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In search of language contact between Jarawa and Aka-Bea: The languages of South Andaman[1]

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Abstract

The paper brings forth a preliminary report on the comparative data available on the extinct language Aka-Bea (Man 1923) and the endangered language Jarawa spoken in the south and the central parts of the Andaman Islands. Speakers of Aka-Bea, a South Andaman language of the Great Andamanese family and the speakers of Jarawa, the language of a distinct language family (Abbi 2006, 2009, Blevins 2008) lived adjacent to each other, i.e. in the southern region of the Great Andaman Islands in the past. Both had been hunter-gatherers and never had any contact with each other (Portman 1899, 1990). The Jarawas have been known for living in isolation for thousands of years, coming in contact with the outside world only recently in 1998. It is, then surprising to discover traces of some language-contact in the past between the two communities. Not a large database, but a few examples of lexical similarities between Aka-Bea and Jarawa are

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investigated here. Words for comparison are selected from the Automated Similarity Judgment Programme-list ASJP (Holman et al. 2008, Brown et al. 2007, 2008, Wichmann 2010) as well as from the Loan Word Typology research (Haspelmath and Tadmor 2009). Although we have data only for 100 items, we further compared the lexical items against the Swadesh list (1955) (see appendix 5). The result achieved exposes for the first time, the possibility of language contact between Aka-Bea and Jarawa in the past. We pose a very relevant question here: can enmities and rivalries induce changes in languages which can be ascribed to contact of a very special kind? We conclude by claiming that prototypical least borrowable lexical items can also be borrowed in a very specific context despite the absence of interactive communication between the two communities.

Keywords: Endangered language, lexical similarities, automated similarity judgment programme, loan word typology, comparative method, body part prefix, Great Andamanese, Toalian stone technology, directionality of borrowing, Angan family, contact-induced language changes.

1. Introduction

Geography

The Andaman Islands are comprised of a cluster of approximately 550 islands, rocks and rocky outcrop running from north to south and located southeast of the Indian sub-continent 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 Union Territory of the Andaman and Nicobar Islands belonging to India (see fig. 1). Geographically, the Andaman Islands are closer to Myanmar and Indonesia than to mainland India. However, contact between the Andamanese and the populations of the neighboring countries has not been established till date. The capital city of the Andaman Islands is Port Blair, situated in the south of the Islands at a distance of 1255 km from Kolkata and 1190 km from Chennai.

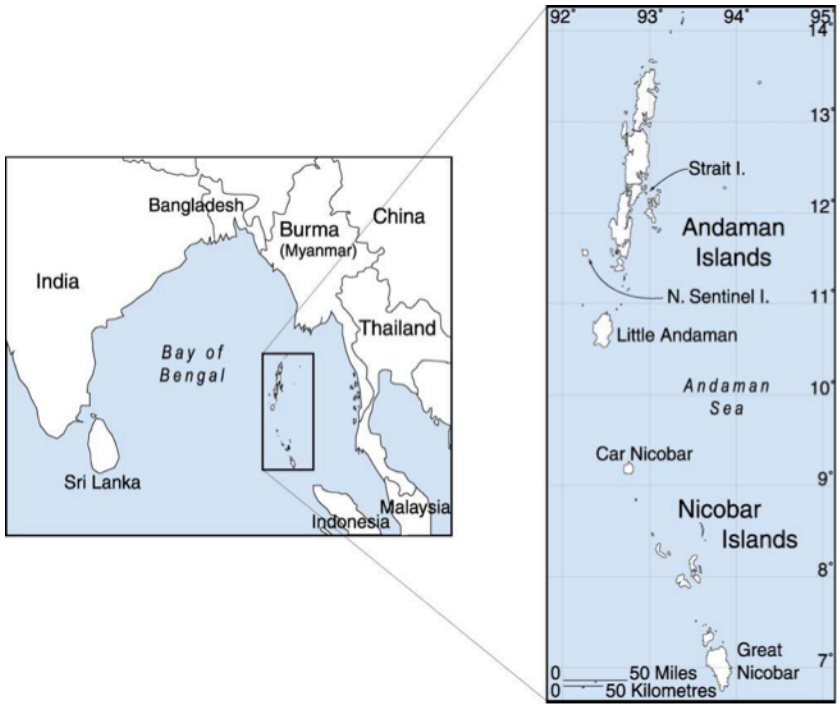

Figure 0.1. Map of Southeast Asia. This map shows the location of the Andaman and Nicobar Islands, Republic of India (source: www.andaman.org).

Organization

The main aim of this paper is to isolate a piece of evidence of probable contact between Aka-Bea, the Great Andamanese language and Jarawa, a language from the Angan group, the speakers of which had lived adjacent to each other geographically in the South Andaman (see fig. 2). Aka-Bea became extinct by 1930 but Jarawa is still spoken in the South and Middle Andaman.[2] For Aka-Bea data the seminal works of E. Horace Man (1923) and Portman (1887, 1992) are consulted. As Man has used different notation system than the one currently popular, such as IPA, we have given the equivalence of these symbols with the IPA notations in appendix 1. For Jarawa, we have consulted the field data from Abbi (2006) and Kumar (in

[2] There are three groups: one is situated in South Andaman (Tiroor) and the other two reside in the central Andaman which is known as the 'Middle Andaman'.

preparation) as no other reliable record for this language exists. The Rosetta Project data is also consulted but the authenticity of this data cannot be ascertained due to absence of information on source and time. It is to be noted that Jarawas established contact with the outside world only in 1998.

We begin with identifying the language families involved in the discussion in this paper. Thereafter, we shall discuss the genealogical, cultural, anthropological and linguistic differences between the two linguistic communities, followed by brief typological sketches of Aka-Bea and Jarawa. We then describe our methodology to rule out superficial similarities as they are not considered proper evidence of language contact. Only the robust examples of similarities have taken into consideration to prove the language contact phenomenon in the two sets of languages. Comparative method is used to isolate cognates in Aka-Bea (Great Andamanese) and Jarawa (Angan).

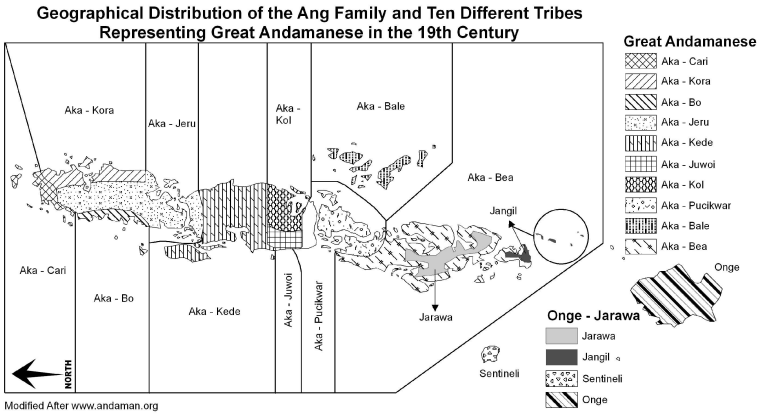

Figure 2. Map 2

2. Genealogical Affiliation

Great Andamanese constitutes the sixth language family of India (Abbi 2006, 2009, Blevins 2007). The other five language families are Indo-Aryan, Dravidian, Tibeto-Burman, Austroasiatic, and Austronesian (represented by Onge-Jarawa known as the Angan

group: Abbi 2006, 2009).[3] Abbi (2006) has shown preference to name this group as 'Angan' because Onge and Jarawa, both refer to themselves 'Ang' pronounced as *əŋ*. We have adopted her nomenclature for this paper. Although the establishment and identification of these languages to a larger family of Austronesian as proposed by Blevins (2007) has its own merits and demerits, yet it is certain that they (Jarawa and Onge) belong to a distinct language family (Abbi 2006, 2009 and Blevins 2007). There are ten languages in the fold of Great Andamanese family: Aka-Bea, Aka-Bale, the southern variety; Aka-Pucikwar [known as Pujjukar in the current spoken language], Aka-Kol and Aka-Kede, Aka-Jowoi, as the central variety; and Aka-Jeru, Aka-Bo, Aka-Kora [known as Khora by the present speakers] and Aka-Cari [known as Sare by the present speakers] a northern variety (fig. 2 and 3).

