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# RECENT DEVELOPMENTS IN LINGUISTIC STUDIES ON THE AUSTRALIAN NEW GUINEA MAINLAND<sup>1</sup>

S. A. WURM

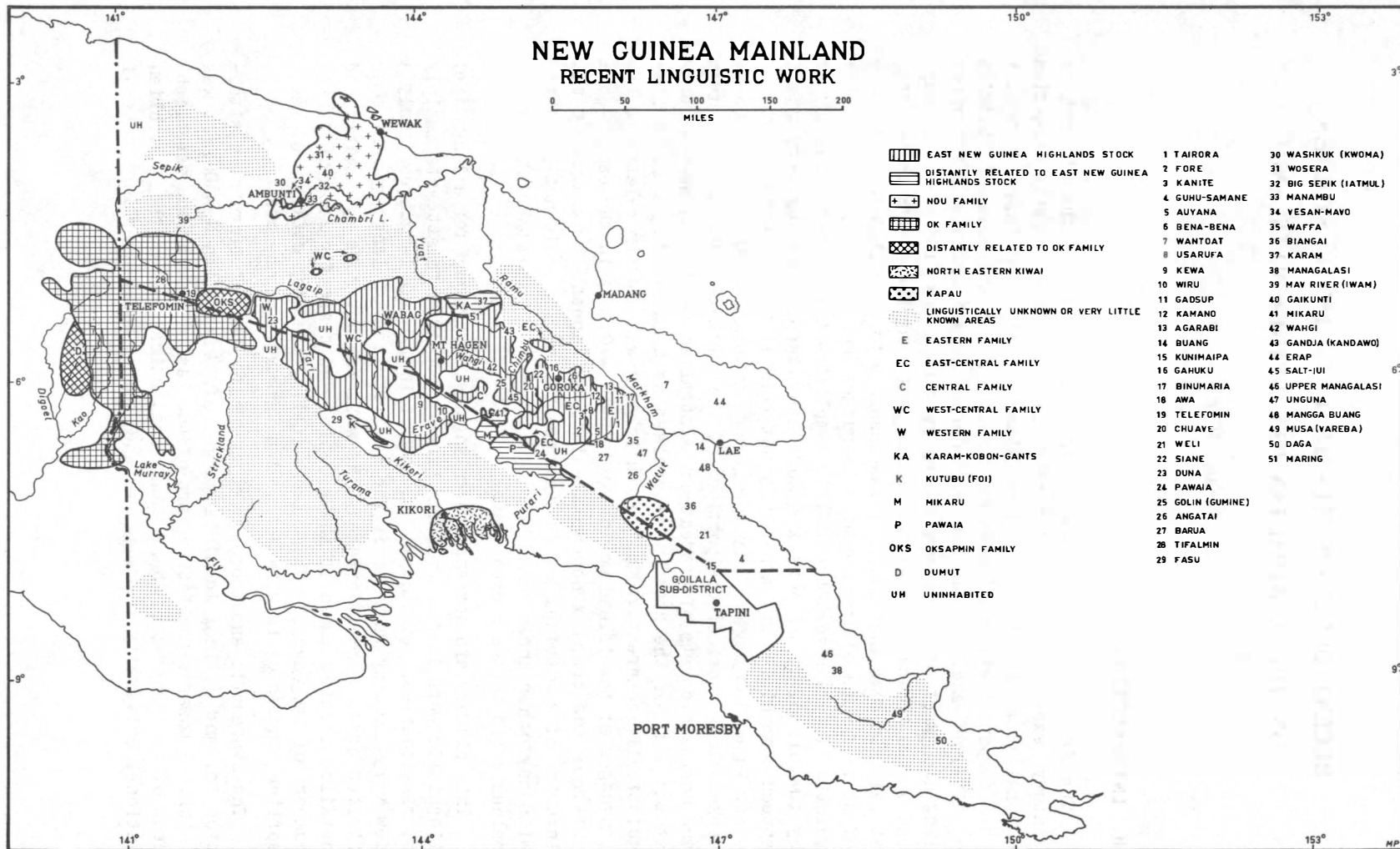
## 0. INTRODUCTION

The first experiences which, towards the end of the nineteenth century, explorers and missionaries had with the linguistic situation of what today is Australian New Guinea, created the impression that this comparatively small area was occupied by an enormous multiplicity of diverse, and, in many cases, unbelievably intricate and complex languages most of which were spoken by only a few hundred, or perhaps one or two thousand, speakers. Subsequent linguistic work showed that at least in some instances, it was possible to establish the existence of small groups of interrelated languages and thus simplify the linguistic picture somewhat, but this simplification was more than offset by the discovery of more and more languages spoken by very small speech communities and apparently not related to each other or to any other known language. Only the large number of Melanesian languages spoken along considerable portions of the south-eastern, north-eastern and northern coasts of present-day Australian New Guinea were already at the turn of the century recognised as constituting a large linguistically coherent group,<sup>2</sup> which in turn was closely related to the languages of the island world adjoining New Guinea in the east.<sup>3</sup> The numerous and complex non-Melanesian, or Papuan, languages of the interior of New Guinea and of some coastal areas, could not be linked with any other known outside languages - a statement which has remained valid to the present day.

This picture did not encourage language study, and for a long time, linguistic work in the area was largely confined to attempts, mainly by missionaries, towards the mastery of individual languages. Only a few very sketchy surveys of the distribution of languages in some limited areas were undertaken,<sup>4</sup> as well as four more systematic and detailed studies aimed at the grouping and classification of varied numbers of languages.<sup>5</sup> Characteristically, the most detailed of these earlier studies deals with Melanesian Languages of the coast.

The systematic and thorough study of the general linguistic situation in, and of individual languages of, Australian New Guinea was initiated towards the latter part of the last decade by the establishment of two centres of New Guinea linguistics, one at the Australian National University in Canberra, and one at the Summer Institute of

# NEW GUINEA MAINLAND RECENT LINGUISTIC WORK



- |     |  |                   |                       |
|-----|--|-------------------|-----------------------|
|     | EAST NEW GUINEA HIGHLANDS STOCK                      | 1 TAIRORA         | 30 WASHKUK (KWOMA)    |
|     | DISTANTLY RELATED TO EAST NEW GUINEA HIGHLANDS STOCK | 2 FORE            | 31 WOSERA             |
|     | NOU FAMILY   | 3 KANITE          | 32 BIG SEPIK (IATMUL) |
|     | OK FAMILY  | 4 CUHU-SAMANE     | 33 MANAMBU            |
|     | DISTANTLY RELATED TO OK FAMILY                       | 5 AUYANA          | 34 VESAN-MAYO         |
|     | NORTH EASTERN KIWAI                                  | 6 BENA-BENA       | 35 WAFFA              |
|     | KAPAU  | 7 WANTOAT         | 36 BIANGAI            |
|     | LINGUISTICALLY UNKNOWN OR VERY LITTLE KNOWN AREAS    | 8 USARUFA         | 37 KARAM              |
| E   | EASTERN FAMILY                                       | 9 KEWA            | 38 MANAGALASI         |
| EC  | EAST-CENTRAL FAMILY                                  | 10 WIRU           | 39 MAY RIVER (IWAM)   |
| C   | CENTRAL FAMILY                                       | 11 GADSUP         | 40 GAIKUNTI           |
| WC  | WEST-CENTRAL FAMILY                                  | 12 KAMANO         | 41 MIKARU             |
| W   | WESTERN FAMILY                                       | 13 AGARABI        | 42 WAHGI              |
| KA  | KARAM-KOBON-GANTS                                    | 14 BUANG          | 43 GANDJA (KANDAWO)   |
| K   | KUTUBU (FOI)   | 15 KUNHAIPA       | 44 ERAP               |
| M   | MIKARU   | 16 GAHUKU         | 45 SALT-IUI           |
| P   | PAWAIA   | 17 BINUHARIA      | 46 UPPER MANAGALASI   |
| OKS | OKSAPMIN FAMILY                                      | 18 AWA            | 47 UNGUNA             |
| D   | DUMUT  | 19 TELEFMIN       | 48 MANGGA BUANG       |
| UH  | UNINHABITED  | 20 CHUAYE         | 49 MUSA (YAREBA)      |
|     |  | 21 WELI           | 50 DAGA               |
|     |  | 22 SIANE          | 51 MARING             |
|     |  | 23 DUNA           |                       |
|     |  | 24 PAWAIA         |                       |
|     |  | 25 GOLIN (GUMINE) |                       |
|     |  | 26 ANGATAI        |                       |
|     |  | 27 BARUA          |                       |
|     |  | 28 TIFALMIN       |                       |
|     |  | 29 FASU           |                       |

Linguistics, now at Ukarumpa in the Eastern Highlands District of New Guinea. The results of the work carried out under the auspices of these two centres has demonstrated that the linguistic picture of Australian New Guinea is, in essence, considerably simpler and clearer than it has been believed to be the case, and that very large groups of more or less closely interrelated non-Melanesian (or Papuan) languages exist in the area. Already before work had started at these centres, it had become known that there were some languages in Australian New Guinea which were spoken by many thousand speakers each, but the results arrived at by studies under the auspices of these centres made it clear that such languages were by no means uncommon there.

The purpose of this paper is to highlight some of the results achieved under the auspices of the two abovementioned centres of linguistic study in recent years on the Australian New Guinea Mainland, and it will also mention recent linguistic work undertaken in Australian New Guinea by people outside the two centres.

