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Bulletin of West Irian Development



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IRIAN
BULLETIN OF WEST IRIAN DEVELOPMENT

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The maps in this issue were drawn by R.D.Mitton of Newmont Mining Company.

NOTES ON CONTRIBUTORS

Jules A.E.Camps :

Fr.Camps, a Franciscan Missionary has spent some nineteen years in West Irian. Since 1963 he has been stationed in the Baliem Valley. Fr.Camps is a previous contributor to the IRIAN

Fr.Camps, seorang misionaris Fransiscan telah tinggal kira2 sembilan belas tahun di Irian Barat. Sedjak tahun 1963 beliau telah bekerdja di Lembah Baliem. Fr.Camps adalah pembantu jang utama dari IRIAN.

Antoine Domaingue:

Before joining UNESCO in 1968 where he was responsible for establishing a radio education service in the Upper Volta, Mr.Domaingue had extensive experience in educational radio and television work in Mauritius, his home country, where he became Assistant Director in the Ministry of Education and Cultural Affairs. In his present work for UNESCO in West Irian he is particularly concerned with training teachers by using radio broadcasting.

Sebelum bekerdja di UNESCO pada tahun 1968 dimana ia telah dapat mendirikan "Pendidikan Service Radio" bagi tingkatan atas, Mr.Domaingue telah berpengalaman luas dalam pendidikan pekerjaan radio dan televisi di Mauri - tius, tanah tumpah darahnya, dimana beliau menjadi Wakil Direktur pada Kemen - trian Pendidikan dan Kebudayaan. Pada saat bekerdja sekarang ini untuk UNESCO di Irian Barat beliau terutama berhubungan dengan pendidikan guru dengan menggunakan radio broadcasting.

Peter Foster :

An Englishman, Peter Foster graduated in agriculture at the Universities of London and Reading. Prior to coming to West Irian, where he is managing the FAO/FUNDWI 27/28 Project "Agricultural Development and Animal Husbandry", based at the Amban Agricultural Research and Education Institute, Manokwari, he was working as Agronomist-Ecologist for more than twenty years in several countries in tropical Africa.

Peter Foster adalah seorang Inggris, tamatan Perguruan Tinggi Pertanian di Universities of London and Reading. Sebelum datang di Irian Barat dimana ia memimpin FAO/FUNDWI 27/28 Project "Agricultural Development and Animal Husbandry", berdasarkan atas Amban Agricultural Research and Education Institute Manokwari, ia bekerdja sebagai ahli agraris untuk lebih dari duapuluh tahun diberbagai kota di Africa.

George Grace :

Dr.Grace is Professor of Linguistics at the University of Hawaii, and is the Editor of the journal, Oceanic Linguistics. His publications are

mainly in the field of Oceanic linguistics. He has carried out field work in various parts of Melanesia, including approximately four months in West Irian in 1955 and 1956.

Dr. George Grace adalah Professor dalam bidang Linguistik di Universitas Hawaii. Beliau juga editor dari majalah Oceanic Linguistics. Karja yang telah beliau terbitkan adalah terutama dalam bidang linguistik oceania. Beliau telah melakukan penelitian2 linguistik dipolbagai daerah dari Melanesia, termasuk kira2 empat bulan di Irian Barat pada tahun 1955 dan 1956.

Mohammad Hasan :

Mohammad Hasan gained a master's degree in Geography from the Department of Teacher Training, University of Indonesia, Djakarta, in 1962. He is now Senior Lecturer in geography at the University of Tjenderawasih. Drs. Hasan was the programme chairman of the Symposium on Education held at the university in June, 1972.

Mohammad Hasan, Sardjana Pendidikan jurusan Geografi, FKIP Universitas Indonesia Djakarta 1962; sekarang Lektor Kepala dalam Geographi social pada jurusan Geographi Fakultas Keguruan Universitas Tjenderawasih Djajapura. Dalam Syposium Pendidikan beliau menjabat Ketua Panitia. Symposium ini diadakan di Universitas pada bulan Juni 1972.