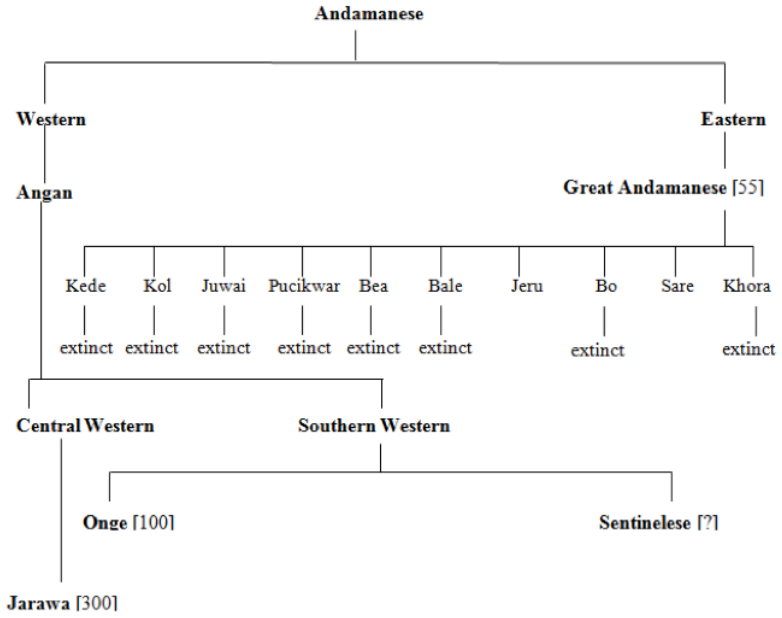

Figure 0.3. The present state of the Andamanese languages (2009) (adapted from Abbi 2003).

[3] There are two more language families represented in India, Tai-Kadai by Tai-Ahom language and language isolate Burushaski which has two languages in its fold.

Geographically, Aka-Bea and Jarawa were adjacent to each other occupying the southern most part of the Andaman Islands (fig. 3). It is evident that they were neighbors but it is also a known fact that they were arch rivals (Portman 1887, 1992). The name '*jarawa*' was given to this tribe by the community of Aka-Bea meaning 'the feared ones' or 'stranger'. However, as stated above, Jarawas call themselves '*Ang*' meaning 'we people'. It is ironical that they themselves did not know till 1998 that they were known as 'Jarawa' by outsiders.

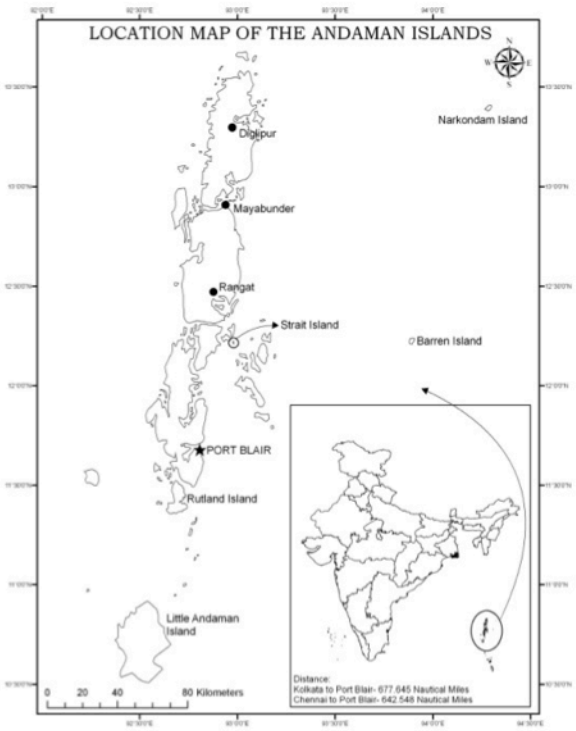

Figure 0.1. Location map of the Andaman Islands.

3. Genetic differences

There have been interesting discoveries by the geneticists about the origins of the two groups of the Andamanese population. Thangaraj et

al. (2003: 86-93) claimed 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." Another geneticist commented in 2004 that: "The aboriginal populations of Andaman Islands seem to have remained in isolation for a much long period than any known ancient population of the world" (Kashyap et al. 2004). Subsequent research by geneticists is consistent with linguistic research. Thangaraj et al. (May 13, 2005) indicated that the two ancient maternal mt DNA lineages, M31 and M32 in the Great Andamanese and the Onge respectively, have evolved in the Andaman Islands independently from other South and Southeast Asian populations.

> Our study suggests that two ancient maternal lineages have evolved in the Andaman Islands in genetic isolation independently. The Great Andamanese and the Jarawas constitute a distinct genetic pool that is different from the rest of the Asian and African population. (Thangaraj et al. *Science*, Vol. 308: 996, 2005)

The analysis 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. These two haplotypes are not found among the Indian populations (fig. 4).

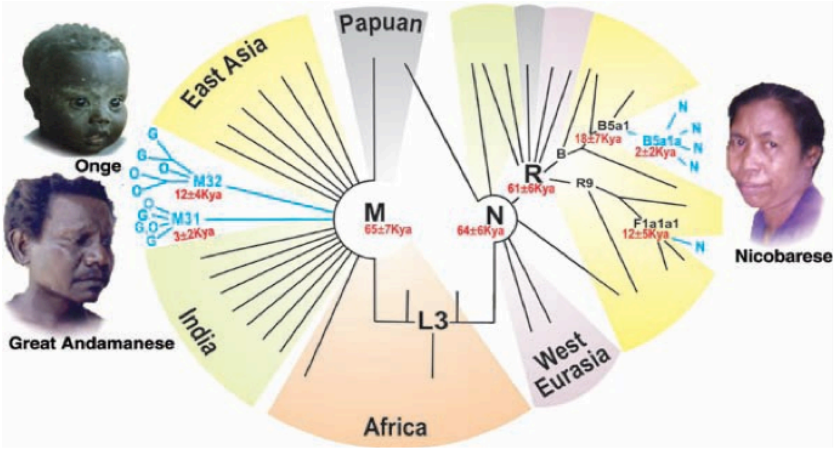

Figure 0.2. Two deeply branching clades differentiating Onge and Great Andamanese (Thangaraj et al. 2005).

Later, the reanalysis of the Andamanese-specific lineage M31 suggested: "...population specific two clear-cut subclades (M31a1 and M31a2). Onge and Jarawa share M31a1 branch while M31a2 clade is present in only Great Andamanese individuals" (Thangaraj et al. 2006: 151). These discoveries reveal the fact that Great Andamanese and the people of the other two tribes Onge and Jarawa (i.e. Angan) belonged to two different genetic pools. The genetic evidence along with linguistic one (Abbi 2006, 2009 and Blevins 2007) suggests that they belong to two distinct language families.[4] The evidence provided by the geneticists of the evolution of these tribes supports the claim that these populations evolved their languages independent of each other without any contact between the two.

[4] We are aware of the fact that it is not necessary that populations belonging to two distinct genetic pools speak genealogically distinct languages; however, in the present case this can be hypothesized considering long isolation and independent development of the two groups.

4. Linguistic differences

Typology of the two languages

Typologically, the two sets of languages are somewhat different from each other. This fact that was first brought out in the research conducted on the present-day Jarawa and the present-day Great Andamanese language (Abbi 2003, 2006).[5] Consulting the dictionary of Aka-Bea by Man (1923) it seems that this judgment need not be changed as Aka-Bea is a prototypical member of the Great Andamanese language family. We will briefly describe the typology of Aka-Bea and Jarawa in the following sections.

Aka-Bea

Aka-Bea is a head-marking polysynthetic and agglutinative language. It has two types of grammatical categories: dependent and non-dependent. Most of the nouns that refer to the typical inalienably possessed items such as 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. A large number of morphemes, affixes, and clitics can constitute a single phonological word. This word generally is a verb phrase. As Aka-Bea is a prototypical "head marking" language where the verb complex includes a large amount of information in a multi-morphemic string that includes subject and object pronominal prefixes or clitics, reflexive and reciprocal prefixes, as well as suffixes expressing tense, aspect and mood. It is a verb final language. However, while the

[5] The linguistic system of the Present Great Andamanese appears to be close to Koineization (Manoharan, 1989). It is characterized by a mixture of linguistic features of several (perhaps four if not all ten that once existed) varieties. It draws its lexicon from Northern Great Andamanese languages such as Khora, Sare, Bo and Jeru. but shows greater influence of Jeru on its grammar. What we notice in today's Great Andamanese speech is a kind of leveling of different linguistic systems. Perhaps several grammatical inputs have contributed to generate the Present Great Andamanese. As the language is highly endangered with five terminal speakers (they were nine when we started our initial fieldwork in 2001), it is very difficult to say how far the language is mixed and what elements are mixed. 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 on Strait Island, a tiny island in the South which is 53 nautical miles north of Port Blair (fig. 3).

genitive phrase, demonstratives, and numerals precede the head noun, other modifiers follow the modified. Pronominals are marked for number and for the inclusive/exclusive distinction. Possessive constructions are very complex as the language makes a distinction between (1) the animate and the non animate possessors, as well as offers a large variety of possessive markers indicating possessed items of (2) human relations, (3) certain organs or parts of human or (4) animal body and what is incorporeal, (5) viz. soul, spirit, ghost and experience (Man 1923: 158). The lexical items referring to all these distinctive notions are prefixed with terms for one of the seven divisions or parts of the human body.

