indian Ocean by anatomically modern humans, in their out-of-Africa migration approx. 50,000 to 70,000 years ago. Also, as the Andamanese negrito have only one mitochondrial haplogroup M and only one Y-chromosomal haplogroup D, which suggests of a possibility of one-haplogroup–one migration.[16] Common mutations between M31 and M32 haplogroups were established meaning thereby that both the Onges and the Great Andamanese have a common maternal origin. However, as we have just established, the linguistic research suggests a different origin for the two sets of languages.

Evidence from archaeology, study of Andamanese kitchen middens, indicates that Andamanese used a Toalian stone technology, a stone technology which has been found all over the Indonesian archipelago, which indicates that Negritos were more widespread than has been thought.

It has also been established culturally that the Great Andamanese differs in their design and construction of huts, weapons, boats and canoes, ornaments and customs from Jarawa and Onge. The Onge–Jarawas differ from the rest of the tribes of the Andaman Islands by not tattooing (Portman, 1899, reprinted 1990, p. 22; Temple, 1909, reprinted 1994, p. 13).

To conclude the discussion, Great Andamanese appears to be different form Onge and perhaps from Jarawa both genetically and culturally.

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[15] Personal communication.
[16] However, conflicting patterns in the structure of genetic variation have been found between Y chromosome and mtDNA (Bertranpetit, 2000).
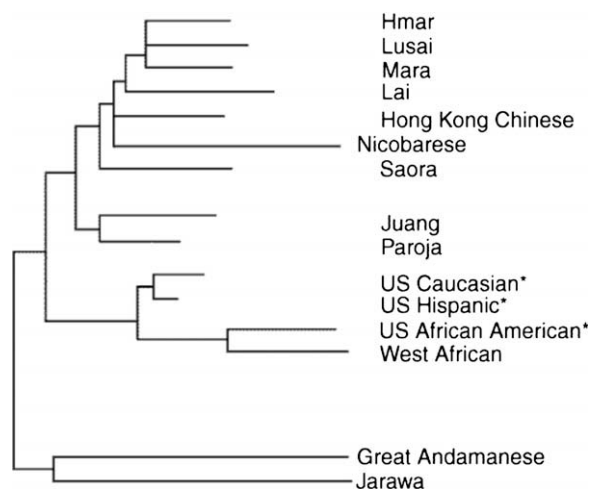
Fig. 6. Neighbour-joining phylogeny of aboriginal Andaman and Nicobar populations with other world populations constructed using pairwise genetic distance (da) values based on **15 MICROSATELLITE MARKERS** (from Levedakou et al., 2001). Study is based on nDNA.

10. Typological differences between Linguistic and Genetic transmissions

What is at issue here is whether the Present Great Andamanese could be viewed as a linguistic isolate. The answer seems to be positive. A preliminary review of Austronesian languages does not show any resemblances with Great Andamanese typologically or historically. If future research in the area of Comparative Austronesian languages (especially those of Philippine Negritos) and Ang is successful in establishing a historical link between the two families, namely Austronesian and Ang, then Great Andamanese may represent the earliest settlement.[17] We cannot rule out the possibility of multiple dispersions from Africa at different times, and also from different locations.

We may also consider positing not one but two separate migrations out-of-Africa into the Andamans.

Unlike vertical transmission of genes, linguistic transmission can both be vertical and be horizontal. In the case of Great Andamanese horizontal transmission had been mostly within the same linguistic family. Though Cavalli-Sforza et al. (1988, pp. 6002–6006) suggested that the evolutionary tree constructed from genetic data is very similar to the linguistic classification, suggesting co-evolution of languages and genes, this parallelism cannot overlook one big difference: genetic tree retains traces for a much longer period than the linguistic tree. The result is that at a particular point of time in human history, genetic and linguistic parallels may not match.

The following abbreviations have been used in the paper: ACC = accusative; CL = class; CLT = clitic; COP = copula; DIR = directional; DIST = distal; DU = dual; EXCL = exclusive; FUT = future; GEN = genitive; HON = HONORIFIC; IMP = imperative; INC = INCLUSIVE; IND = INDICATIVE; INSTR = instrumental; INT = INTERMEDIATE; INVIS = INVISIBLE; LOC = locative; NEG = negative; PC = personal clitic; PERF = perfective; PL = plural; POSS = possessive; PP = personal prefix; PROX = proximate; PRS = present; PST= past; RD = rounded; REFL = reflexive; SG = singular; STAT = stative; TR = transitivizer; UR = unrounded; VIS = visible.

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[17] Much after this paper was presented in the EMBO conference, and my attention was drawn to a very exciting research by Blevins (2007) where she successfully posits the historical relationship between the Ang (she calls them Ongan) languages and the Austronesian family of languages.

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