Gordon F. and Milfred O. Larson :

The Larsons are American missionaries under the Christian and Missionary Alliance (CAMA) working with KINGMI (Kemah Indjil Geredja Masehi Indonesia) primarily in Bible translation and adult literacy among the Western Dani of the Ilaga Valley. Gordon Larson has recently returned from the University of Michigan, USA, where he has been doing graduate study towards a doctorate in Anthropological Linguistics.

Keluarga Larsons adalah missionaries CAMA dari Amerika yang bekerdja dengan KINGMI (Kemah Indjil Geredja Masehi Indonesia). Mereka bertugas terutama untuk menterdjemahkan Kitab Sutji dan pemberantasan buta huruf bagi orang dewasa diantara masyarakat Dani Barat di Lembah Ilaga. Gardon Larson baru kembali dari Michigan University, USA, dimana beliau telah menjelesaikan studinja untuk memperoleh gelar sardjana dalam ilmu Anthropological Linguistics.

Willem G. Manua :

Willem Manua graduated from B II Pedagogic Course in Bandung in 1961. Before coming to West Irian he was a lecturer at the Teaching Training College, Manado. In West Irian he was the principal of the Christian Junior High School at Biak and from 1964 to 1969, the Principal of the Teacher Training College at Djajapura. In 1971 he became head of the Teacher Training Division in the Department of Education and Culture, Djajapura.

peranan penelitian, perkembangan2 dan perubahan2 yang terjdadi didaerah ini yang mempunyai hubungan dengan pembangunan daerah yang sangat mendesak dewasa ini. Diandjurkan agar dalam rangkaian tulisan2 berikut harus adanja rentjana yang pasti dan program yang baik seperti yang diharapkan dan tidak terlepas dari program2 yang telah ada. Dilain pihak kami akan berusaha untuk mengelompokkan data etnografis tentang kebudayaan2 yang berada di Irian Barat. Untuk maksud tersebut kami akan bekerdja sama dengan para sardjana yang telah mengadakan penelitian2 di Irian Barat baik dari pihak misi agama maupun dari Pemerintah yang sekarang berada di Irian Barat dan memiliki data yang bernilai bagi daerah ini.

Satu hal lagi yang patut mendjadi perhatian sebelum penerbitan2 bulletin ini dilandjutkan ialah kurangnya tulisan2 dari orang2 Indonesia yang mendjadi penjokong bulletin ini. Bahwa kelangsungan IRIAN dapatlah didjamin, tetapi tidaklah baik apabila yang memberikan support dalam bentuk tulisan2 hanya berasal dari orang2 asing. Sekarang direntjanakan pembentukan suatu badan yang bekerdja untuk IRIAN sehingga beban berat yang membebani para editors dapat ter-bagi2. Diharapkan orang2 Indonesia yang mendjadi anggota dalam badan yang akan terbentuk ini dapat berhasil dalam pengumpulan tulisan2 bagi bulletin dari orang2 pedalaman atau orang2 asli daerah ini.

Sesuai dengan persetujuan antara Universitas dan Institute News, maka pada terbitan berikut akan memuat prasaran2 dari para pemasaran yang mengikuti Seminar Agats, suatu seminar tentang perkembangan2 di Asmat.

Terbitan yang berikut lagi merupakan nomor khusus dengan judul "THE COMMUNITY AT KUGAPA", jaitu suatu monograph penduduk yang ditulis oleh anthropolog Fr. B.C. van Nunen. Mendjadi harapan kami, bahwa publikasi ini merupakan monograph seri pertama dalam kebudayaan2 di Irian Barat.

STONE AS A CULTURAL FACTOR IN THE CENTRAL
AND EASTERN HIGHLANDS

R.D. Mitton

ICHTISAR :

Tulisan ini adalah suatu gambaran mengenai kebudayaan daerah pegunungan tengah bagian Timur Irian Barat yang masih menggunakan alat2 batu, dan satu adjakan untuk mereka yang menaruh perhatian dibidang Archaeologis. Hal ini akan dapat dikembangkan lebih jauh apabila perhatian yang lebih banjak ditujukan kepada kebudayaan saat ini dan didalam benda2 prelistori yang dapat merupakan potensi kearah itu.