Jarawa

Jarawa is an agglutinating language with an SOV clausal structure. It has dependent and non-dependent words like Aka-Bea but the complexities lie only with the nouns belonging to human body parts and kinship terms. It has few adpositions which occur as postpositions. Descriptive adjectives follow the noun while numerals and demonstratives precede the noun. Intensifier and manner adverbs follow the adjectives and verbs. Question particle comes in the beginning of a polarity question while the question word (e.g. interrogative pronoun) remains in its situ position. Copula precedes the verb in verbal clauses and nouns and adjectives in verbless clauses. Causatives are formed by prefixation. Possession is expressed by prefixing the pronominals to the possessed noun. Negation is expressed either by putting the negative word at the end of a clause or by suffixation of a morpheme to the verb; the more frequent one is to use negative word at the end of a clause or a phrase. Jarawa has three way distinctions in pronominal system, first, second and third but lacks number distinction in all personal pronouns. Jarawa is a mood prominent language. Verbs are optionally prefixed by pronominal or definiteness/referentiality markers.

The biggest typological difference between the two languages is that Jarawa does not have the prefixing system of Aka-Bea, where each and every lexical item belongs to the binary division of dependency. Nor the lexicon is divided into five "groupings" (Portman 1898: 37-41) each prefixed by a distinct body part prefix. Man (1923) has listed seven body part prefixes attached to various kinds of nominal and other categories.

5. Non linguistic differences

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).

Evidence from archaeology such as study of Andamanese kitchen middens, indicates that the Andamanese used Toalian stone technology. This stone technology which has been found all over the Indonesian archipelago indicates that Negritos were more widespread than has been thought. It has also been established culturally that the Great Andamanese differ in their design and construction of huts, weapons, boats and canoes, ornaments and customs from Jarawa and Onge. The Onge-Jarawa 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).

In short, Great Andamanese is different from Onge and Jarawa both genetically, anthropologically and culturally.

6. Methodology

To achieve our goal we have compared Jarawa-Aka Bea data against the forty word-list from the ASJP (2008)[6] databank. Subsequently, this data was compared against the Basic word list of Swadesh (1955) (see appendix 5) as linguists have believed that Basic vocabulary and bound morphemes are hardest to borrow. To confirm the possibility of contact between Jarawa and Aka-Bea, the existing data is further compared against the scale provided by the most nonborrowable word list from the Loan Word Typology research (henceforth LWT: Haspelmath and Tadmor 2009).[7] We then isolated words which

[6] ASJP stands for Automated Similarity Judgment Program. The 200-item Swadesh list is reduced to a 40-item list. This has been done as the authors claim "without loss and even with a gain in classificatory reliability." The present method automates both the judgments of cognacy and the subsequent inference of phylogeny.

[7] This research is the first of its kind to address the question of what kinds of words get borrowed in a systematic and comparative perspective. It studies lexical borrowing behaviour on the basis of a world-wide sample of 40 languages, both major

appeared to be lexically similar in Aka-Bea and Jarawa. These were taken as suspicious of being borrowed [shared] between the two languages.

There are certain questions that can be raised here. Do these suspicious words indicate any borrowing? If yes, then what is the directionality of borrowing? Was it unilateral or bilateral? To answer these questions we have compared the suspicious words with other languages of the Great Andamanese family for which we have record (Portman 1887, 1992) and the Angan family (Abbi 2006, Blevins 2007, Dasgupta and Sharma 1982). To be more precise, we have adopted a simple procedure: if a word under consideration is found similar to words found in other extinct languages of the Great Andamanese family, we considered them belonging to Aka-Bea; and if the words are found to be indigenous to the Angan family, we considered them belonging to Jarawa. After isolating genetic inherited words in two distinct families, we arrive at the count of five words: three words which can be marked for borrowing with certainty and two words which may have the possibility of borrowing. Having removed the shadowy evidence for contact between the two languages and isolating only the robust ones, we conclude by demonstrating that language contact between Jarawa and Aka-Bea was not a unilateral contact. Both languages borrowed words from each other in a very specific context despite the absence of intense contact.

7. Observations

As there is no data available for Jarawa for pre-1998, we are forced to compare modern data of Jarawa with the archaic data of Aka-Bea. A comparison between the current linguistic data based on our fieldwork (Abbi et al. 2001, and Abbi 2005-2008 and Kumar in preparation)[8] and the available data from the Rosetta Project leads us to believe that Jarawa has undergone very little sound change. As the Jarawa tribes have lived in isolation for thousands of years without any contact with

languages and minor languages, and both languages with heavy borrowing and languages with little lexical influence from other languages.

[8] My initial fieldwork in the Andaman Islands in 2001 was assisted by two of my students, namely, Shailendra Mohan and Pramod Kumar. Subsequently I and Pramod Kumar made several trips to the Andaman Islands to collect data.

the outside world, we presume that sound change must have been minimum and slow confining to only internal sound change.[9] The 40-word list of ASJP containing Jarawa and Aka-Bea parallels is given in appendix 2.

Similar words in Aka-Bea and Jarawa (against the ASJP list)

According to the list provided by the ASJP, we found seven words which appeared similar across the two languages. These are two personal pronouns 'we', 'you', two body part terms 'hand', 'breast', and, three words relating to environment 'tree', 'water' and 'stone'. These overlap with the Basic vocabulary because ASJP list is based on the Basic vocabulary. These similar words are given in table 1. The orthographic notations adopted by Rosetta are not very clear, however, we have tried to give equivalency by = symbol. This may be considered as an approximation.

Table 1. Similar words in Aka-Bea and Jarawa compared against the ASJP list.

No.	English	Aka-Bea (Man)	Jarawa (Rosetta)	Jarawa (present)
1	we	mòlòichik	Mi = mi	Mi
2	you	ngòlòichik	Ni = ŋi	ŋi
3	hand	ông-kōro (da)	om, ome	ipi:l
4	breast	ôt-kûg (da)	akag	Kag
5	tree	âkà-tâng	anao	taN
6	water	îna	iN = iŋ	iŋ
7	Stone	taili	uli	Ulli

We shall discuss these words in the following sections.

Pronouns

Sound-meaning correspondences are only in the initial sounds *m-* for first plural and *ŋ-* for second singular. Genetically and typologically

[9] The original transcription used by Man and the Rosetta project are maintained in citation. However, for the equivalence value of these symbols readers may refer to appendix 1.

unrelated languages across the world have known to have similar sounding first consonant in first and second person pronouns. Maps of personal pronouns in WALS (Nichols and Peterson 2008, chapters 136, 137) are good indicators of *m-* as the first sound in the first person pronoun being used by languages of Eurasia or by the Tungusic languages of the Altaic family spoken in Siberia. Hence, we rule out the possibility of these two similar appearing words as borrowings or as evidence of genetic relatedness. Also, the second sound of the monosyllabic word is diametrically opposite to each other in the two languages. Hence while Jarawa uses high, front unrounded vowel [i], Aka-Bea uses mid, back rounded vowel [o].

Body part terms

(i) The word for **'hand'** and other extremities of the body in all the Great Andamanese languages including Aka-Bea begin with an inalienable proclitic (Abbi 2010) *ong-*. The Rosetta Project reports of the word *om* as a parallel to Aka-Bea *ong-* which is not shared by the present Jarawa form *ipi:l*. As we shall discuss below, the word in Jarawa for hand is *ipi:l* while for fingers it is *om ~ ome*. Even we consider the word given by Rosetta Project as a borrowing from Aka-Bea, we have no justification to prove that the word was borrowed with a bound morpheme, i.e. *ông-kōro* and then the main lexeme was dropped having the residual proclitic *ông-* implanted in the language for the meaning of 'hand'. Thus we rule out the word *om* 'hand' in Jarawa (Rosetta) as a borrowing from Aka-Bea. The present form *ipil* in Jarawa is very distant from the Aka-Bea *ông-kōro* to establish them as borrowed items.