## **1. WORK BY LINGUISTS OF THE AUSTRALIAN NATIONAL UNIVERSITY**

### **1.1. WORK BY S.A. WURM IN LANGUAGES OF THE HIGHLANDS DISTRICTS**

After preliminary preparatory work, the first major piece of research in New Guinea linguistics at the Australian National University was undertaken by the author who, in 1958-9, carried out an extensive survey of the languages spoken in the three Highlands Districts. Large quantities of materials on paper and tape were collected in most of the sixty languages encountered by him in the area, and the preliminary assessment of these materials showed that forty-seven of them were more or less closely interrelated, and five further languages distantly related to these forty-seven. Some of the early results of this work have been published,<sup>6</sup> and a detailed map of the distribution and grouping of the languages (forty-seven of which were recognized as constituting five interrelated language families) was issued by the Australian National University.<sup>7</sup>

Much additional work on these languages has since been done, on the grammatical, and typological and comparative, levels, and in some instances, the original groupings have been modified. Also, a few new languages have been discovered in the area. The latest picture of the linguistic situation in the three Highlands Districts is as follows: fifty of the languages found in the three Highlands Districts can be grouped into five language families, comprising nine, fourteen, fourteen, twelve languages, and one language, respectively. The five families are interrelated and can be combined into a larger group, or stock, which has been named the East New Guinea Highlands Stock. The composition of this Stock is as below (the figures indicate the number

of speakers, largely on the basis of the 1959-60 census, SF = sub-family or branch, a. = approximately, o. = over, e. = estimated):

EAST NEW GUINEA HIGHLANDS STOCK a. 735000

1) *Eastern Family* 30114

- |  |   |
|--|---|
| a) Gadsup SF 15227<br>Gadsup 6338, Agarabi 7958<br>Oyana 931 | c) Awa SF 1185<br>Awa 1185  |
| b) Auyana SF 5263<br>Auyana 4414, Usarufa 849                | d) Tairora SF 8439<br>Tairora 8181<br>Kambaira 135<br>Binumaria 123 |

2) *East-Central Family* o. 152000

- |   |   |
|---|---|
| a) Gende SF a. 8400<br>Gende a. 8000, Biyom a. 400                | d) Kamano SF 60651<br>Kamano 31342<br>Kanite 2584<br>Keigana 8443<br>Yate 3988<br>Yagararia 14294 |
| b) Siane SF 19800<br>Siane 15336, Yabiyufa 4464                   | e) Fore SF 28756<br>Fore 12021<br>Gimi 16735  |
| c) Gahuku SF 34752<br>Gahuku 11390, Asaro 11597<br>Benabena 11765 |   |

3) *Central Family* a. 286000

- |  |   |
|--|---|
| a) Hagen SF 90777<br>Hagen 59347, Aua 439<br>Gawigl 30991                                      | d) Chimbu SF 143905<br>Chimbu (Kuman) 60273,<br>Nagane a. 300 of the<br>Chimbu speakers, Dom<br>dialect 43376 (Dom proper<br>8857, Gumine 24713,<br>Nondiri 2338, Salt 7468),<br>Sinasina 15608, Chuave<br>5639, Elimbari 15328,<br>Nomane 3681 |
| b) Wahgi SF a. 33900<br>Wahgi a. 33900   |   |
| c) Jimi SF 17141<br>Yoadabe-Watoare (Maring) 4241<br>Narak a. 6150<br>Kandawo (Gandja) a. 6750 |   |

4) *West-Central Family* a. 253000

- |  |   |
|--|---|
| a) Enga SF a. 123500<br>Kyaka a. 9000, Enga a. 110000,<br>Ipili-Paiela e. 4500 | d) Mendi SF a. 63750<br>Mendi a. 33800,<br>Kewapi (Kewa) a. 18200,<br>Pole 6046,<br>Augu a. 3100,<br>Sau 2611 |
| b) Lemben SF a. 600-700<br>Lemben a. 600-700                                   | e) Wiru SF 11541<br>Wiru 11541  |
| c) Huli SF a. 54000<br>Huli a. 35900, Huliduna a. 18100                        |   |

5) *Western Family* a. 14000

- Duna a. 14000



The determination of the borderline between language and dialect is a very difficult matter in New Guinea linguistics, and if the languages of these five Families are looked at from a different linguistic point of view in this respect, it is possible to regard quite a few of them as dialects of one language, rather than as separate languages. This was discussed by the author and Laycock.<sup>8</sup> When considering modifications brought about by additional information and increased knowledge since the appearance of their publication on the subject, the following of the languages listed above could be grouped together as dialects of one language: Gadsup-Agarabi-Oyana, Auyana-Usarufa, Gahuku-Asaro, Kamano-Kanite-Keigana-Yate-Yagarua, Hagen-Aua-Gawigl, Narak-Kandawo, Chimbu-Nagane-Dom-Sinasina, Chuave-Elimbari, Kyaka-Enga, Huli-Huliduna, Mendi-Kewapi-Augu-Pole-Sau. This would reduce the number of languages within the Stock from fifty to twenty-nine.

The following additional languages encountered in fringe areas of the Highlands Districts are distantly related to those of the East New Guinea Highlands Stock:

Karam, one of three languages (Karam, Kobon, Gants) which constitute a family and are spoken by approximately 10,000 speakers. Of the three languages only Karam has been studied so far.

Kutubu (or Foi) with 2584 speakers.

Mikaru with approximately 4000 speakers.

Pawaia with under 2000 speakers. The relationship of this language to the Stock is doubtful.

Apart from these languages, eleven further languages are known to be located in south-eastern, northern, north-western and south-western fringe areas of the Highlands Districts. The author has not undertaken studies in them apart from establishing that they most probably are not related to the other languages mentioned so far. They will not be discussed here, and are not shown on the map accompanying this paper.

The judgements on the existence and extent of interrelationship between the languages of the five Families and of that between these languages and the distantly related ones mentioned above, were based on comparisons on the lexical level, and it was found that languages belonging to the same sub-family within a family mostly shared more than 60% basic vocabulary cognates, whereas languages of different sub-families within the same family tended to share between 40% and 55%. Languages belonging to different families within the Stock largely showed between 15% and 25% agreement in basic vocabulary. Of the distantly related languages mentioned, the Karam Family and Kutubu shared, on average, 12% basic vocabulary cognates with those of the Stock, Mikaru 8% and Pawaia 4%. Comparisons of some grammatical

features carried out at the same time showed a fair amount of parallelism between the degrees of lexical agreement, and the similarities displayed by these grammatical features.

More detailed typological comparisons involving the study of the presence or absence, and the specific nature, of selected features of language structure in the languages of the five Families, were subsequently undertaken by the author, and these comparisons extended to the distantly related languages, and to some other New Guinea languages.<sup>9</sup> The results of this work showed the existence of a reasonable level of agreement in the occurrence of lexical and typological similarities in the languages of the Stock,<sup>10</sup> and also demonstrated that there were a few other languages in New Guinea which showed typological similarities to those of the Stock, though lexically they differed from them.

A new method designed to allow an objective assessment of the degree of typological diversity on the phonological level<sup>11</sup> was then applied by the author to the languages of the five Families.<sup>12</sup> The results of this work agreed almost entirely with the findings of the other typological comparisons mentioned above.

The author is at present continuing his work in the languages of the Highlands Districts and plans to undertake comparative work, and the study of specific grammatical features of individual languages. A detailed description and discussion of the individual families is also in hand.

## 1.2. WORK BY D. C. LAYCOCK IN LANGUAGES OF THE SEPIK DISTRICT

D. C. Laycock of the Australian National University undertook extensive linguistic fieldwork in the Sepik District in 1959-60, and collected large amounts of materials on paper and tape, in particular in the languages of the Middle Sepik area. Preliminary results of his work were published.<sup>13</sup> Apart from gaining information on a considerable number of languages which had been poorly known or unknown, he established the existence of a large language family, which he called the Ndu Family, stretching along a large section of the Middle Sepik, and occupying much of the country between the latter and the coast. The composition of this family is as follows:

<i>Ndu Family</i>	57856
Abelam	29188
Boikin	17332
Iatmul	7887
Sawos	1804
Manambu	1448
Yelogu	63
Ngala	134

After assessing his materials in the languages of the Ndu Family, Laycock compiled a book on them in which he included a detailed description of Abelam and outline descriptions of the other languages of the Family except Sawos. He also gave detailed lexical comparisons whose results showed that the languages of the Family were rather closely interrelated, i. e. they shared mostly between 45% and 57% basic vocabulary cognates. Only Ngala was found to be more distantly related to the other languages of the Ndu Family: it shared only 31% to 35% basic vocabulary cognates with them. Typological comparisons of a number of features of the Ndu languages also formed part of the book, and a language map of the Sepik District was added.<sup>14</sup>

In addition to this work, Laycock wrote a paper on three Sepik languages which are characterised by noun-classification.<sup>15</sup> He is preparing more of his material for publication, and is planning to undertake further work in the Sepik District.

### 1.3. WORK BY A. HEALEY AND P.M. HEALEY IN LANGUAGES IN AND AROUND THE TELEFOMIN AREA

A. Healey and P.M. Healey of the Australian National University worked in the field in the Telefomin area in the far central west of Australian New Guinea in 1961-3. They concentrated in the first place on the language around Telefomin, Telefol, but also studied the linguistic situation in the entire area which may aptly be described as the hub of the island of New Guinea, and established the existence of a family of fifteen languages in it which they named the Ok Family. A small family of five languages, the Oksapmin Family, is distantly related to it, and so may be another language, Dumut, as well as the language of the Goliath pygmies, further west in Indonesian New Guinea (it is not shown on the map). It may be possible to combine the Ok and Oksapmin Families into a stock whose composition would be as follows (the population figures are estimates by A. Healey):

OK - OKSAPMIN STOCK a. 55000

- 1) *Ok Family* a. 51000
  - a) Mountain - Ok S F a. 33000.  
Telefol e. 4100, Tifal e. 3000, Faiwol e. 3000, Bimin e. 1000, Kawol e. 400, Iwoer e. 1500, Ngalum e. 15000, Mianmin e. 1500, Sibil e. 3000, and one as yet unnamed language e. 500.
  - b) Lowland - Ok S F a. 18000.  
Southern (Metomka) Kati e. 4000, Northern (Ninatti) Kati e. 8000, Yonggom e. 2000, Kowan e. 500, Ninggrum e. 3500.
- 2) *Oksapmin Family* a. 4000  
Tarangap, Gaugutianap, Tekin, Wengbit, Eriku.