1. Dilembah Baliem batu2 itu digunakan sebagai dinding2/pagar kebun. Waktu mengerdjakan kebun, batu2 ditemukan dan dikumpulkan untuk kemudian dijadikan pagar2 batu.
2. Kapak batu dan benda2 kebudayaan lainnja diperoleh dari 3 sumber:
 - a. Jalemo, sebelah utara Mulia
 - b. Tagi dekat Pyramid (Argillite)
 - c. Bagian selatan dari rentetan pegunungan diantara Koruppun dan sungai Eil (microchorite)
 disitu terdapat perdagangan yang intensif dan terdjadinja perpindahan batu2 itu.
3. Batu2 digunakan sebagai ornament atau hiasan didaerah Oksibil dan Maltja.
4. Disc.clubs ditemukan didaerah oksibil dimana penduduk disitu tidak mengetahui untuk apa benda2 itu digunakan.
5. Banjak dari batu yang digunakan dalam upatjara (terutama suku Dani) yang mungkin memperolehnja dari Jalemo, tapi mereka djuga memiliki batu2 alam yang djarang ditemukan. Disana terdapat kemungkinan yang kuat dimana ukiran2 prelistoric dan djuga memiliki persamaan dengan batu2 yang ditemukan dipegunungan PNG yang mungkin masih ada dalam koleksi batu2 upatjara.
6. Ukiran pada dinding2 batu djarang, sebagai tjontoh di Baliem terdapat tjat kapur dekat gunung Mandala.
7. Pengukiran batu yang terdapat di Sentani djuga terdapat dipegunungan dekat Karubaga. Keduanja berada dalam antjaman karena pengrusakan2 yang disengadja maupun tidak.

This is a purely descriptive paper on the uses of stone by the people in the central and eastern mountain range of Irian Barat. It is also a request

that some thought be given to the prehistory of the area. When a region has its whole mentality oriented to development the past is easily overlooked. However, the more developed a people become, and the more they are projected into an insecure, future-biased attitude, then the more they will want to seek out their past. Their past does not begin with the documented penetration of Melanesia by the English, the Dutch or the Indonesians; it is to be found in the mythology or hidden in the remains of the material culture. To discover the prehistory one must look to the stone artifacts and any associated bones, immediately placing restrictive parameters on the search. Unfortunately, this is a fact of life that prehistorians have to face. Early documentation of possible prehistoric sites or of existing examples of stone age culture will be a service well appreciated by future students of the past.

An approach to the Grand Baliem from the south takes a person through some of the most spectacular gorge scenery in Irian Barat. South of the gorge the population is sparse, the cultivated areas holding a balance with forested fallow. Above the gorge the scene dramatically changes. The population is dense, the forest recedes up the valley walls, and the agriculture is more intensive. Unlike most mountain areas of Melanesia where terracing is a rudimentary, fence-like structure of logs running with the contour, the Baliem gorge is terraced with stone walls. These walls would probably have two functions:

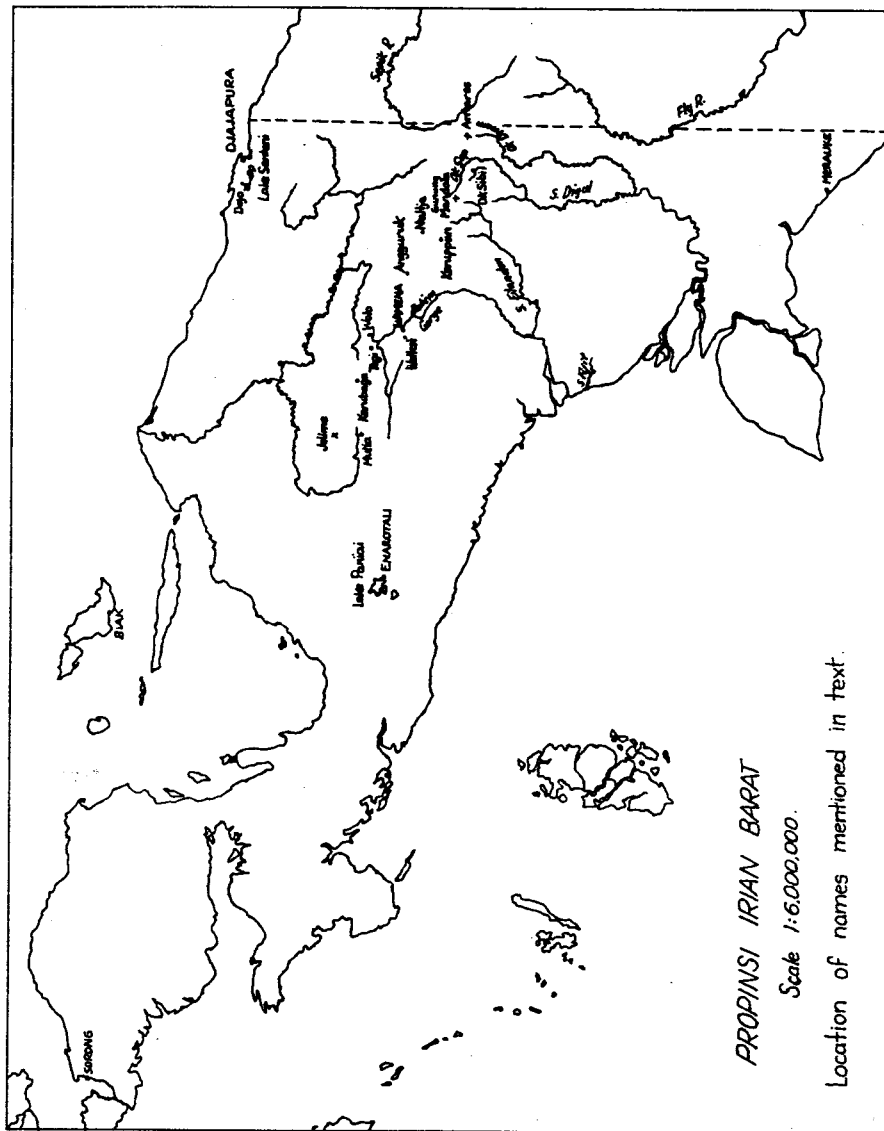
1. Convenience. The walls are a direct function of the stony environment: they are the rejected stones from the garden stacked in a utilitarian fashion. In the more level areas where terracing is not required walls are still constructed around individual garden plots. Main walls may be more than three feet thick and serve as walkways. In the Grand Valley it is possible to see the phasing out of stone walls between Wellesi and Wamena as the finer sediment of the valley floor is approached.
2. Permanence. The pressure on the land would be such that gardens would not revert to forest in their fallow period. The garden form would not be lost and replanting the garden would be a substantially simpler task requiring only minor restoration of walls.

On a prominent bluff, overlooking the Baliem between Metigima and Tangina, there stands an old, deserted village site. At first glance it looks like some razed fortress, an ancient memory guarding the valley portal. It could possibly be a potentially interesting archeological site. The low stone walls delineate the basic plan of the Baliem Sili. They are not the destroyed walls of the buildings, these were the traditional Dani vertical plank and grass roofed structure. The stone walls only substitute the fences. The plotting of the location of this particular structure and any other similar structures, and also the gathering of information from the local population on any deserted village sites would be of assistance to future prehistorians.

The stone terracing of the Baliem gorge is the most visually striking manifestation of the use of stone by the Neolithic people of Irian Barat. Other well known aspects of the stone technology are the tools and portable articles of the material culture. Whereas the stone for the walls was collected in situ and there was no effort at modification, the axe blades and exchange stones are traded over considerable distances from specific source sites and are often superbly formed and polished.

In the Baliem there were two types of stones in use for axe and adze blades.