(ii) The word for **'breast'** in Aka-Bea is *ôt-kûg*, i.e. proclitic + lexeme for 'breast'. The lexical item in Jarawa is very similar if we leave out the proclitic and the vowel between the consonants. It is *akag* in Rosetta database and in present Jarawa it is *kag*. In Aka-Bea word the inter-consonantal vowel is high, back, rounded [u] while in Jarawa it is low, back unrounded [*a*]. This lexeme may be considered as a likely candidate for borrowing despite the difference in the nature of the vowel. However, the form for 'breast' given by Portman (1887, 1992) is *ig-kam* which raises doubt about the correct meaning of the word *ôt-kûg*. This calls for investigation into other genetically related languages of Jarawa, such as Onge, to identify the indigenous word in the Angan family so as to rule out the inheritance feature.

Others

There are three words in the domain of 'environment' that appear similar in two languages.

(i) The word for **'water'** in Aka-Bea is *îna* while in Jarawa it is *iŋ*. Although Great Andamanese languages offer phonemic contrast between velar and dental nasals, we can consider this as a borrowing despite the alternation in dental vs. velar nasal in the two languages. However, we need further investigation in other genetically related language of Jarawa, such as Onge, for which there is some written account, to rule out the inheritance feature and reach any firm and convincing decision.[10]

(ii) The word for **'tree'** raises the question of contact between the two sets of languages. In Aka-Bea the word is *âkà-tâng* while in Rosetta database it is reported as a very distant form *anao*. However the present form in Jarawa has a very similar sounding word for 'tree', i.e. *taŋ*. If we leave out the proclitic *âkà-* in Aka-Bea we are left with the root lexeme for 'tree' which is similar between Jarawa and Aka-Bea. One cannot rule out the fact that *taŋ* could be a specific tree and not a generic name for a tree which can induce borrowing.

(iii) The word for **'stone'** also raises a possibility of borrowing. In Jarawa, both the present form and the one reported in the Rosetta database are similar, i.e. *ulli* and *uli* respectively. The word for the same lexeme in Aka-Bea is *tailli* sharing the terminal syllable of the word, i.e. *-li*. If we take for granted that the segment *ta-* in Aka-Bea is some form of a prefix then the root morpheme and its structure is VCV with CV as shared sound segments. Another feature worth mentioning here is that there are varieties of stones in the Andaman Islands raising the possibility of speculation for borrowing this particular word referring to a kind of stone used as a weapon. Given the nature of contact between the two groups, this could justify potential borrowing.

To summarize our observations so far, the words for 'water', 'tree' and 'stone' are similar in the two sets of languages and offer possibilities of borrowings.

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[10] One must note that in many languages of the world, the word for 'water' contains a nasal, cf. Proto-Arawak **uni*, Carib *tuna,* Tacanan *ena,* and so on (Alexandra Aikhenvald, personal communication).

Similar words in Aka-Bea and Jarawa according to the LWT

There are 100 words which are considered to have low possibility of borrowing across languages in linguistic literature. This had been achieved by comparing data across 40 distinct languages of the world (Haspelmath and Tadmor 2009) (see appendix 3). According to the authors of LWT any similarity in the word-list among distinct languages can be read as the indicators of chance phenomenon, or genetic relatedness. As the hypothesis of genetic relatedness between Great Andamanese and Jarawa is already quashed, the only possibility we are left with is the borrowing of a minimal kind or borrowing in a very specific context or a chance similarity in similar appearing words. One cannot rule out a possibility of two languages borrowing very specific items from each other without being in intense contact with each other. This situation can be conceptualized in an exposure or interaction between two communities for short and specific purpose.

The LWT lists two varieties of second person pronouns, singular (62nd in the scale) and plural (58th in the scale) as well as the body part terms 'breast' (94th in the scale) and 'finger' (88th in the scale). An additional word 'throw', which occupies the 60th rank in the hierarchy of the database on non-borrowability (see appendix 3) seems to be similar in the two languages. See table 2 for the similar words.

Table 2. Similar words in Aka-Bera and Jarawa against the LWT list.

No.	Rank in LWT	English	Aka-Bea (Man)	Jarawa (Rosetta)	Jarawa (present)
1	09	we	mòlòichik	Mi = mi	Mi
2	58	you (pl)	ngòlòichik	Ni = ŋi	ŋi
3	62	you (sg)	ngòlòichik	Ni = ŋi	ŋi
4	88	finger	ông-kōro (da)	om, ome	ipi:l
5	94	breast	ôt-kûg (da)	akag	kag
6	60	throw	dapi, depi	depi	apine

Personal Pronouns

As there is no distinction in singular and plural forms of second person pronoun in our database, we will consider them as one single entry. Our judgment for this is similar to the one reached for the ASJP list (table 1). The LWT lists these words as 'most resistant to borrowing.' The first person pronoun is one of those lexemes which have 9th rank in the 'unborrowability scale.' Similarly, the second person singular pronoun has the rank of 62 in the list of 100 as the most unborrowable words/items. However, we cannot consider them as the cases of borrowing as a large number of the world's unrelated languages seem to share initial nasals in first person pronouns as discussed above.

Body part terms

Among the body part terms words for 'finger' and 'breast' occupy the rank of 88th and 94th rank respectively on the list of 100 most unborrowable words/items. The arguments for sharing these items are already discussed above. It is to be noted that Man (1923) as well as Rosetta Project give the identical forms for 'hands' and 'fingers'. They do not appear to be borrowings.

Others

A comparison from the list of the LWT gives us one word 'throw' which qualifies to be similar in the two sets of languages. The words recorded in Rosetta database and Aka-Bea dictionary by Man (1923) are identical. We will have to confirm its status as a borrowed word after investigating the Onge language to rule out a chance similarity. As we know identical words, more often than not, are similar by chance than are the instances of borrowing or genetic inheritance.

To sum up, following words seem to qualify for borrowings between Aka-Bea and Jarawa. The square brackets give the reference list used for comparison.

- 'throw' V [LWT]
- 'breast' BP [LWT + ASJP]
- 'finger' or 'hand' BP [LWT + ASJP]
- 'water' N [ASJP]
- 'tree' N [ASJP]

• ‘stone’ N [ASJP]

We are motivated to investigate the lexical inventory of Onge to reach any conclusive judgment. In addition, we have to compare the words with those given for other Great Andamanese languages in Portman (1887, 1992) to rule out genetic inheritance in Aka-Bea.

We shall begin by comparing languages of the Angan group. For this we will refer to the published material (Abbi 2006, Portman 1887, 1992 and Dasgupta and Sharma 1982).

8. Comparison between the Angan Languages (Jarawa and Onge)

We shall consider similar appearing lexical forms in the two languages of the Angan family to ascertain cognacy. The form/s drawn from Dasgupta and Sharma (1982) are marked by * in table 3.

Table 3. Lexical forms in Onge and Jarawa.

No	Jarawa (Present)	Onge (Abbi 2006) (Portman 1887, 1992)	Gloss
1	mi	eɽI (A)	we
2	ŋi	ɲI (A)	you
3	taŋ	daŋe	tree
4	kag	na:ka:ge:	breast
5	iŋ	iŋe	water
6	ulli	uli *[taiyi:]	stone
7	apine	wötaiqua:u:be	throw

The Jarawa words number 1 and 7 do not show any similarity with Onge in Table 3. Thus, these offer the possibility of being borrowed from Aka-Bea which shares these lexical items with other Great Andamanese languages. The rest of the words are similar in the two languages. The word number 6, viz. ‘stone’ merits some discussion. We will discuss this below.

9. The two families compared: Great Andamanese and Angan

We shall consider the consolidated list of Aka-Bea, Jarawa and Onge in this section. The following results have been arrived at comparing

the Aka-Bea words with the extinct languages of the Great Andamanese family such as Aka-Bojigiab, Aka-Kede, Aka-Chariar reported in Portman (1887, 1992). We are not listing the words given in these extinct languages here (for details see appendix 4). Data on Onge is drawn from Portman (1887, 1992). As specified above, where no lexical item was given for the word under consideration by Portman, data from Abbi (2006) is being used. For the word 'stone' the correspondence and the reconstruction form from Blevins (2007) is used. Table 4 presents the comparative lexical similarity as well as the directionality of borrowing of the lexical forms. If the word is not shared with its sister language then it is marked as 'unique'.