A. Healey has completed work on linguistic aspects of Telefol kin-

ship terminology,<sup>16</sup> written a detailed description of the phonology of Telefol,<sup>17</sup> prepared papers on the distribution and classification of the languages in the hub area of New Guinea,<sup>18</sup> and applied historical-reconstructive techniques to his material in the languages of the Ok Family.<sup>19</sup> He is at present working on outline phonologies of other languages of the Ok and Oksapmin Families, and on grammatical descriptions. A large dictionary of the Telefol language is also in hand. P.M. Healey has been mainly concerned with grammatical, in particular syntactical, problems of the Telefol Language, and has prepared two papers on them.<sup>20</sup>

#### 1.4. WORK BY C. CRIPER IN THE CHIMBU LANGUAGE

C. Criper of the Australian National University has been working in the field in the Chimbu language area which is located in the north-eastern part of the territory occupied by the Central Family of the East New Guinea Highlands Stock. He spent a period in the field in 1962-3, and returned there late in 1963. Besides carrying out anthropological studies, he collected extensive materials in the Chimbu language with a view to producing a detailed description of the language, and established the nature of the Nagane language which he found to be spoken, in addition to Chimbu, by a portion of the adult male population, i.e. those aged thirty years or more, of two of the four clans of the Inaugl tribe living on the eastern bank of the Chimbu River in the upper third of the Upper Chimbu Valley.

#### 1.5. WORK BY J. HARRIS IN NORTHERN KIWAI DIALECTS

J. Harris of the Australian National University spent several months in 1963-4 in the Northern Kiwai language area on the border of the Western and Gulf Districts collecting materials on paper and tape in several dialects of Northern Kiwai. He is at present assessing his materials with a view to compiling a descriptive and comparative study of Northern Kiwai.

#### 1.6. RESEARCH INTO METHODS AND TECHNIQUES OF LINGUISTIC FIELDWORK

In addition to the work described, research has been carried out at the Australian National University into the methods and techniques of linguistic fieldwork in New Guinea. A. Healey wrote a paper on the subject of the handling of linguistic informants,<sup>21</sup> and S. Wurm prepared a book on the techniques of collecting materials in New Guinea languages.<sup>22</sup>

#### 1.7. WORK IN TRADE LANGUAGES OF AUSTRALIAN NEW GUINEA

Work has also been carried out at the Australian National University in the trade languages of Australian New Guinea, and S. Wurm and J. Harris prepared an introduction to Police Motu.<sup>23</sup> Similar work

is being done in Pidgin (or Neo-Melanesian).

## **2. WORK BY MEMBERS OF THE SUMMER INSTITUTE OF LINGUISTICS, AND WORK UNDER THE MICRO-EVOLUTION PROJECT, UNIVERSITY OF WASHINGTON**

### **2.1. GENERAL REMARKS, AND LANGUAGES UNDER STUDY**

After a period of preparation, the Summer Institute of Linguistics, New Guinea Branch, began its work in languages of Australian New Guinea in 1957. This organisation is concerned with the thorough study of individual languages and the production of detailed descriptions of them, as well as with the preparation of literacy materials, with a view to translating the Scriptures into the languages studied by its members. Teams, usually consisting of two linguists, are allocated to given language areas, and live for a prolonged period with the tribes, studying their languages.

The allocations made to date have been indicated on the map by the figures 1-51. The results achieved in the study and description of the languages are varied, and depend to a great extent on how long ago a given allocation was made. A detailed description of the work of the Summer Institute of Linguistics, and the results of its linguistic work, was given by A. Pence,<sup>24</sup> but the following may serve as a guide:

The chronological order of the allocations has been as follows (the numbers refer to the map) -

1957: 1-6, 1958: 7-10, 1959: 11-20, 1960: 21-26, 1961: 27-30, 1962: 31-43, 1963: 44-51. Additional allocations are under way.

### **2.2. STUDIES BY S. I. L. MEMBERS, AND BY K. MCKAUGHAN OF THE MICRO-EVOLUTION STUDIES PROJECT IN CO-OPERATION WITH THE S. I. L.**

A very considerable number of papers on various features of a good many of the languages listed on the map have been prepared, and several have been published under the auspices of the University of Sydney,<sup>25</sup> by the Linguistic Circle of Canberra,<sup>26</sup> and elsewhere.<sup>27</sup> Others ready for publication, notably papers on Awa (by R. Loving and K. McKaughan), Benabena (by R. A. Young), Gadsup (by Ch. Frantz and H. McKaughan), Kewapi (Kewa) (by K. Franklin), and Wantoat (by D. Davis), several of which were prepared with assistance from the Micro-Evolution Studies Project of the University of Washington which has been carried out since 1960 in the Eastern Highlands with J. B. Watson as chief investigator. This Project is amongst other objectives concerned with the thorough study and detailed description of Gadsup, Tairora, Auyana and Awa of the Eastern Family of the East New Guinea Highlands Stock in co-operation with members of the Summer Institute

of Linguistics. H. McKaughan has been in charge of the Linguistic side of the Project, and he has also independently prepared a paper on some of the results of his work.<sup>28</sup> Other papers by members of the Summer Institute of Linguistics which are in publishable form deal with Awa (two papers by R. and A. Loving), Usarufa (by D. Bee), Binumaria (by J. and J. Oatridge), Gahuku (by E. Deibler), Kamano (by A.M. Payne and D.E. Drew), Kanite (by G. Gibson and J. McCarthy), Fore (by R. Nicholson, and another paper by G.K. Scott), Chuave (by J. Swick), Wahgi (by D. Phillips), Kewa (by K. Franklin), Duna (by D. and N. Cochrane), Fasu (by E. Loeweke and J. May), Karam (by L. Scholtz), Wantoat (by D. Davis), Barua (by R. and J. Lloyd), Kunimaipa (by A. Pence), Wosera (by J. and L. Bass), Iatmul (by L. Straalsen), Yesan-Mayo (by V. Foreman and H. Marten), Iwam (by R. and J. Conrad), Tifal (by W. Steinkrauss), Guhu-Samane (by E. and M. Richert), Waffa (by J. Hotz and P. Hurd), Welli (by M. and H. Boxwell), Musa (by H. and N. Welmer), and Managalasi (by J. and J. Perlier).<sup>29</sup>

### 2.3. LINGUISTIC SURVEYS, AND LANGUAGE COURSES

In addition to the work mentioned so far, members of the Summer Institute of Linguistics carried out linguistic surveys of the Mt. Hagen Sub-District of the Western Highlands District<sup>30</sup> (linguistically this embraces the western and northern portions of the Central Family of the East New Guinea Highlands Stock), and of the Chimbu Sub-District of the Eastern Highlands District<sup>31</sup> (linguistically this comprises the eastern part of the Central Family, and small fringe areas of the central - or southern - part of that Family, of the East-Central Family and of Mikaru). Similar surveys were undertaken in the Maprik Sub-District of the Sepik District<sup>32</sup> (linguistically this takes in the northern inland section of the Ndu Family, and a number of other languages adjoining this section on the western side) and in the Gollala Sub-District of the Central District<sup>33</sup> (see map). A survey of the use of Motu and Police Motu was also carried out.<sup>34</sup> A language course in Chimbu has been prepared,<sup>35</sup> and similar courses compiled in Pidgin<sup>36</sup> and in the Azera Language in the Markham Valley to the west of Lae.<sup>37</sup>

### 2.4. LITERACY MATERIALS AND TRANSLATIONS

Literacy materials have been published by the Summer Institute of Linguistics at their print shop at Ukarumpa in Gadsup, Agarabi, Awa, Tairora, Kamano, Kanite, Gahuku, Golin, Kewa, Washkuk, Fasu and Guhu Samane, and translations of Scripture prepared in a number of languages.<sup>38</sup>

### 2.5. WORK BY W. AND L. OATES IN THE KAPAU LANGUAGE

A major piece of work has been carried out by W. and L. Oates in the quite widespread Kapau language of the Upper Watut which has at least 10,000 speakers.<sup>39</sup>



### 3. WORK BY OTHER LINGUISTS AND BY MISSIONARIES

Recent linguistic work undertaken on the Australian New Guinea Mainland by persons not working under the auspices of the Australian National University, The Summer Institute of Linguistics, or the Micro-Evolution Project of the University of Washington has been comparatively limited, except for that accomplished by A. Capell in revising his Linguistic Survey in which the Australian New Guinea Mainland has been included.<sup>40</sup> Most of the other work was done by missionaries, but a few university linguists and anthropologists were also engaged in work on the Australian New Guinea Mainland. B. Biggs of the University of Auckland, New Zealand, undertook studies in Karam<sup>41</sup> (marked K on the map), A. E. Cook of Yale University worked in Narak of the Central Family of the East New Guinea Highlands Stock (Narak is situated immediately to the south-east of Maring which is marked 51 on the map), E. P. Hamp worked in Wahgi<sup>42</sup> (Wahgi is marked 42 on the map), and C. A. Schmitz in Wantoat<sup>43</sup> (Wantoat is marked 7 on the map). Somewhat earlier R. F. Salisbury carried out work in Slane<sup>44</sup> (Slane is marked 22 on the map). Of the work done by missionaries in recent years resulting in manuscripts or the publication of descriptive linguistic materials, the following may be mentioned as examples: L. J. Luzbetak's work in Wahgi,<sup>45</sup> O. C. Hintze's in Enga<sup>46</sup> (Enga constitutes the major part of the northern portion of the West-Central Family of the East New Guinea Highlands Stock), P. Davidson's in Abelam of the Ndu Family as from 1958 (the Wosera dialect of Abelam is marked 31 on the map), J. E. and W. M. Rule's in Kyaka (Kyaka adjoins Enga in the east) and in Pole (Pole is located in the south-eastern part of the West-Central Family), A. H. Brown's in Toaripi (Toaripi is a coastal language located around the mouth of the Lakekamu, to the east of the Purari delta) and F. Mihalic' in Pidgin.<sup>47</sup> Amongst somewhat earlier work, the following may be referred to: P. A. McVinney's and L. J. Luzbetak's work in Sinasina<sup>48</sup> (Sinasina is in the eastern part of the Central Family), as well as S. A. M. Bus' work in Enga and W. M. Rule's in Mendi (Mendi is located in the central part of the West-Central Family).