1. A hard green-blue variety which was traded from a quarry site on the Jelime River approximately thirty kilometers north of Mulia (Harrer, 1965; Heider, 1970). Hand specimens have been identified by geologists as being transitional from peridotite to serpentinite; other specimens are predominantly epidote and chlorite. A minority of the blades are glaucophane schist.
2. A softer black stone originates from a site in the Tagi area (between Pyramid and Kelila). The stone is an indurated mudstone (argillite) from the Kembelangan formation. Normally the mudstone of this formation is fissile and readily breaks down into the loose shaly rock which is very prominent in the Karabaga - Kelila area. However, there are pockets of the formation in which the fissile quality is lost where the rock is slightly calcareous (Visser and Hermes 1962).



PROVINSI IRIAN BARAT

Scale 1:6,000,000.

Location of names mentioned in text.

The Tagi stone had a restricted use --mainly as axe blades, although adze specimens have been observed and I have seen one small exchange stone of this material. The Jelime stone had a far wider acceptance. It is used mainly for adze blades, for small chisels, occasionally as axe blades, and for most exchange stones.

The spread of the stones is extensive. I have seen specimens of both Jelime serpentinite and Tagi argillite in the Casuarina Coast region of the Asmat (Fijit River). This is probably close the southern limit of diffusion as the specimens appeared to be exceptional. Most of the Asmat stones were of poorer quality: sandstones and granites presumably obtained from river beds on the southern flank of the range. The eastern extension currently established for the Jelime stones is Maltja where they are used as spirit stones. However, the adze form begins to phase out in the Angguruk valley. I have no knowledge of the northern or western limits of spread, although from photographs of axes from around Lake Paniai (Le Roux, 1948) I would assume that they extend to the Ekagi group.

Between Angguruk and the Papua, New Guinea border the adzes are of a different appearance. While the Jelime stones are generally of triangular plan, oval cross-section, and finely finished, the Angguruk-OkSibil stones are long, triangular in cross-section and roughly finished. In most of the blades the flaking can be seen with only the apex edges and cutting edge being polished. The stone is a microdiorite which occurs in a dyke form on the southern fall of the range between Koruppun and the Eilanden Riv. The stones would probably be taken from the river beds rather than from a specific quarry.

The introduction of steel has meant that the stones are no longer being obtained from their source. Very soon the skill of flaking and polishing will be lost and the stones will be relegated to the historical environment of the museum.

It is comparatively rare in Irian Barat to see stones used as body ornamentation, but the mountain people from Maltja to the Star Mountains do use a stone nose decoration. In the OkSibil region this is a worked sliver of calcite between two and four inches long. The calcite originates from the

Denam River which has its source on the southern fall of Antares in the Star Mountains. The Maltja nose stones are smaller and have a much higher polish. They also originate in the east and could be a form of the Denam calcite. However, as there is also found at Maltja a calcite dough-nut shaped ornament which is carved and polished locally it is probable that there is a second source between OkSibil and Maltja. This circular ornament (locally called Em Doldol) is quite rare, only being worn by a person of considerable importance.

To my knowledge the only other form of worked stone found in the eastern region are stone club heads which have probably been traded in from the southern Fly Digul region where they were once relatively common. A painted club disc was collected by the Star Mountains Expedition in 1959. The people from whom it was obtained apparently had no knowledge of its original purpose (Kooijman, 1962). I know of the existence of one other stone disc in a village in the valley of OkSop.

The significance of the stone club discs is considerable. That they are kept by a people who have no practical application for them indicates that it is quite possible that there are other stones in the highlands retained for their curiocity value, or, more likely, their assumed spiritual value. Very little is known of the Dani spirit stones. Many appear to be similar to the peridotite-serpentinite exchange stones, although they may also be stones that have not been worked by the Dani. These may be fossils (ammonites are common to the north of the Baliem), concretions, or other unusual natural formations. Recently on display at the University of Tjenderawa-sih was an unusual stone that has been classified as coming from the Baliem. Unfortunately, the documentation stops there, but the stone which appears to be a concretion, is definitely phallic in form. Its natural characteristics have been accentuated by a rudimentary carving.