Table 4. Comparative lexical similarity in South Andamanese languages and directionality of borrowing.

No	English	Aka-Bea (Man)	Jarawa (Rosetta)	Jarawa (present)	Onge (Abbi, Dagupta & Sharma and Portman)	Directio-nality of borrowing	Observations
1	breast [N]	ôt-kûg (da) *unique*	akag	kag	na:ka:ge:	Jarawa > Aka-Bea	No cognates in other Great Andamanese languages but similarity exists in Angan
2	throw [V]	dapi, depi	depi *unique*	apine *unique*	wötaiqua:-u:be	Aka-Bea > Jarawa	No cognates in Angan but cognates available in Great Andamanese languages
3	stone [N]	taili *unique*	uli	ulli	taiyi *uli (Blevins)	Jarawa > Aka-Bea	No cognates in other Great Andamanese
4	water [N]	îna	iŋ	iŋ	iŋe	chance similarity	Great Andamanese languages have dental nasal while Angan have velar nasal
5	tree [N]	âkà-tâng	anao	taŋe	daŋe	chance similarity	Unexplained similarity in the two sets of languages
6	we	mòlòichik	mi	mi	eŋi	Aka-Bea	No cognates

	[PRO]			*unique*		> Jarawa	in Onge
7	you [PRO]	ngòlichik, ngòl	ŋi	ŋi	ɲi	perhaps Jarawa borrowed from Aka-Bea	No real cognates in Onge. Weak case for comparison
8	finger	ông-kōro	om, ome 'hand'	om	o'me (Portman) bilaye (Abbi)	Aka-Bea > Jarawa	The Great Andamanese languages share cognates

10. Discussion

In the following sections we will discuss those items which raise doubt of being borrowed.

'Throw'

The word for 'throw' has an interesting contact history. The first syllable of the Aka-Bea word is a prefix *da-* ~ *de-* and the root morpheme is *pi*. Etymologically, the word has a very different root in the Angan language as can be seen from the data from Onge. It appears that the present Jarawa borrowed the word without the prefix consonant and added *-ne* suffix. However, the Rosetta data shows that the whole lexeme with the prefix was borrowed, which is more a plausible situation than the former. Since other extinct and living language of the Great Andamanese family show cognacy with this word, we can with fair amount of certainty claim that this is originally an Aka-Bea word and Jarawa borrowed it as a full lexeme along with the proclitic. The word for 'throw' in the present Great Andamanese is *e-p^{h}il*.

'Stone'

The word for stone has cognates in Angan languages and has also been reconstructed in Proto Angan as *uli (Blevins 2007). In addition, the entry under Aka-Bea is unique as it does not share cognate relationship with other extinct or living languages of the Great Andamanese family. Another fact to be noticed is that the initial syllable of *ta-* appears to be an applicative prefix which has been taken as a part of the lexeme by Man (1923). If we disregard this

morpheme *ta-* for the time being, then the only sound change that Aka-Bea underwent was *u>i* after borrowing the word from Jarawa. The present Great Andamanese word for 'stone' is *meo*.

The word for stone raises some issues in polysemy. There are various kinds of stones in the Andaman forests with multiple uses. The ones that are erected as epithets to the graves of the ancestors are different from those found near the sea shores. There are others found in the forest which perhaps can be used for throwing at an object be it inanimate or animate. Then there are those which are used for cooking turtles and big games. Some are also used for household use. None of the writers have given any detail account of the word for 'stone' in the languages. Thus, we are not without doubt to claim lack of borrowing. It may be a borrowing as this word perhaps refers to a kind of stone which is found only in the Southern Andaman and used as a weapon. Possibility of borrowing the word for 'stone' which is either hunting equipment or a weapon is high. Geographical specificity of an item can also raises the possibility of sharing an item and its referent between two language speakers.

'Breast'

The word has cognates in Angan but has no cognates in the Great Andamanese languages and hence this seems to be a clear-cut borrowing from Jarawa into Aka-Bea. The Present-day Great Andamanese word for 'breast' is *ɛr-metei*.

As in the case of 'stone' the word for 'breast' can have the potentiality of borrowing for its polyseymous nature and multifunctionality. In many languages body part terms are used for spatial deixis. In Present-day Great Andamanese the human body and its various divisions provide the most important model for expressing concepts of spatial orientation. The words for 'back', 'face', 'shoulder' and 'behind' are used as deictic categories. One cannot rule out the possibility that one of the meanings of the word for 'breast' could be 'front' or 'in front of', which has a high possibility of a borrowable item. Unfortunately neither the ASJP-list not the LWT-list takes into account the multiplicity of meaning of a word.

'Water'

The lexical similarity for 'water' runs across languages of both the families. It could be a case of chance similarity. Though we would like to point out that the word in Aka-Bea has a structure of vcv syllable with a dental nasal occurring inter-vocalically but Jarawa has a vc syllable structure with a velar nasal in a coda position. They are not absolute identical words. The Great Andamanese languages offer dental and velar contrast among nasals which cannot be disregarded (see fn. 10).

'Tree'

Although striking similarities in the forms in two distinct language groups point towards borrowing, the word for 'tree' can be established as the case of chance similarity. Since the word is reconstructed as **taŋ* and **daŋ* by Blevins (2007), and has similar lexical items in other extinct languages of the Great Andamanese family, we can only say that this may be a case of accidental similarity. The Present-day Great Andamanese offers *ʈɔŋ* 'tree'. Since retroflex and non retroflex sounds stand in contrast in the Present-day Great Andamanese language it can be conjectured that Man (1923) missed out this fine distinction as his dictionary does not list a single word with retroflex sound. Without a large database the nature and reasons for this similarity remain obscure.

'We'

This deserves some discussion. Our field data on Onge gives us the first person plural form *eṭi*, which is not shared by Jarawa *mi*. Jarawa does not make any distinction between singular and plural in first person pronoun. Blevins (2007) also reconstructs **eti* for the word 'we' in Proto Angan. Thus Jarawa word *mi* for 'we' seems to be a unique entry and can be considered as a borrowing from Aka-Bea with an oversimplification as a monosyllable word *mi*. Moreover, all the other languages of the Great Andamanese family offer cognates of the form in Aka-Bea, proving that the word belongs originally to the Great Andamanese family.

'You'

The Aka-Bea form given in table 4 is for the second person plural reference. The parallel forms in Jarawa and Onge are for second person singular form and thus a real comparison is difficult to make. Moreover, the second consonant *-l* is very significant in the Great Andamanese languages as it indicates plurality. Obviously, this information is missing in the Onge and Jarawa forms. We can only ascribe this superficial similarity of the initial consonant to chance similarity. We would also like to add the argument given above that the initial consonant similarity in second person pronouns exists across a large number of languages of the world and hence cannot be considered a robust diagnostic feature for genetic relatedness. Chance or borrowings are the only two possibilities. And in this case it seems to be a case of chance similarity.

'Finger'

Our recording of Jarawa offers two distinct words *ipi:l* 'hand' and *om* 'fingers'. However the Rosetta data for Jarawa shows *ome* for 'hand' but it is silent on the word for 'finger'. The Onge data is little problematic as Portman noted two distinct words, one for 'hand' *m'ome* and another one for 'finger' *o'me*. It is noted that the distinction does no accrue to the basic lexeme but to the possessive prefix, i.e. *m-* vs. absence of a possessive prefix. This implies that these are not two different words but one and the same basically referring to the lexeme for 'hand'.[11] The word for 'hand' is reconstructed by Blevins as **-ome* in Proto-Angan. Abbi (2006) notes a very distinct appearing word for 'finger' and that is *bilaye*. This implies that we cannot with surety obtain parallels for the word 'finger' in the Angan languages. This brings us back to the form om in the present Jarawa which can be ascribed to the borrowing from Aka-Bea but only of the proclitic form *ong-*. Another hypothesis is that it borrowed the whole lexeme *ong-koro* but later dropped the root morpheme *koro* retaining the *ong-* and then later changed *ng [ŋ]* to bilabial nasal *m-*. However, we cannot identify the phonological

[11] It is conceivable of the difficulties involved in eliciting distinct words for 'fingers' and 'hand'. Many of the speakers in Present-day Great Andamanese also gave the same form for 'hand' and 'finger'.

environment responsible for such a change due to paucity of the database.