### 4. WORK FOR THE FUTURE

Though the recent linguistic work reported in this paper is quite extensive, there are still large areas on the Australian New Guinea Mainland which are linguistically unknown, or almost unknown. As can be seen from the map, these areas are in particular, much of the country between the Upper Sepik and the coast; a broad region stretching between the Sepik in the north, and the Ok-Oksapmin Stock and the East New Guinea Highlands Stock in the south, and extending as far to the east as the Upper Ramu Valley; a small area in the Trans-Fly; most

of the country between the Strickland in the west, an area north of the Lower Fly and the coastal hinterland in the south, the lower Purari in the east and the East New Guinea Highlands Stock in the north; a region east of the Purari and stretching as far as the Lakekamu; as well as much of the interior of the narrow tail-end of New Guinea east of Port Moresby. In all these areas, initial pioneering linguistic survey work is needed for establishing the distribution and preliminary grouping of the languages located in them, and for providing basic information on the nature and characteristics of these languages.

However, it must be borne in mind that the areas left white on the map and which, in consequence, denote linguistically "known" areas (unless they are marked UH = uninhabited) are in most instances only very superficially known, with the information available on the languages spoken in them rarely exceeding short word lists and a few notes on grammar. Only a few individual languages are really well known. A large amount of depth study, i.e. additional detailed linguistic study encompassing all aspects of linguistic work, is still necessary in almost all parts of the Australian New Guinea Mainland in addition to the pioneering work required in the linguistically unknown areas, and there is ample work for hundreds of linguists there for many years to come. Unfortunately, only relatively very few linguists have so far been attracted to this linguists' paradise, by far fewer than for instance to the field of the American Indian Languages. The reasons for this are very probably the remoteness of the area, the physical difficulties encountered by the linguistic student in New Guinea which arise from factors like the forbidding nature of the country and the climate, and the comparatively very recent introduction of linguistics as a subject in Australian Universities, and the as yet underdeveloped state of the discipline in most of them.

The question may be asked why the study of the languages of New Guinea is being undertaken, and is regarded as most important by linguists. There are two major reasons for this: the study of these languages, and the clarification of the intricate linguistic picture of New Guinea, is necessary for the practical purpose of providing the means through which the full understanding of its native peoples can be achieved, and also for a very important scientific purpose: In spite of the simplification of the New Guinea linguistic picture in recent years, the fact remains that there are still very numerous highly complex and diverse languages in New Guinea to provide linguists with a wonderful opportunity for the study of the still not fully understood phenomenon of language as such. The study of these languages may well have a considerable influence upon general linguistic theory, and help us in our efforts towards achieving the final full understanding of the mystery of language in its multiple and varied manifestations.



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# MOTU AND POLICE MOTU, A STUDY IN TYPOLOGICAL CONTRASTS

S. A. WURM

## 0. INTRODUCTION

**0.0.** The Motu language of Papua exists in basically two, perhaps even three, different forms. One of them constitutes the native language of the Motu people of the Port Moresby area, and may be termed true Motu, Motu proper, or Hanuabada Motu, after the big village of Hanuabada close to Port Moresby. The other one or two forms are commonly referred to as Police Motu, and are pidginized languages derived from true Motu. While it is generally assumed that there is such a thing as standard Police Motu, it exists in fact in two variants, apart from minor local variations met with in it in different parts of the Territory of Papua. One of these two variants is the form of Police Motu used by speakers whose native language is a Melanesian language, especially one very closely related to true Motu. This Police Motu is characterized by a number of grammatical features which are not encountered in the other variant, and which reflect Melanesian, and specifically true Motu, characteristics. Also the general vocabulary of this Melanesian-type Police Motu shows stronger leanings towards Motu proper than is the case with the other variant of Police Motu.

**0.1.** The other variant is the Police Motu generally heard from speakers whose native language is a non-Melanesian, i.e. Papuan, language. This variant is much more widespread than the other one, and may be regarded as the real standard form of Police Motu. In this paper, the other variant will be disregarded, and the non-Melanesian-type (or Papuan-type) Police Motu contrasted, as Police Motu proper or simply Police Motu (PM) with true Motu or simply Motu (M).

## 1. MOTU AND POLICE MOTU - CLOSELY RELATED DIALECTS?

**1.0.** Motu and Police Motu share well over 90% of basic vocabulary cognates, and should therefore be regarded as very similar dialects of the same language, according to the principles of lexicostatistics which lay down the figure of 81% shared basic vocabulary cognates as the borderline between dialect and language (Swadesh 1955). This figure has been challenged by the author and Laycock as being too high

for New Guinea languages (Wurm and Laycock 1961) which would make Motu and Police Motu even more closely related dialects of one language.

1.1. The interesting fact, however, is that in actual practice, Motu and Police Motu are not readily mutually intelligible in full, and not infrequently, they are mutually unintelligible on the clause and sentence levels, though individual words in the utterances may be recognized. This is very much at variance with their status as two very similar dialects assigned to them on the basis of the lexico-statistical evidence.

## 2. FACTORS RESPONSIBLE FOR MUTUAL UNINTELLIGIBILITY OF MOTU AND POLICE MOTU

2.0.0. This immediately raises the question as to what factor or factors may be responsible for this unexpected phenomenon. Differences in the phonologies of Motu and Police Motu may be looked at first as a possible cause: there are a number of minor differences, but only three which may seriously affect understanding in isolated cases:

2.0.1. In Police Motu, the /g/ and /g/ of Motu are both realized as /g/, e.g. Motu **guria** 'to bury' and **guria** 'to pray to' are both **guria** in Police Motu.

2.0.2. Motu /l/ and /r/ are both commonly realized in Police Motu as a flap /ř/, e.g. Motu **lau** 'I' and **rau** 'leaf' are both **řau** in Police Motu.

2.0.3. In Motu, the position of the stress is indicative of the singular or plural with a few words, e.g. **hahíne** 'woman', **háhine** 'women', **kekéni** 'girl', **kékeni** 'girls'. In Police Motu, there is no change of the position of the stress to indicate number, and these two words appear as **háhine** (mostly **háine**) 'woman, women' and **kekéni** 'girl, girls'.

2.0.4. These phonological differences, though certainly responsible for misunderstandings and lack of understanding in a few instances, are undoubtedly not the reason for the serious impairment of mutual intelligibility between Motu and Police Motu mentioned above.

2.1.0. The reason for this must obviously be sought in the field of language structure. The morphosyntactic level comes to mind: there are certainly quite far-reaching differences between Motu and Police Motu especially in morphology, with the latter lacking most of the elaborate morphological complexities of the former. This in itself does not appear to be quite enough reason for the high degree of im-



pairment of mutual intelligibility as is observable between Motu and Police Motu. Motu stripped of most of its morphology would still be reasonably intelligible to a speaker of true Motu, though most of the finer points of the message intended to be conveyed would be completely lost. Conversely, a speaker of morphologically "stripped" Motu, if this existed as a communalect, would probably be able to understand much of the basic essence of a message expressed in true Motu, though the finer points would be lost on him. In actual fact, a speaker of true Motu who hears Police Motu for the first time, receives the impression of a sequence of words which are mostly familiar to him individually, but which many times do not convey a coherent message to him, or a message which does not make sense. Conversely, a speaker of Police Motu listening to true Motu will hear a sequence of words, many of which are meaningful to him individually, but which is broken by a large number of unfamiliar elements, and is lacking in function words which are necessary to make an utterance convey a coherent message to him. This situation is not very dissimilar to that concerning the mutual intelligibility between English and Melanesian Pidgin (or Neo-Melanesian), except that the phonological and basic vocabulary agreements between Motu and Police Motu exceed those between English and Pidgin by far.

**2.1.1.** It appears that the major factor affecting the mutual intelligibility between Motu and Police Motu is to be sought in the differing functions of individual elements in the clauses and sentences in the two languages, and in the typologically different composition of the utterances, and consequently the different typology, of the two languages in several respects.

### **3. DIFFERENCES IN THE STRUCTURE OF MOTU AND POLICE MOTU**

**3.0.** To illustrate this point, a few of the major differences in the structure of Motu and Police Motu will be reviewed below and the probable influence of these differences upon the mutual intelligibility between them discussed:<sup>1</sup>

#### **3.1. REFERENCE TO THE CATEGORY OF PERSON**

**3.1.0.** The most striking difference between Motu and Police Motu is in the manner in which reference to the category of person is expressed, and in which tense, mood, aspect and voice is denoted with verbs. In Motu, reference to person, be it that of the subject or object, or the possessor, is predominantly by affixes and particles, as is that to tense, mood, aspect and voice of the verb, and the two types of particles coalesce in many cases. In contrast to this, reference to these categories in Police Motu is almost wholly by periphrastic forms which gives a very different picture, as will be shown in what follows.