In Papua, New Guinea there have been a number of discoveries of prehistoric stone carvings. These are mostly of the simple mortar and pestle, although some like the Ambun stone are skilfully and stylistically carved. There is no reason to believe that similar prehistoric stonework does not

exist in Irian Barat. If they do exist then this would indicate that the highlands had at one stage a quite different culture to the ones that currently exist. Objects that were alien to the culture of the current highland societies would be likely to be incorporated into the ritual life of the community. Thus, in the case of the Dani, they would be kept hidden among some spirit stone collections. I have been told by a Dani of the Wolo valley (to the northeast of the Grand Valley) about a strange stone with a hole in it that was found in a garden and immediately placed in the spirit stone compartment of an important mans house. Unfortunately, with the breakdown of old culture values these objects may lose their significance and be lost. It is possible that some of the missionary fetish pyres of the early sixties may have already consumed significant objects.

Other sites of archeological value are relatively unmovable but not protected from damage and destruction. It is a well known fact that the central highlands are art poor. A few caves in the Baliem contain some crude drawings and Heider has recorded two art styles from the Dugum neighborhood (1970:181 ff.). The only other rock shelter paintings that I personally know of in the highlands were seen by Dr. Robert Wight and myself at about 3,500 meters on the slopes of Gunung Mandala (Mt. Juliana). These "paintings" were merely a number of ochre smears covering the walls of a rock overhang. Why they should exist at this high altitude, and in such a remote section of the country presents an interesting problem. The shelter is beside a dead-end hunting trail and quite removed from any population centres.

On the hill behind Dojo village at Lake Sentani there is an unusual arrangement of stones. The largest upright is about 0.6 metre high, so the stones cannot really qualify as being megalithic. However, the unfortunate aspect of the stone arrangement is that, according to the local villagers, it was broken down by American servicemen during the war. This senseless, intentional vandalism appears to be just as strong today. Near the stone arrangement are a number of large boulders bearing engravings, the animist style of which appears to be contemporary with recent Sentani Art. These engravings

are also in danger of vandalism as the rocks are a perfect medium for people who wish to emblazon their names across the countryside.

How do the Sentani engravings relate to anything in the highlands? Only in their susceptibility to damage. In the village of Nabunage near Karubaga there is a large boulder that is covered in chip engraving. In comparison to the Sentani engravings the Nabunage ones are crude in both execution and form. Much of the boulder is covered by rows of pecked holes, but there is also a crude face and what appears to be a figure. The villagers have no knowledge of the origin of the engravings; they had always been there. Again, this boulder has recently suffered considerable damage. The village decided to extend its church and, when first noticed, the boulder was in the process of being broken up. Hopefully, some of the engraving can be preserved. The people were also quite definite that the example was not unique to the area.

The future of archeology and prehistory in Irian Barat depends to a large extent upon the current interest shown by all sectors of the community. Adequate protection of valuable artifacts and sites will ensure a potentially bright future. However, a barrier of ignorance may mean that many important objects are lost and some sites disturbed or damaged. The growing trend towards the preservation of artifacts is very encouraging, but only of use if there is adequate documentation. This also extends to cultural artifacts in situ.

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NEW MEDIA IN DEVELOPING COUNTRIES

A. Domaingue and W. Manua

ICHTISAR :

Telah diketahui keuntungan² dan kekurangan² yang terdapat pada radio dan TV sebagai media pendidikan.

Mengingat fasilitas yang terdapat di Irian Barat maka pilihan kita djatuh pada radio. Radio sebagai media baru dapat kita pakai menanggulangi masalah-masalah pendidikan yang dihadapi karena :

- di Irian Barat terdapat pemantjar baru yang berkekuatan 20KW yang terdapat di Djajapura sedang di tiap kabupaten terdapat station pemantjar lokal.
- pesawat radio tjukup murah dan banjak terdapat dimana saja di Irian Barat.
- adanja radio transistor memungkinkan radio dapat dibawa dan dipergunakan dimana saja bahkan sampai djauh ke pelosok.

Siaran pendidikan yang setjara luas ditujukan kepada murid² sekolah Dasar dapat membantu mengatasi masalah kekurangan guru. Siaran ini akan meringankan tugas guru bahkan bagi guru yang merangkap kelas, merupakan bantuan yang sangat besar. Bagi small-schools atau one-two teacher schools yang terdapat di beberapa tempat dipedalaman adanja siaran pendidikan yang dikombinasikan dengan pengorganisasian kelas yang tertentu akan merupakan djalan pemertjahan terhadap masalah kekurangan guru.