11. Conclusion

The words number 1, 2, and 3, i.e. 'breast', 'throw' and 'stone' respectively given in table 4 are clear cases of borrowing. Borrowing has taken place from Jarawa to Aka-Bea as well as from Aka-Bea to Jarawa. Words for 'breast' and 'stone' have been borrowed in Aka-Bea from Jarawa but the word for 'throw' has been borrowed from Aka-Bea into Jarawa. Further, possibilities of first person plural pronoun 'we' (word number 6) and the word number 8 for 'finger' also appear to be borrowed from Aka-Bea into Jarawa. This implies that the contact between the two languages existed at a very minimal level. Near identical forms for 'water' and 'tree' are best viewed as accidental. Overall resemblances in personal pronouns are small and not above chance levels. This throws open the question of reliability of the words listed in the LWT list as most borrowing-resistant items.

The authors of the present paper do not believe in the hierarchical scale provided by the LWT not because of the lack of distinction between grammatical and lexical items but because of the fact that it does not take cognizance of similar sounds across languages of the world due to chance similarity. Nasal consonants in personal pronouns are case in point (Nichols and Peterson 1995, Campbell 1997). Campbell (1997: 340) lists several accounts of borrowing of pronouns as well as borrowing of the entire pronominal systems across genetically distinct languages. He mentions that there are also several documented cases of borrowed pronouns involving Southeast Asian languages, Austronesian, and Papuan languages.

We claim that the specific context and unusual circumstances can force the society to borrow items which are considered borrowing-resistant. Aikhenvald (2008: 1-66) offers excellent examples of contact-induced language changes in the speech of "River-dwellers" and "Jungle-dwellers" of the Sepik River Basin in New Guinea proving that despite different means of subsistence, life styles, and patterns of interaction, two communities can show enough evidence of language contact. One has to take into account the nature of the contact-relationship between two communities living adjacent

to each other. Out of several factors leading to contact-induced changes in the two languages in contact, the rivalry relationship between the two communities may induce very different and specific lexical borrowings. It is to be noted that hunters are always at an ear-shot distance from each other and hence are good candidates for hearing and adapting words used in a specific context.

The world of hunters and gatherers is different from ours. The two communities under consideration here are known to be arch rivals. This sociological situation may have motivated a-prototypical or unusual kind of items to be participating in language contact phenomenon. It is not surprising then to observe that words used in the semantic domain of 'hunting' that are easily borrowed. Words such as 'stone', 'throw', 'fingers', 'hand' (seen as instrument in holding a bow and shooting an arrow) are good candidates for borrowing in a typical hunter-gatherer society.

Abbreviations: BP = body parts, N = noun, PRO = pronoun, V = verb.

Appendix 1

Use of Alphabets by E. H. Man (1923) and its equivalence in IPA.

Consonants			Vowels		
(Man)		(IPA)	(Man)		(IPA)
b	=	b	a	=	ʌ
p	=	p	ā	=	ɜ:
ch	=	c	à	=	a
d	=	d	â	=	a:
g	=	g	ä	=	a
h	=	h	e	=	e
j	=	j	ê	=	e:
k	=	k	i	=	ɪ
l	=	l	î	=	i
m	=	m	o	=	ɔ
n	=	n	ō	=	ɔ:
ñ	=	ɲ	ò	=	ɒ
ng	=	ŋ	ô	=	ɒ:
r	=	r	u	=	u
s	=	s	û	=	u:
t	=	t	ai	=	ai
t^h	=	t^h	àu	=	au
w	=	w	òi	=	ɔi
y	=	y			

Appendix 2

Comparative list of words from Jarawa and Aka-Bea against the AJSP list. The list contains all the forty words from the AJSP list. Non availability of data in respective languages is marked by xxx.

S.N.	English	Jarawa (present)	Aka-Bea (extinct)
1.	blood	ceŋ	ông-ti
2.	bone	xxx	ar-tâ
3.	breast	kag	ig-kâm
4.	come	allema	òn
5.	die	peca:me	oko-li

6.	dog	wɨwəmə	bibi
7.	drink	ɨɲcowa	wêlej
8.	ear	ikʰwa	ig-pûku
9.	eye	cepo/epo/ecepo	ig-dal
10.	fire	ʈʰuhə	î-dal
11.	fish	napo	yâd
12.	full	xxx	têpe
13.	hand	ipi:l	ông-kōro
14.	hear	iʈʰəhəʈʰe-yə	î-dai
15.	horn	oʈiɖə:w	wôlo-tâ
16.	I	mi	dôlla
17.	knee	ola	ab-lô
18.	leaf	pɨpɨ	î-tông / i-ông
19.	liver	xxx	ab-mûg
20.	louse	xxx	xxx
21.	mountain	ʈʰinon[12]	bōroin
22.	name	aʈiba	ôt-ting$_{[N]}$ âr-taik$_{[V]}$
23.	new	xxx	gôi
24.	night	kiʈʰale	gûrug
25.	nose	ɨɲɲa:nbo	ig-chōronga
26.	one	waya	ûba-tûl / ûba-dôga
27.	path	le:b / ice:le	tinga
28.	person	xxx	ab-dâlang
29.	see	əyoyəba	ig-bâdi
30.	skin	a:ʈi	(ab-)éj / dôch
31.	star	ciləhe	châto
32.	stone	ulli	taili
33.	sun	yeheyə	bôdo
34.	tongue	əndal	âká-êtel
35.	tooth	ənahoɖ	ig-tûg
36.	tree	taŋ	âka-tâng
37.	two	naya	ikpōr
38.	water	iŋ	ina
39.	we	mi	mòlòichik (mòl) (in construction)
40.	you	ŋi	ngòlòichik (ngòl) (in construction)

[12] There is no word for mountain. The Jarawa word *ʈʰinon* refers to ‘high land/hillock’.

Appendix 3

Comparative list of words in Jarawa and Aka-Bea against the 100-word list provided by the LWT. Non availability of data in respective languages is marked by xxx. Aka-Bea data has been transliterated according to the keys given in Appendix 1. Words are arranged serially according to the stability index. Hence the word considered to be the least stable for borrowability in the list occupies the last position, i.e. 100th.

S.N.	English	Jarawa	Aka-Bea
1.	he/she/it	hi	ɒ:llʌ, ɒ:
2.	we (incl.)	xxx	xxx
3.	we (excl.)	xxx	xxx
4.	up	xxx	xxx
5.	this	li	u:ca, kɜ:
6.	where?	kaha:y?	tan, tekʌrica:?
7.	why?	onahəle?	micʌlen?
8.	which?	onne	tenca:?
9.	we	mi	mɒlɒicik, mɒl
10.	married woman	əŋa:p	xxx
11.	younger sister	aikʰwəʈa	ʌr-dɒ:atɪŋʌpail
12.	to rise	xxx	xxx
13.	day after tomorrow	yakeka	ta:r-waiŋʌ
14.	to spin	xxx	xxx
15.	stinking	xxx	xxx
16.	to bring	eŋge/ekane	tɒ:yu, kɔ:rɔt
17.	day before yesterday	cetali	ta:r-dilbʌ
18.	there	luwə	ka:to, i:tʌn
19.	to lie down	tʰulə	bɜ:lʌgI
20.	to stand	ḍokəkte	ka:pʌrI
21.	here	liyə	i-ta:rmilŋʌ
22.	how?	noycʰe	kIcIkʌ, bIcIkʌ
23.	to run	ahapela	ka:j
24.	behind	xxx	xxx
25.	bitter	xxx	xxx
26.	nose	iɲapo	Ig-cɔ:rɔŋʌ
27.	thatch	xxx	xxx
28.	to go out	xxx	xxx
29.	to say	aʈiba	ta:r-cIre