3.1.1. The person of the object is marked in Motu by the following personal suffixes:

	<i>sg.</i>	<i>pl.</i>
1 <i>incl.</i> }		<b>-da</b>
1 <i>excl.</i> }	<b>-gu</b>	<b>-mai</b>
2	<b>-mu</b>	<b>-mui</b>
3	<b>-(i)a</b>	<b>-dia</b>

In Police Motu, however, transitive verbs are, as a rule, provided with the invariable petrified suffix **-(i)a**, and the person of the object is indicated by the personal pronouns. These very frequently precede the subject pronoun which is not so commonly observed in Motu in those instances in which personal pronouns are used in the latter at all. The Police Motu personal pronouns are:

	<i>sg.</i>	<i>pl.</i>
1 <i>incl.</i> }		<b>ita</b>
1 <i>excl.</i> }	<b>lau</b>	<b>ai</b>
2	<b>oi</b>	<b>umui</b>
3	<b>ia</b>	<b>idia (or: ia)</b>

3.1.2. The person of the subject is denoted in Motu by particles immediately preceding the verb base:<sup>2</sup>

	<i>sg.</i>	<i>pl.</i>
1 <i>incl.</i> }		<b>ta</b>
1 <i>excl.</i> }	<b>na</b>	<b>a</b>
2	<b>o</b>	<b>o</b>
3	<b>e</b>	<b>e</b>

These particles, when used alone, indicate the simple present and past affirmative. In all the other numerous tenses, moods and aspects of Motu, they are either combined with other particles to form complex particles, which immediately precede the verb base, or appear in conjunction with suffixes added to the verb base to form discontinuous morphemes. In Police Motu, the person of the subject is shown by the personal pronouns functioning as particles and occupying the same slot as the corresponding particles in Motu, i. e. immediately preceding the verb. Tenses, moods and aspects are denoted by free morphemes some of which can almost be regarded as particles, but which do not occupy the same slots as the corresponding particles in Motu.

3.1.3. A few simple examples may be given first to illustrate the differential expression of the category of person with verbs in Motu and Police Motu:

M: e rakatanigu }  
 PM: lau ia rakatania } he left me

M: ia e itamu }  
 PM: oi ia (se) itaia } he saw you (sg.)

A speaker of Police Motu<sup>3</sup> hearing the first of these two Motu sentences, will probably recognize the verb **rakatani-** as meaning 'to leave' even though it is provided with a suffix unfamiliar to him in the function in which it appears in this example. He will, however, not understand the message. In the second sentence, he will recognize **ia** as meaning 'he, she, it' or 'they', but probably will not be able to identify the short verb **ita-** known to him only as **itaia**, and will certainly not grasp the message. A Motu speaker<sup>3</sup> will misunderstand the first of the two Police Motu sentences as 'I left him', and the second as 'you saw him', but will be bewildered by the **se** which he will probably recognize as corresponding to the Motu subject marker **ese**, but which in his feeling accompanies the wrong pronoun. The petrified ending **ia** of **ita-ia** which, on the basis of the structure of his own language, he takes as signalling a third person singular object makes him regard **ia** as the object pronoun, and **oi** as the subject pronoun, though in actual fact the reverse is the case.

### 3.2. TENSES, MOODS, ASPECTS AND VOICES OF THE VERB

3.2.0. Of the quite numerous Motu tenses, moods, aspects and voices, a few will suffice to support the argument in this paper. The following Motu forms are complex particles preceding the verb stem:

#### 3.2.1. Motu, Simple Present and Past Negative:

	<i>sg.</i>	<i>pl.</i>
1 <i>incl.</i> }	<b>asina</b>	<b>asita</b>
1 <i>excl.</i> }		<b>asia</b>
2	<b>to (or asio)</b>	<b>asio</b>
3	<b>se (or asine)</b>	<b>asie</b>

In Police Motu, the simple present and past negative is indicated by **lasi** following the verb.

3.2.2. In Motu, a perfect past is formed by placing the particle **vada** before the particles denoting the person of the subject. In Police Motu, the particle **vadaeni** has a similar function, but it is placed *after* the verb, and is much more frequently used than **vada** in Motu. In many instances, **vadaeni** simply denotes the past.

3.2.3. In Motu, the addition of the suffix **-mu** to the simple present and past forms denotes a continuous present, and that of the suffix

-**va** a continuous past. In Police Motu, **noho** 'to exist, be present' placed after the verb stem fulfils the same function.

### 3.2.4. Motu, future:

	<i>sg.</i>	<i>pl.</i>
1 <i>incl.</i> }	<b>baina</b>	<b>baita</b>
1 <i>excl.</i> }		<b>baia</b>
2	<b>ba</b>	<b>ba</b>
3	<b>baine</b>	<b>bae</b>

In Police Motu, the future is denoted by **dohore** which precedes the subject pronoun, or stands at the beginning of the sentence.

3.2.5. In Motu, the imperative is expressed by the future particle of the second person, preceding the verb base, whereas in Police Motu it is indicated by the second person pronoun + verb.

3.2.6. The simple future forms, with **vada** placed before the future particles, indicate intention in Motu. In Police Motu, intention is expressed by the verb with **gwauraia** 'to talk about' placed after it.

3.2.7. The future negative in Motu is denoted by the following particles preceding the verb base:

	<i>sg.</i>	<i>pl.</i>
1 <i>incl.</i> }	<b>basina</b>	<b>basita</b>
1 <i>excl.</i> }		<b>basia</b>
2	<b>basio</b>	<b>basio</b>
3	<b>basina</b>	<b>basie</b>

In Police Motu, the future negative is expressed by **dohore** before the subject pronoun and **lasi** after the verb.

3.2.8. In Motu, the conditional is indicated by the following particles preceding the verb base:

	<i>sg.</i>	<i>pl.</i>
1 <i>incl.</i> }	<b>bama</b>	<b>baitama</b>
1 <i>excl.</i> }		<b>baiama</b>
2	<b>boma</b>	<b>boma</b>
3	<b>bema</b>	<b>bema</b>
<i>negative -</i>		
1 <i>incl.</i> }	<b>basinama</b>	<b>basitama</b>
1 <i>excl.</i> }		<b>basياما</b>
2	<b>basioma</b>	<b>basioma</b>
3	<b>basinema</b>	<b>basiema</b>

These particles precede the verb base both in the dependent and the main clauses.

In Police Motu, the conditional is expressed by **bema** placed before the subject pronoun, or at the beginning of the sentence, and in the negative **lasi** follows the verb.

### 3.3. ILLUSTRATIVE EXAMPLES TO 3.2.

A number of examples will illustrate the differences between Motu and Police Motu described so far:

M:	<b>asina itamu</b>	}	I did not see you(sg.)
PM:	<b>oi lau itaia lasi</b>		

This Motu sentence would probably be totally unintelligible to a Police Motu speaker, and the Police Motu sentence would be understood by a Motu speaker as 'you(sg.) I see-him no' which is not likely to make much sense to him.

M:	<b>mero na vada e moru</b>	}	the boy has fallen down (from height, e.g. from a tree)
PM:	<b>mero ia moru vadaeni</b>		

In this sentence, a Police Motu speaker may guess the correct meaning of the Motu sentence, though it will sound very wrong to him. The **na** after **mero** will make him regard the latter as the head of a phrase, but he will miss the attribute, and **vada e** which he will identify as corresponding to **vadaeni** in Police Motu, seems to be in the wrong place from his point of view. Similarly, the Motu speaker will understand the Police Motu sentence, probably even hearing **ia** as **e**, but will frown on **vada** as being in the wrong place, and be puzzled by the **-eni** after **vada**.

- |     |     |                               |   |                              |
|-----|-----|-------------------------------|---|------------------------------|
| (1) | M:  | <b>daika e herevamu</b>       | } | who is talking?              |
|     | PM: | <b>daika ia hereva noho</b>   |   |                              |
| (2) | M:  | <b>daika e karaiamu</b>       | } | who is doing it?             |
|     | PM: | <b>daika ia karaia noho</b>   |   |                              |
| (3) | M:  | <b>daika e itamaimu</b>       | } | who is looking at us(excl.)? |
|     | PM: | <b>ai daika ia itaia noho</b> |   |                              |

A Police Motu speaker will most probably understand the first two Motu sentences, though not quite correctly. He will have to ignore the suffix **-mu** which to him has no meaning, and will not realize that the verbs are denoting actions continuing in the present. He will probably believe the second sentence to refer to an action in the past. He will not be likely to understand more than the word for 'who' in the third Motu sentence - perhaps he may recognize **ita-** as meaning 'to see' (PM: **itaia**). Perhaps he may receive the impression of 'who - ?

(he?) - we(*incl.*) (or: see?) - come - ?' from the third Motu sentence, though the position of the stress in it is *itámainu*, whereas Police Motu 'we(*incl.*) come' would be stressed *íta mái*. A Motu speaker may guess at the correct meaning of the first two Police Motu sentences if he can overlook the absence of the subject particle, and identify *noho* 'to dwell' as indicating a continuous action. He has no hope of correctly understanding the third sentence which to him sounds like a jumbled 'we(*excl.*) who he (subject-marker-missing) see-him dwell'.

M: **daika e herevava** }  
 PM: **daika ia hereva noho** } who was talking?

The reaction of a Police Motu speaker to the Motu sentence will be much the same as to that of the first sentence in the previous example: he will grasp the basic sense of the utterance, but miss the finer shades of its meaning. The Police Motu translation given above is not quite exact: there is no way to express past continuous action in Police Motu unless an adverb of time referring to the past is added, e.g. **varani daika ia hereva noho** which means 'who was talking yesterday?', and will probably be correctly understood by a Motu speaker with a little imagination.