Usaha untuk meningkatkan mutu profesional guru² Sekolah Dasar dapat djuga ditempuh dengan djalan mengadakan sematjam "teacher training course of the air" yang disertai dengan bahan² tertulis lainnya sebagai penundjang siaran.

Melalui siaran pendidikan pandangan² baru dalam mengadjar beladjarpun dapat segera disampaikan kepada guru² untuk ditjebakan.

Sehubungan dengan adanja siaran pendidikan nanti, perlu dipikirkan pembentukan suatu badan yang bertugas mengkoordinir serta memikirkan segala sesuatu yang berhubungan dengan siaran pendidikan yang anggotanya terdiri dari wakil² Perwakilan Departemen Pendidikan dan Kebudayaan, Dinas Pendidikan dan Kebudayaan otonom, dari Untjen, dari Penda, Dinas Penerangan, R.R.I., serta dinas² lain yang erat hubungannya dengan pendidikan seperti dinas Kesehatan dan dinas Pertanian. Apakah badan ini disebut Educational Broadcasting Board atau lain, namun satu hal yang pasti bahwa badan ini perlu diadakan.

Disamping itu perlu segera dibentuk satu team yang terdiri dari guru² Sekolah Landjutan Atas yang dibantu oleh Untjen untuk mendjadi script-writers, producers dan tehniisi dan sebagainya yang diperlukan demi kelantjaraan djalan-nya siaran.

Ananja Teacher Training Center (T.T.C.) di Abepura yang didalamnya terdapat satu bagian Educational Broadcasting lengkap dengan studio perekaman, sesungguhnya siaran pendidikan di Irian Barat sudah dirintis bahkan sudah di-

mulai dalam format ketjil, yang disiarkan melalui studio R.R.I. Djajapura.

Usaha-usaha Pendidikan Masyarakat serta usaha² meningkatkan kesadaran rakyat akan kesehatan, child and mothers care, masalah-masalah kesedjahteraan keluarga serta keluarga berentjanapun dapat diadakan melalui siaran pendidikan ini.

Disamping penggunaan siaran pendidikan untuk menanggulangi masalah pendidikan yang dihadapi, perlu dipikirkan pula kemungkinan penerapan programmed - instruction pada sekolah sekolah. Programme - instruction dan programmed learning merupakan salah satu djalan djuga untuk mengatasi masalah kekurangan tenaga guru.

Untuk ini perlu segera Perwakilan Departemen P dan K Propinsi Irian Barat bersama Untjen memikirkan serta merintis kemungkinan penggunaan programmed-instruction itu di-sekolah².

Demikianlah kemungkinan² yang ada pada media baru pendidikan itu yang dapat kita pakai untuk mengatasi masalah pendidikan yang kita hadapi di Irian Barat.

It was in the years after the second world war that the term 'new media' was coined to cover all sorts of devices used in instruction—devices other than the formal, old-established book-blackboard method. It cannot be denied that in the thirties, and probably even before, educators were experimenting with teaching aids. However, when the war started in 1939, although many devices and methods were about to lead to new inventions, they had to go into cold store, so to speak, or else they were directed to the war effort.

When a country goes to war it becomes faced with the problem of training large number of recruits who come from different walks of life, and having widely differing levels of education. Instruction must be given in the handling of weapons and other sophisticated equipment, and such instruction must proceed as rapidly as possible, because war is an emergency, and time is vital. In the instruction of recruits during the war years successful use was made of pictures, diagrams and charts that would convey much information at a glance and of maps of different scales. Still and movie films were used to teach processes involving movement using close-ups, enlarged pictures, slow-motion or speeded-up filming as required. Models, scaled up or down were used allowing study of complex or of hidden mechanism. The aim of all this was to accelerate the process of learning. It should also be recalled in that we are

referring to a war situation that generals played with sand-trays, little flags, dinky toys and lead soldiers--all very seriously because it was the best way of making a situation as clear as possible while planning campaigns.