30.	to draw water	xxx	xxx
31.	that	luwə	ɒ:llʌ, ɒl
32.	itch	eweewe	ru:tuŋ-aij
33.	to go/return home	unnə	wi:j
34.	what?	onəhə	a:te, ya:te
35.	to grasp	xxx	xxx
36.	I	mi	dɒ:llʌ, dɒ:l
37.	to be hungry	əŋgiyac^{h}u	ga:riŋa
38.	younger brother	aik^{h}wəʈə	ar-we:jɪŋʌ
39.	yolk	xxx	xxx
40.	above	xxx	xxx
41.	to come	allema	ɒn, kaic
42.	who?	onne	mi:jʌ
43.	next	xxx	xxx
44.	to listen	xxx	xxx
45.	it	li	ɒllʌ
46.	under	xxx	xxx
47.	to fart	xxx	xxx
48.	fire	ʈ^{h}uhə	i-dʌl
49.	not	naɖem	yɜ:ba, ba, da:ke
50.	to bite	ənigine, ipaka	ca:pI, ka:rʌp
51.	child-in-law	???	xxx
52.	right (side)	toheya	bi:dʌ
53.	to have	xxx	xxx
54.	to go	bəɪʈ^{h}e	li:r
55.	to lose	xxx	xxx
56.	to blow	əhubə	u:l, tɒ:puk, pu:wu
57.	to howl	xxx	xxx
58.	you (plural)	ŋi	ŋɒlɒicik, ŋɒl
59.	to grow	ʈu:ma:lə	wʌlʌgʌ, ab-dɒ:gʌ
60.	to throw	apine	dapɪ, depɪ
61.	to drop	huwaji	xxx
62.	you (singular)	ŋi	ŋɒlɒicik, ŋɒl
63.	to flow	xxx	xxx
64.	yesterday	kiʈaye	di:le:ʌ
65.	to hollow out	xxx	xxx
66.	to play	xxx	xxx
67.	eyelid	ecepoʈa:ʈi	xxx
68.	long	talu	la:pʌŋʌ, la:pʌnʌ
69.	to hit/beat	onodəhe	paidlɪ, paitɪ
70.	wide	xxx	pan, pe:ketɔ

71.	udder	xxx	xxx
72.	to climb	capʈʰe	ŋa:lau, cɔ:gra
73.	married man	əŋa:gi	xxx
74.	to hear	iʈʰəhəʈʰe	i:dai
75.	loud	xxx	xxx
76.	when?	kiʈa:ye	tain
77.	bright	xxx	xxx
78.	today	olla	kʌ-wai
79.	down	xxx	xxx
80.	nit	xxx	xxx
81.	black	hiʈu	pu:tuŋʌ
82.	firewood	nam/name	ca:pʌ
83.	to burn (intransitive)	amame	dʌl, jɒ:i, cɔ:i
84.	thick	huʈʰu	gɒ:rɔdmʌ
85.	louse	xxx	xxx
86.	to chop	icilo	ɒ:t-kɒ:p
87.	to float	xxx	xxx
88.	finger	om	ɒ:ŋ-kɔ:rɔ
89.	outside	xxx	xxx
90.	fly	ugiəɻʈʰe	ʌd-pa:pyʌ
91.	in	xxx	xxx
92.	at	xxx	xxx
93.	she	hi	ɒ:lla, ɒ:
94.	breast	kag	ɒ:t-ku:g, ɪg-ka:m
95.	to do/make	icʰe	ɒɪyɔ, ka:dlɪ
96.	to fall	huwaji	pa:, gɒ:dʌɪ, tɔ:lʌt
97.	how much?	noycʰe	tɜ:n-tu:n, kɪcɪk
98.	raw	xxx	xxx
99.	older sister	-a:mi	a:enʈɔ:bʌrepail, a:enʈɔ:kʌrepail
100.	in front of	xxx	xxx

Appendix 4

Lexical comparison between the extinct languages of the Great Andamanese family. Data is drawn for all languages from Portman (1887) which is at variance with the data supplied by Man (1918).

S.N.	English	Aka-Bea	Aka-Kede	Aka Cari	Aka Bojigiab

1	breast	ot-ku:k (da) ot-ku:g (da) ig-kam	ot- pada be	ot char.	ote pa-da
2	throw	dapi, depi	jo pil	jok ter choin	ete toii kan
3	stone	taili-da	mio	meau	me-da
4	water	ina-da	ine	ino	ena
5	tree	aka-tang-da	katong	aka-tongel	o-tong-da
6	we	moloichik	mui	mio	mule
7	you	Noloichik, Nol	ngui	ngio	ngule
8	finger	ong-bodo (da)	ong-koro	ong-kudemo	pute

Appendix 5

Comparative list of words from Aka-Bea and Jarawa against the Swadesh-list (1955).

S.N.	English	Aka-Bea (Man 1923)	Jarawa (Present)
1.	all	a:r-du:ru	xxx
2.	and	xxx	ən
3.	animal	tɔ:t-nan	xxx
4.	ashes	ɪg-bu:g, ca:pa-lɪg-pid	hʷi:yə
5.	at	len, lat, yʌ	ɖə
6.	back	ab-gu:dur	-inon
7.	bad	ab-jɜ:bʌg	piʈʰi
8.	bark (of a tree)	ɒ:t-e:d, ɒ:t-e:j, ɒ:t-aic, ɒ:t-aij	ipo
9.	because	eda:re	xxx
10.	belly	ʌr-mu:ga	-aykʈʰə
11.	big	bɒ:dia, dɒgʌ, ca:nʌg, ta:bʌŋʌ, rɒcɔbɔ	huʈʰu
12.	bird	cu:lʌ	noha
13.	to bite	ca:pi, ka:rʌp, kɒ:p	ənigine, ipaka

14.	black	puːtuŋʌ	hiɽu
15.	blood	tiː, teːɪ	ceŋ
16.	to blow (wind)	uːl, wuːl	əhubə
17.	bone	taː	-ogyag
18.	to breathe	aːka-ɔːnʌ	xxx
19.	to burn	jɒːɪ	ʈʰuhəble
20.	child (young)	ab-liːgʌ	əccəle
21.	cloud	yuːm-lɪ-dɪyʌ	xxx
22.	cold (weather)	rɪtɪp	xxx
23.	to come	ɒn, kaic	allema
24.	to count	ʌr-laːp	xxx
25.	to cut	ʌb-ŋaːli, kaːtaːɪ	icilo
26.	day (not night)	bɒdɔ	
27.	to die	ɔkɔ-li	pecaːme
28.	to dig	eːr-kɒːp	ipine
29.	dirty	guːjŋʌ, lʌdʌŋʌ, i-taːrʌ	piʈʰi
30.	dog	bibɪ	wɪmə
31.	to drink	weːlej	iɲco
32.	dry (substance)	i-kɔːlʌ	xxx
33.	dull (knife)	ɪg-piːcaŋʌ, muːgu-tɪg-piːca	xxx
34.	dust	eːr--lɒːt-puːpyʌ	pela
35.	ear	ɪg-puːku	-ikʰwa
36.	earth (soil)	gʌrʌ	pela
37.	to eat	mag, meg, mak, aːka-wet/wed	ita
38.	egg	mɔːl-ɔ	yana, yanela
39.	eye	iːg-da’	-ecepo, -cepo, -epo
40.	to fall (drop)	paː	huwaji
41.	far	el-ʌr-paːlʌ, lɒːyʌbʌ	noɖa
42.	fat (substance)	paːtʌ	huʈʰu
43.	father	ʌb-maiəlʌ, ʌr-ɒːdɪŋʌ, ʌb-caːbil	ummə, amumə
44.	to fear	ʌr-laːt, ʌr-laːd	ənpəʈʰa
45.	feather (large)	piːd	xxx
46.	few	ik-pɔːr	xxx
47.	to fight	ʌrʌ-taːŋ-mɒk	əniɲa
48.	fire	i-dal	ʈʰuhə
49.	fish	yaːd	napo
50.	five		mala
51.	to float	juːmu	xxx