M: **baia itamui** }  
 PM: **umui dohore ai itaia** } we two(*excl.*) will see you(*pl.*)

The Motu sentence will in all probability be entirely unintelligible to a Police Motu speaker, whereas the Police Motu sentence will sound to a Motu speaker as 'you(*pl.*) presently we(*excl.*) see him' which is not likely to mean to him what the sentence means in Police Motu.

M: **ba henigu** }  
 PM: **oi henia** } give me!

The Motu sentence will probably convey a vague notion to the Police Motu speaker that something concerning giving is being referred to, provided he recognizes *heni* as 'to give' (PM: *henia*). A Motu speaker will misunderstand the Police Motu sentence as being an incorrect utterance meaning 'you(*sg.*) give-him (or: give-it)' but will have to guess from the intonation that an imperative utterance is intended. The Police Motu speaker is in the same position in this respect: **oi henia** in Police Motu usage, can mean 'you give; you gave; you give him; you gave him; give him! give me! give us!' but the Police Motu speaker is much more used to interpreting context and situation for determining the exact shade of meaning of an utterance in his formally relatively uncomplicated language than the Motu speaker in whose complex language the exact shade of meaning is much more frequently denoted by a functional signal, like the particle *ba* indicating the imperative.

M: **vada baine helai** }  
 PM: **ia helai gwauraia** } he intends to sit down

The Police Motu speaker may perhaps guess wrongly that the Motu sentence is supposed to mean 'he has sat down' or 'he sat down', identifying **vada baine** with Police Motu **vadaeni** which indicates completed past action or simply the past (see 3.2.2.), and ignoring the fact that it precedes, rather than follows, the verb. A Motu speaker will recognize the Police Motu sentence as 'he (subject-marker-lacking) sits (subject?) talk about' - he will have to be rather ingenious to understand this correctly from the Police Motu point of view.

M: **basina henimu** }  
 PM: **oi dohore lau henia lasi** } I shall not give you(sg.)

In the Motu sentence, a Police Motu speaker may perhaps recognize **henimu** as having something to do with 'to give' which he knows as **henia**, but he will not understand the sentence. It seems obvious, at the same time, that a Motu speaker will not understand the Police Motu sentence correctly: to him, it appears as 'you(sg.) presently I give him no'.

M: **boma noigu bama henimu** } if you beg me I shall give  
 PM: **bema oi noia lau henia** } (it) to you (i.e. 'if you(sg.)  
 beg I give')

The Motu sentence may give an intelligent Police Motu speaker a vague impression that something concerning begging and giving is being talked about, if he can identify **noi-** as 'to beg' (PM: **noia**) and **heni-** as 'to give' (PM: **henia**). He may perhaps even recognize condition being expressed by **boma** and **bama** (PM: **bema**), but the exact meaning of the sentence will not be clear to him. A Motu speaker will receive the following impression from the Police Motu sentence: 'if-he you(sg.) (subject-marker-lacking) beg-him I (subject-marker-lacking) give-him' which he is not likely to interpret correctly from the Police Motu point of view. The lack of conditional particle in the main clause (see 3.2.8.) will add to his confusion.

M: **basioma henida basiana henimui**  
 if you(pl.) do not give us, we do not give you(pl.)  
 PM: **bema umui henia lasi umui ai henia lasi**  
 (i.e. if you(pl.) do not give, we(excl.) do not  
 give you(pl.))

Again, there is a possibility that a Police Motu speaker may recognize the word for 'give' in the Motu sentence, but he will not understand the sentence as such. A Motu speaker will hear the Police Motu sentence as 'if-he you(pl.) (subject-marker-lacking) give-him no you(pl.) we(incl.) (subject-marker-lacking) give him no'. Again, it is most

unlikely that he will understand this correctly from the Police Motu point of view, and the lack of a conditional particle in the main clause will make it even worse for him.

### 3.4. MOTU IRREGULAR VERBS.

The presence of irregular verb forms in Motu makes it even more difficult for Police Motu speakers to understand some Motu sentences correctly. A few examples will show this very clearly:

- |     |     |                           |   |                              |
|-----|-----|---------------------------|---|------------------------------|
| (1) | M:  | <b>nama</b>               | } | I came                       |
|     | PM: | <b>lau mai</b>            |   |                              |
| (2) | M:  | <b>tala</b>               | } | we( <i>incl.</i> ) went      |
|     | PM: | <b>ita lao</b>            |   |                              |
| (3) | M:  | <b>toma</b>               | } | you( <i>sg.</i> ) did not go |
|     | PM: | <b>oi lao lasi</b>        |   |                              |
| (4) | M:  | <b>basinema</b>           | } | he will not come             |
|     | PM: | <b>dohore ia mai lasi</b> |   |                              |

To a Police Motu speaker these Motu utterances are completely unintelligible. However, a Motu speaker will very probably understand the Police Motu utterances correctly, though they may sound very crude to him - like 'moi venir', 'nous aller', 'tu aller non' and 'bientôt lui venir non' may sound to a Frenchman for 'je viens', 'nous allons', 'tu ne vais pas' and 'il ne viendra pas'.

- |     |     |                        |   |               |
|-----|-----|------------------------|---|---------------|
| (1) | M:  | <b>asi dibagu</b>      | } | I do not know |
|     | PM: | <b>lau diba lasi</b>   |   |               |
| (2) | M:  | <b>e hitologumu</b>    | } | I am hungry   |
|     | PM: | <b>lau hitolo noho</b> |   |               |

In these two Motu utterances, a Police Motu speaker is likely to recognize **diba** 'to know' and **hitolo** 'hungry', but will not be able to understand the meaning of the utterances themselves. On the other hand, a Motu speaker will grasp the meaning of the Police Motu sentences correctly if he can overlook what, to him, appears as their crudeness.

### 3.5. FURTHER FEATURES OF THE MOTU VERB

**3.5.0.** Of the remaining features of Motu on the verb level whose functional meanings can at least approximately be rendered by Police Motu equivalents, only a few will be mentioned here:

**3.5.1.** In Motu, the reflexive is expressed by the reflexive pronoun **sibo-** + a personal suffix (see **3.1.1.** and **3.8.0.**) followed by a



subject particle and the verb stem with **he-** prefixed to it. In Police Motu, the reflexive can be expressed with the help of the restrictive adjunct **sibona** which means 'by oneself' when preceding the subject pronoun (it denotes 'only' when following the verb), though more usually, reflexivity is replaced by a noun denoting a part of the body and appearing in the object slot:

- (1) M: **sibogu na heiva** I cut myself  
 PM: **sibona lau ivaia (vadaeni)**; more commonly e.g.  
**lau egu kopina lau ivaia (vadaeni)** (i.e.  
 'I cut my skin')
- (2) M: **sibogu na heitamu** I am looking at myself  
 PM: **sibona lau itaia noho**; more commonly **lau egu**  
**kopina lau itaia noho** (i.e. 'I am looking  
 at my body')

The two Motu sentences are most probably completely unintelligible to a Police Motu speaker. A Motu speaker may understand the first of the two Police Motu equivalents to sentence (1) as 'I cut only him', because **sibona** means 'only he' or 'himself' in Motu, and **ivaia** means 'cut-him'. Similarly, he may believe that the first Police Motu equivalent to sentence (2) means 'I saw only him' if he has enough imagination to interpret **noho** 'to dwell' as indicating continuous action, and is not puzzled too much by the absence of subject particles in both sentences. He will be much more likely to understand the second Police Motu equivalents to both sentences correctly, though the, to him, unexpected manner of expressing possession (see 3.8.0.) may startle him.

3.5.2. The concepts rendered in English by temporal clauses are expressed in Motu in varying ways according to the time of the action in relation to the present. For instance, if the time is the past, and no stress is laid on the continuous nature of the action, the temporal concept is expressed by the verb-stem + a personal suffix in the form referred to in 3.8.0., followed by **ai** 'in', and this is in turn followed by the main clause. If the time is a definite point of time in the future, the future form of the verb + **neganai** 'at the time' + the deictic particle **na** is used, followed by the main clause. In Police Motu, the verb (without temporal particles) + **negana(i)** and followed by the main clause is used in all instances.

- (1) M: **mahutagu ai natugu e mase** } while I slept  
 PM: **lau huta neganai lau egu natuna** } my child died  
**a mase**

- |  |   |  |
|--|---|--|
| (2) M: <b>lai baine namo neganai<br/>na bae heau</b> | } | the moment the wind is<br>good they will set |
| PM: <b>lai dohore ia namo neganai<br/>idia heau</b>  | } | sail ( <i>lit.</i> run)                      |

Hearing the first Motu sentence, a Police Motu speaker will be very likely to understand that a child has died, and that it has something to do with sleeping. He is familiar with **ai** meaning 'in' because it occurs in Police Motu with a few common words like **uda** 'bush': **udai** 'in the bush', **hanua** 'village': **hanuai** 'in the village', but it remains questionable if, in this Motu sentence, he will identify **ai** as 'in', or rather think of it as being the more frequently occurring **ai** 'we(*excl.*)'. At the same time **natugu** may strike him as a term of address rather than a term of reference (see 3.8.0.). All in all, he will get some idea of the correct meaning of the Motu sentence but fail to understand it in full. In the second Motu sentence, he will understand 'when the wind is good' and 'run, set sail' which will enable him to correctly interpret the meaning of the sentence even though he misses the meaning of three words. A Motu speaker will in all likelihood understand both Police Motu sentences correctly even though they may strike him as very crude and wrong Motu.

### 3.6. MOTU VERBAL FORMS WITH NO POLICE MOTU EQUIVALENTS

In addition to the Motu verbal forms which have at least approximate Police Motu equivalents, there are a considerable number of Motu verb forms with functional meanings which cannot be adequately expressed in Police Motu, unless long explanations or circumlocutions are resorted to. Such forms are, for instance, those denoting the near future and immediate future as distinct from the simple future. It goes without saying that a Police Motu speaker is unable to grasp the exact meanings of such forms, even though he may understand some, or most, of the remaining parts of the Motu sentence in which they occur.

### 3.7. CASES OF UNILATERAL AND BILATERAL INTELLIGIBILITY BETWEEN MOTU AND POLICE MOTU ON THE VERB LEVEL

To conclude this discussion, a few examples will be given to further illustrate the fact that (a) there are Motu sentences containing features on the verb level whose Police Motu equivalents are quite intelligible to a Motu speaker, even though a Police Motu speaker can understand the Motu sentences only in part, or not at all, and (b) that there are such sentences in the case of which both a Motu and a Police Motu speaker will undoubtedly understand the equivalent in the opposite form of Motu:

- |                               |   |                  |
|-------------------------------|---|------------------|
| (a) M: <b>tau na vada ela</b> | } | the man has gone |
| PM: <b>tau ia lao vadaeni</b> | } |                  |

In the Motu sentence, **ela** will be unintelligible to a Police Motu speaker, and he will not understand **na**. This will render the whole utterance more or less meaningless to him. Conversely, a Motu speaker will correctly understand the Police Motu equivalent, though he will find it to be very crude and wrong Motu.

- (b) (1) M: **sisia ese boroma e koria** }  
 PM: **boroma sisia se ia koria** } the dog bit the pig
- (2) M: **e moru gabunai e rakatania** } he left it where  
 PM: **ia moru gabunai ia rakatania** } it fell down  
 (from height)
- (3) M: **oi dibamu ia be daika** }  
 PM: **oi diba ia (be) daika** } do you know who he is?

With these three sentences, the Motu and Police Motu equivalents are so similar that speakers of the two communalects will have no difficulty in correctly understanding the utterances in the opposite communalect.

### 3.8. INDICATION OF POSSESSION

**3.8.0.** Another important field of difference between Motu and Police Motu is in the manner in which possession is indicated. In Motu, it hinges on the personal suffixes listed in **3.1.1.** - with the only difference that the third person *sg.* suffix is **-na**, not **-(i)a**. With names of parts of the body and relationship terms, these suffixes are added directly to the Motu words (e.g. **matagu** 'my eye', **tamada** 'our(*incl.*) father'), whereas with names of foodstuffs, they are added to **a-** which precedes the Motu word (e.g. **ana aniani** 'his food'), and with the names of other objects, they are suffixed to **e-** which also precedes the Motu word (e.g. **emai ruma** 'our(*excl.*) house'). In Police Motu, possession is expressed by the following preposed compounds:

	<i>sg.</i>	<i>pl.</i>
1 <i>incl.</i> }	lau egu	ita ena
1 <i>excl.</i> }		ai emu
2	oi emu	umui emu
3	ia ena	idia ena

At the same time, most relationship terms and names of parts of the body are provided with the invariable petrified suffix **-na**, irrespective of the person of the possessor. With a few common terms of relationship, this suffix **-na** is replaced by **-gu** when these terms are used in address. This is the Motu suffix **-gu** 'my', but it may be suggested that Police Motu speakers tend to regard it rather as a suffix marking a form of address than denoting 'my'.

**3.8.1.** These differences between the two forms of Motu affect mutual intelligibility as follows:

A Police Motu speaker will have difficulty in identifying the person of the possessor in those cases in which the suffixes are directly attached to Motu nouns: when he hears the familiar **-na** replaced by **-gu** he will think of terms of address rather than of terms of reference, and Motu **-na** 'his' will simply be the petrified Police Motu **-na** to him which signals no particular possessor to him. Motu **-mu** replacing the familiar **-na** will be confusing, and even if he realizes that it is meant to indicate a possessor, he does not know whether it is the second person singular, second person plural, or first person plural (*excl.*). The Motu suffixes **-da**, **-mai**, **-mui** are strange to him,<sup>4</sup> and **-dia** he knows as a plural marker added to some nouns when they occur as phrase heads (e.g. **tamadia** 'fathers') which may enable him to identify it as denoting third person plural possessors. He will correctly recognize Motu **egu**, **emu**, **ena** and perhaps **edia**, and probably also the corresponding forms with **a-**, but many Police Motu speakers will be puzzled by **eda**, **emai**, **emui**, **ada**, **amai** and **amui**.<sup>4</sup> Conversely, a Motu speaker will in most cases properly understand the Police Motu possession markers, though he may receive the impression that they are very incorrect.

### 3.9. POLICE MOTU **dekena**

The last important difference between Motu and Police Motu to be mentioned here is the Police Motu <sup>1</sup>**dekena**. This means 'to, at, in, from' and in this meaning is sufficiently similar to Motu **dekena** 'to (motion towards), near to, by the side of' which is used with persons only, to be identifiable to Motu speakers. The Motu equivalents to Police Motu <sup>1</sup>**dekena** are in part incomprehensible to Police Motu speakers. The greater difficulty rests with Police Motu <sup>2</sup>**dekena** 'by means of' which is puzzling to Motu speakers, and whose Motu equivalent, the verbal suffix **-laia**, is in most instances strange to Police Motu speakers.<sup>5</sup> However, the context may sometimes contribute to mutual intelligibility:

M: <b>io maḡani<sup>6</sup> na gwadalaia</b>	}	I pierced the wallaby with a spear
PM: <b>magani lau gwadaia io dekena or: io dekena magani lau gwadaia</b>		

A Police Motu speaker will understand the words for 'spear', 'wallaby', and will be likely to recognize **gwadalaia** as 'to pierce' in spite of the extra syllable **-la-** in it. From these he will be able to understand the meaning of the Motu sentence, except for the person of the subject. A Motu speaker will fare similarly, and also be in a position to understand the person of the subject, though what he understands as 'spear-towards (a person?!)' will probably give him a jolt.

#### 4. CONCLUSIONS

4.0. The above examples and the discussion accompanying them have shown the level of mutual intelligibility between Motu and Police Motu to be predominantly low to very low. It appears that Motu speakers are in a better position in their attempts to understand Police Motu utterances than is the case with Police Motu speakers trying to understand Motu ones, but the great number of misunderstandings and misinterpretations Motu speakers are exposed to when listening to Police Motu makes the general intelligibility of Police Motu for Motu speakers to be still of a very low order, with that of Motu for Police Motu speakers being considerably lower still, bordering on total incomprehensibility of all parts of a Motu utterance in some instances. No experiments have yet been carried out to measure the exact percentage of information transfer between Motu and Police Motu speakers with the help of tape-recorded materials (see e.g. Hickerson *et al.* 1952) but the author's observations have led him to realize that Police Motu speakers understand very much less of Motu utterances than may be expected on the basis of the lexicostatistical evidence only, and it does not seem possible to regard Motu and Police Motu as dialects of the same language if intelligibility is taken into account, especially if 'intelligibility' is interpreted as 'correct understanding of utterances', and not as 'recognition of isolated morphemes', and as 'mistaken understanding'. Comparable observations involving Motu speakers' understanding of Police Motu have also been made by the author, but reliable results are much more difficult to achieve in this because of the scarcity of suitable Motu speakers who are completely unfamiliar with Police Motu. The results obtained seem to bear out what has been said at the beginning of this paragraph.

4.1. Even if the drastic limitation of intelligibility between Motu and Police Motu was only one-sided, which is not the case, this would still constitute a valid basis to the argument in this paper which attempts to demonstrate that the sharing of a very high percentage of basic vocabulary cognates by two communalects is not sufficient to make them mutually fully, or nearly fully, intelligible, and to put them into the category of being dialects of the same language. Disregarding far-reaching differences on the phonological level, factors very adversely affecting mutual intelligibility, seem to be those in the fields of the bound morphemes and function words which cause two communalects to be at great variance with each other on the typological level: this is exactly the case with Motu and Police Motu.

4.2. It may be argued that Motu and Police Motu represent an exceptional case because of the 'pidgin' nature of Police Motu, and that findings based on their comparison may not be valid for situations involving non-pidgin languages. This objection does not seem pertinent to the main argument of this paper which attempts to demonstrate

the often overlooked and neglected importance and influence of features of language structure upon the mutual intelligibility, and hence the language-status, of lexically closely related communalects. The pidgin nature of Police Motu is irrelevant in this: it is a natural, extensively and widely used language, and the mother tongue of a number of individuals (mostly children of native constables whose parents have Police Motu as their only common language). In a synchronic comparison between Motu and Police Motu, the latter has therefore much the same status as the former. It is true that lexicostatistical evidence and that yielded by the comparison of language structure and the assessment of mutual intelligibility rarely present such a contradictory picture as is the case with Motu and Police Motu, and it is likely that these two languages show this contradiction in an exaggerated form because of the special character of Police Motu. However, comparable, though less severe, cases have been observed with pairs of languages both of which were 'full' languages, i. e. not pidginized, or trade, languages in the usual sense. (One language in such a pair could, of course, have attained its present form through a process of pidginization at some time in the past, but this would be pure conjecture.) An example in New Guinea is provided by some of the Northern Kiwai languages, like Kerewa of Goaribari Island in the Gulf District for instance, which share quite a high percentage of basic vocabulary cognates with Kiwai proper of Kiwai Island, but differ from it quite extensively in a number of typological features.

5. To sum up, it appears that the establishment of the sharing of a high percentage of basic vocabulary cognates by two communalects may not be entirely sufficient evidence for their classification as dialects of one language, or as very closely related languages. At least some examination of the structure of the two communalects is necessary in addition to ascertain whether or not the similarities on the lexical level are paralleled, or at least not seriously contradicted, by features of language structure and especially the typology of the two communalects. Tests relating to mutual intelligibility supply valuable additional information facilitating a decision on the status of the two communalects, but may, in many cases, be very difficult, if not impossible, to carry out satisfactorily.