52.	to flow	ceːleehʌ, yaːl	xxx
53.	flower	aːka-kɔːl	ohaːg
54.	to fly	ʌd-paːpyʌ	ugi-k-əiʈʰe
55.	fog	puːlɪʌ	xxx
56.	foot	ɒːŋ-paːg	uːg
57.	four		mala
58.	to freeze	xxx	xxx
59.	fruit	ceːtʌ-taːlʌ	ellewə
60.	to give	maːn, aː	iya
61.	good	aː-beːrɪŋʌ	ceːw
62.	grass	yuːkʌlʌ	ʈahaːbə
63.	green	ele-paij	ələŋda
64.	guts	ʌb-jɒdɔ	xxx
65.	hair	piːd	oɖə
66.	hand	ɒŋ-kɔːrɔ	ipiːl
67.	he	ɒːllʌ	hi
68.	head	ɒt-ceːtʌ	-otʰaːp
69.	to hear	iː-dai	
70.	heart	ɒt-kuːk-taː-bʌnʌ	xxx
71.	heavy	iːnma, wɒːmʌ	anponi
72.	here	kaːre, kaːmɪn, kaːrɪn, kʌm	liyə
73.	to hit	paitɪ	aikʰwa
74.	hold (in hand)	puːcu	kʰo
75.	how	kɪcɪkʌ-caː	noycʰe
76.	to hunt (game)	dele	kɨyə tahilə
77.	husband	iːk-yaːte	aːgi
78.	I	dɒːllʌ	mi
79.	ice	xxx	xxx
80.	if	mɒːdʌ	xxx
81.	in	len	ɖə
82.	to kill	tɔlɪgʌ	aikʰwa
83.	know (facts)	tiːdai	-iniyəla
84.	lake	xxx	xxx
85.	to laugh	yeŋe	əniyiːyə
86.	leaf	iː-tɒːŋ	pɨpə
87.	left (hand)	kɔːrɪ	kuhʷə
88.	leg	ʌr-caːg	-ipo
89.	to lie (on side)	bɜːlʌgɪ	tʰulə
90.	to live	buːdu	xxx
91.	liver	ʌb-muːg	xxx

92.	long	la:pʌŋʌ, la:pʌnʌ	ta:lu
93.	louse	xxx	xxx
94.	man (male)	a:bu:lʌ	əŋ, a:gi
95.	many	a:rdu:ru, ɒt-u:bʌbʌ	malawə
96.	meat (flesh)	dʌmʌ	u:gə
96.b	moon	ɒ:gʌr	tape
97.	mother	ʌb-e:tɪŋʌ	kaya
98.	mountain	bɔ:rəɪn, tɒ:t-jɒ:dʌmʌ	ʈʰinon
99.	mouth	a:ka-bʌŋ	-imun
100.	name	ɒt-tɪŋ	aʈiba
101.	narrow	e:r-cɒpʌuʌ	xxx
102.	near	lʌgyʌ, lʌgɪbʌ	buʈʰə
103.	neck	ɒ:t-lɒ:ŋɔtʌ	-inʈʰug
104.	new	gɒɪ	xxx
105.	night	gu:rug	kiʈʰale
106.	nose	ɪg-cɔ:rəŋʌ	iɲapo
107.	not	yɜ:bʌ	naɖem
108.	old	ʌb-cɔ:rəgʌ	xxx
109.	one	u:bʌ-tu:l, u:bʌ-dɒ:gʌ	wəya
110.	other	i:glɜ:, a:ka-tedɪ-bɒ:lyʌ, a:ka-tɔ:rə-bu:ʌ	xxx
111.	person	ʌb-da:lʌg	əŋ
112.	to play	i:-ja:j	xxx
113.	to pull	ti:nʌp, te:, te:nɪ	ipəʈʰeŋe, ehʷa
114.	to push	ɒ:t-u:dʌutɪ	əɖeyag
115.	to rain	yu:m	wəwə-le
116.	red	ce:remʌ	hoɽgidu
117.	right (correct)	u:bʌ-wai	ce:w
118.	right (hand)	ʌb-bi:dʌ	toheya
119.	river	i:-ji:g-ca:n-cau, ji:g	hʷa
120.	road	tɪŋʌ	le:b
121.	root	ʌr-cɔ:rəg, a:r-c:g	icʰe-taŋ, ʈʰucə
122.	rope	be:tmɔ, kɔ:dɔ	pado
123.	rotten (log)	u:b-cɔ:rɔre, ʌr-yɒ:b	xxx
124.	rub	ra:r, cu:lu, lu:rʌɪ	acʰilele
125.	salt	e:repʌɪj	xxx
126.	sand	ta:rʌ	bilowə
127.	to say	ta:r-cɪre	aʈiba
128.	scratch (ich)	ŋɔ:tɔwʌ	eweewe
129.	sea (ocean)	ju:ru	ullelə
130.	to see	ɪg-ba:dɪ	əyoyəba

131.	seed	ɒ:t-bʌn	xxx
132.	to sew	ja:t	xxx
133.	sharp (knife)	ri:nɪmʌ	ʈʰupe
134.	short	ʌb-jɒ:dʌmʌ, ʌb-de:debʌ, ʌb-du:gʌb, ɒ:t-tɒdʌmʌ, ɒ:t-rɒ:kɔmʌ	ucəhə
135.	to sing	ra:mɪt-tɒ:yu	gəgapa
136.	to sit	a:ka-dɒ:ɪ, ʌrʌ-cɒ:mɪ	ən-ətəhə
137.	skin (of person)	dɒ:c, dɔɪc	-itəyaŋ
138.	sky	mɔ:rɔ	paŋnag
139.	to sleep	ma:mɪ	omohə
140.	small	ke:tɪʌ	boyĩya
141.	to smell (perceive odor)	ɔ:tɔ-au	acʰu
142.	smoke	mɔ:lʌ	pənel
143.	smooth	liŋʌtɪ, pu:lʌɪ	xxx
144.	snake	jɒ:bɔ	topo
145.	snow	xxx	xxx
146.	some	ed-i:kpɔ:r	waŋ
147.	to spit	ci:n, tu:bʌl	tʰuwə
148.	to split	ca:pʌ-ca:lʌt, a:ka-tɜ:rʌlɪ	xxx
149.	to squeeze	pe:temɪ, pu:nu	xxx
150.	to stab (or stick)	ʌb-jʌɪŋ	xxx
151.	to stand	ka:pɪ	ɖokəkte, tokəʈʰe
152.	star	ca:tɔ	ciləpe
153.	stick (of wood)	pu:tu	
154.	stone	tʌɪlɪ	ulli
155.	straight	mɔ:lɔ	xxx
156.	to suck	ɪg-nɔ:	ɲoɲo
157.	sun	bɒ:dɔ	yeheyə
158.	to swell	lapi, a:r-bu:t	xxx
159.	to swim	ʌr-pi:t	waʈa
160.	tail	ʌr-pi:cʌm	xxx
161.	that	ɒ:llʌ, ka:tɔ	luwə
162.	there	ka:tɔ	luwə
163.	they	ɒlɒɪcɪk	xxx
164.	thick	gɒ:rɔdmʌ	huʈʰu
165.	thin	ʌb-kɪnʌb, ʌb-mʌɪŋʌ	telo

166.	to think	luːʌ	oʈʰa ən-iyelaŋ[13]
167.	this	uːcʌ	li
168.	thou / you	ŋɒllʌ / ŋɒlɒɪcɪk	ŋi
169.	there		luwə
170.	to throw	daːpɪ	apine
171.	to tie	ɔːkɔ-baːt	aɸle
172.	tongue	aːka-eːtel	aɖal
173.	tooth (front)	aːka-tuːg-lʌr-nʌɪcʌmʌ	ahoɖ
174.	tree	aːka-taːŋ	taŋ
175.	to turn	ɪg-geːʌli	xxx
176.	two	iːkpɔːr	naya
177.	to vomit	aːka-tuːdyʌ, ʌd-weː	əbulə:
178.	to walk	nau	cawaya
179.	warm (weather)	ɒt-uːyʌ	hulu
180.	to wash	caːt	anɖə
181.	water	iːnʌ	iŋ
182.	we	mɒlɒɪcɪk	mi
183.	wet	ɔːtɔ-iːnʌre, ɔːtɔ-puːlure	aŋgtʰə
184.	what	mɪcɪmʌ	onəhə
185.	when	tʌɪn	kiʈaye
186.	where	tan	kahay
187.	white	ɔlɒwɪʌ	haləŋda
188.	who	miːjʌ	onne
189.	wide	pan	xxx
190.	wife	iːk-yaːte	əŋaːp
191.	wind (breeze)	uːlŋʌ	biːyiŋ
192.	wing	ɪg-aːcʌ-taː	ukɨ
193.	wipe	raːr, rar	xxx
194.	with (accompanying)	ɪk	nyacʰe
195.	woman	aːpʌɪl	əŋaːp
196.	woods	puːtu	nam
197.	worm	wiːlɪdɪm	xxx
198.	ye	xxx	xxx
199.	year	taːlɪk	xxx
200.	yellow	teːrʌwʌ	tʰorgidu

[13] The multimorphemic word in Jarawa translates roughly as “I have forgotten, let me think/remember.”

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