## NOTES

1. The Motu materials presented here have mostly been drawn from Chatterton (Lister-Turner and Clark) 1957a. The orthography used here for both Motu and Police Motu is the one employed in that book and in Chatterton (Lister-Turner and Clark) 1957b. The reason for using the latter in preference to a phonemic spelling which would represent the Police Motu phonology more accurately was the assumption that Police Motu in the standard Motu spelling would look more familiar to readers who are acquainted with Police Motu but lack modern linguistic training.
2. 'Verb stem' in Motu denotes the plain verb, without personal suffixes, 'verb base' the verb with personal suffixes. With intransitive verbs, verb base and verb stem are identical. For Police Motu there is no need to distinguish between verb stem and verb base, and the term 'verb' is used for it here exclusively.
3. 'A speaker of Police Motu' for the purpose of this paper, is a person who is a fluent speaker of Police Motu who has no active or passive knowledge of Motu, and is not used to hearing it spoken. Similarly 'a Motu speaker' refers to a native speaker of true Motu who has no active or passive knowledge of Police Motu and is not used to hearing it spoken.
4. Some Police Motu speakers use, or are familiar with, the following possessive compounds in the plural: **ita eda** (1st *incl.*), **ai emai** (1st *excl.*), **umui emui** (2nd), **idia edia** (3rd). These are the Motu forms, and Police Motu speakers who know them will be able to identify the Motu possession markers without difficulty.
5. In Police Motu, its use is largely restricted to **mailaia** 'to bring', **loalaia** 'to walk around with' and **loulaia** 'to return, hand back' in which comitativity, rather than instrumentality, is denoted.
6.  $\bar{g}$  is the symbol used for /g/ in the spelling employed in the Chatterton (Lister-Turner and Clark) 1957a and 1957b (see Note 1).

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## GLOSSARY

### MOTU - ENGLISH

With verbs, the verb stems are given, with personal suffixes added in parenthesis whenever this is thought to facilitate the understanding of the Motu materials in this paper. Transitive verb stems are marked by a dash following them. Of verbal particles, only those have been included here which occur in the sentences in this paper, leaving out those which have been listed in the paradigm tables only. Only those meanings have been mentioned in the entries which are of relevance for the Motu material presented.

#### A

- ada** our (*incl.*) (if the possessed is some foodstuff)
- ai** we (*excl.*)
- ai** in, at
- amai** our (*excl.*) (if the possessed is some foodstuff)
- amui** your (*pl.*) (if the possessed is some foodstuff)
- ana** his (if the possessed is some foodstuff)
- aniani** food
- asina** verbal particle denoting 1st person *sg.* subject and simple present or past negative: 'I do (or: did) not...'
- future affirmative: 'he (she, it) will...'
- bama** verbal particle indicating 1st person *sg.* subject and conditional affirmative: 'if I...' (conditional particles appear in both the dependent and the main clauses)
- basiama** verbal particle indicating 1st person *excl.* subject and conditional negative: 'if we (i.e. I and he) do not...' (conditional particles appear in both the dependent and the main clauses)
- basinema** he will not come
- basioma** verbal particle marking 2nd person *sg.* or *pl.* subject and conditional negative: 'if you do not...' (conditional particles appear in both the dependent and the main clauses)

#### B

- ba** verbal particle indicating 2nd person *sg.* or *pl.* subject and simple future, or imperative, affirmative: 'you will...; you...!'
- bae** verbal particle indicating 3rd person *pl.* subject and simple future affirmative: 'they will...'
- baine** verbal particle indicating 3rd person *sg.* subject and simple
- boma** verbal particle denoting 2nd person *sg.* or *pl.* subject and conditional affirmative: 'if you...' (conditional particles appear in both the dependent and the main clauses)

**boroma** pig

### D

**-da** our (*incl.*); us (*incl.*)

**daika** who?

**dekena** (used with persons only)  
to (motion towards), near to, by  
the side of

**-dia** their; them

**dibamu** you (*sg.*) know

### E

**e** verbal particle marking the 3rd  
person *sg.* or *pl.* in the simple  
present or past affirmative: 'he  
(she, it) does (or: did)...'

**eda** our (*incl.*)

**edia** their

**egu** my

**ela** he went

**emai** our (*excl.*)

**emu** your (*sg.*)

**emui** your (*pl.*)

**ena** his, her, its

**ese** marker of the subject

### G

**gabunai** where...

**-gu** my; me

**guri-(a)** to bury (him)

**ḡuri-(a)** to pray (to him)

**gwada-(ia)** to pierce (it) (with a  
spear)

**gwadalaia** to pierce it with...

### H

**hahíne** woman

**háhine** women

**heau** to run; to set sail

**heita** to see ...self

**heiva** to cut ...self

**helai** to sit, sit down

**heni-** to give

**hereva** to talk

### I

**-(i)** him, her, it

**ia** he, she, it

**io** spear

**ita-** to see, look at

**iva-(ia)** to cut (him)

### K

**kara-(ia)** to do, make (it)

**kekéni** girl

**kékeni** girls

**kori-(a)** to bite (it)

### L

**lai** wind

**-laia** verbal suffix denoting the  
instrument: 'with, by means of'

### M

**maḡani** wallaby

**mahuta** to sleep

**-mai** our (*excl.*); us (*excl.*)

**mase** to die

**mata-** + personal suffix eye

**mero** boy

**moru** to fall (from height)

<sup>1</sup>**-mu** your (*sg.*); you (*sg.*) (ob-  
ject)

<sup>2</sup>**-mu** marker of continuous present

**-mui** your (*pl.*); you (*pl.*) (object)

### N

<sup>1</sup>**na** verbal particle denoting 1st

person <i>sg.</i> subject and simple present or past: 'I do (or: did)...'	flexive pronoun; 2. alone
<sup>2</sup> <b>na</b> deictic particle	<b>sibona</b> 1. himself; 2. only he
<b>-na</b> his, her, its	<b>sisia</b> dog
<b>nama</b> I came	
<b>namo</b> good; to be good	
<b>natu-</b> + personal suffix child	
<b>neganai</b> at the time...	
<b>noho</b> to dwell	
	<b>T</b>
	<b>tala</b> we ( <i>incl.</i> ) went
	<b>tama-</b> + personal suffix father
	<b>tau</b> man
	<b>toma</b> you ( <i>sg.</i> ) did not go
	<b>V</b>
	<b>-va</b> marker of continuous past
	<b>vada</b> 1. verbal particle indicating completed action, e. g. perfect past; 2. placed before the future particles: intention
<b>O</b>	
<b>oi</b> you ( <i>sg.</i> )	
<b>R</b>	
<b>rakatani-(a)</b> to leave (it) behind	
<b>ruma</b> house	
<b>S</b>	
<b>sibo-</b> + personal suffix 1. re-	

*POLICE MOTU - ENGLISH*

Only those meanings have been given in the entries which are relevant for the Police Motu material included in this paper.

<b>A</b>	<b>D</b>
<b>ai</b> we ( <i>excl.</i> ); us ( <i>excl.</i> )	<b>daika</b> who?
<b>-ai</b> locative marker: in, at	<sup>1</sup> <b>dekena</b> to, at, in, from
<b>ai emai</b> our ( <i>excl.</i> ) (uncommon variant of <b>ai emu</b> )	<sup>2</sup> <b>dekena</b> by means of
<b>ai emu</b> our ( <i>excl.</i> )	<b>diba</b> to know
	<b>dohore</b> marker of the future
<b>B</b>	<b>G</b>
<b>be</b> marker of emphasis on the subject	<b>gabunai</b> where...
<b>bema</b> it	<b>guria</b> to bury; to pray to
<b>boroma</b> pig	<b>gwadaia</b> to pierce
	<b>gwauraia</b> to talk about...

**H**

**hahine** woman  
**hanua** village  
**hanuai** in the village  
**heau** to run; to set sail  
**helai** to sit, sit down  
**henia** to give  
**hitolo** hungry; to be hungry

**I**

**ia** he, she, it; him, her, it;  
 they; them  
**ia ena** his, her, its  
**idia** they; them  
**idia edia** their (uncommon variant  
 of **idia ena**)  
**idia ena** their  
**io** a spear  
**ita** we (*incl.*); us (*incl.*)  
**ita eda** our (*incl.*) (uncommon  
 variant of **ita ena**)  
**ita ena** our (*incl.*)  
**itaia** to see  
**ivaia** to cut (up), slice, incise

**K**

**karaia** to make, do  
**kekeni** girl  
**kopina** skin; body  
**korua** to bite

**L**

**lai** wind  
**lao** to go  
**lasi** no; not  
**lau** I; me  
**lau egu** my

**M**

**magani** wallaby  
**mahuta** to sleep  
**mai** to come  
**mase** to die  
**mero** boy  
**moru** to fall (from height)

**N**

**namo** good; to be good  
**natuna** child  
**negana(i)** when..., at the time when  
**noho** 1. to exist, be present;  
 2. marker of continued prolonged  
 action, an action occurring over a  
 period of time, or an action still  
 going on  
**noia** to beg

**O**

**oi** you (*sg.*)  
**oi emu** your (*sg.*)

**R**

**rakatania** to leave (something or  
 somebody)  
**rau(rau)** leaf

**S**

**se** marker of the subject  
**sibona** by oneself (preceding the  
 subject pronoun); only (following  
 the verb)  
**sisia** dog

**T**

**tamadia** fathers (*pl.* of **tamana**  
 father)  
**tau** a man

## U

**uda** bush

**udai** in the bush

**umui** you (*pl.*)

**umui emai** your (*pl.*) (uncommon  
variant of **umui emu**)

**umui emu** your (*pl.*)

## V

**vadaeni** marker of past and/or  
completed action

**varani** yesterday

1964-1965

v

... of the ...  
... of the ...  
... of the ...

U

...

...

...

... of the ...  
... of the ...