When the war was over the methods that had been tried and the aids which had been concocted could be turned to peaceful ends. As life gradually returned to normal, schools and educational systems reorganized and teachers retrained these aids to teaching (which should be more appropriately called aids to learning) began to enter the schools. It should be noted, however, that no country has ever financed further development of teaching aids to the extent that occurred during the war. Nevertheless, many things were to revolutionize education and these teaching aids were to play their part effectively within the school, and outside the school in the teaching of adults and specially, as far as radio and television are concerned, in mass education.

Within schools, colleges, universities and other training institutions where all sorts of skills are taught, teaching aids both visual and aural, some extremely simple and others highly sophisticated are now to be found. Teachers have often been reluctant to use aids of any kind either through apprehension or through insufficient knowledge of their use and value. The need for the teacher to be made familiar with the methods involved in their use has been recognized in most countries, and facilities are being provided sometimes sparingly, and sometimes extravagantly. The use of any resource other than chalk, talk and book is no longer regarded as a novelty. However, some teachers develop an interest in the use of aids more than others, and many remain indifferent. The reason is often because the teaching aid which is supposed to make teaching easier, is in reality a device which demands extra preparation. The conscientious teacher who has patiently experimented and assessed results is soon convinced of the value of aids. Generally he becomes an enthusiast who spreads the good word among other teachers.

It would not be out of place here to review a list of teaching and learning aids. This list is by no means exhaustive..

Reference is often made to non-projected aids, some of which have already been mentioned: the picture in its many forms, the diagram, the chart,

the map and the flannelgraph. There are also samples, specimens and models; here we have multi-dimension and the possibility of involving more active student participation. Next we have projected pictures requiring some form of projection equipment. The material may be available on slides or on film-strips often produced by the teacher himself. Photographs, pictures from books and documents can be projected using an epidiascope. Also transparencies prepared by the teacher or available from commercial sources may be shown using the overhead projector which also allows the teacher to add details to the projected picture, using a felt pen. All the above-mentioned projected methods involve still pictures.

Motion pictures, although first used in education in 1910, still constitute a respected novelty in many otherwise advanced educational systems. The film, with or without sound is expensive, requires more preparation and manipulation of equipment by the teacher, but can bring the world into the classroom with considerable reality. It should be noted in passing that records and recorded tapes also have a part to play here. The most widely used educational film is 16mm. The smaller 8mm dimension gives greater scope for local production by teachers and pupils as the equipment involved is cheaper. It is also the dimension of film being widely used in making film-loops, which are usually short and have value in teaching a particular situation where movement has to be observed, as the loop film repeats the recorded picture as long as it is allowed to run.

The aids mentioned so far have one thing in common: they can be available for use as and when required under close control of the user. Radio and television fall into a different category as they come from outside the school and when used create a situation whereby the class teacher temporarily withdraws from the teaching scene. He is also required to submit himself to a schedule as to time, contents, method and means of transmission. All these factors are outside his control.

Radio broadcasting is the medium most relevant to situations with which we are familiar. Perhaps a rapid survey of developments and reference to some experiments carried out in developing countries may not be out of

place here.

Radio broadcasting is hardly fifty years old. During the years between the two world wars it went through various stages of experiment and development, with gradual improvement in power and quality brought about by research in new materials and equipment. The long playing record and the tape recorder have only become the tools of the broadcaster, as well as becoming accessible to privileged sections of the general public, within the last twenty years or so. But by that time broadcasting had already emerged as a great force that knew no physical boundaries. The world still remembers the part played by the BBC's overseas broadcasts in the critical years of the Second World War. It was the voice that brought hope, boosted morale, co-ordinated widespread underground movements and helped prepare the way for liberation.

Since those days, new developments and new techniques have brought constant and immense improvement in the field of radio communication. Most nations now have their own internal broadcasting service and many have external services as well. In the decade 1950 to 1960 the number of radio transmitters in Africa increased from 140 to 870. In Europe it rose from 566 to 2,700. In the USSR alone the number quadrupled and it is therefore not surprising that the USSR should have the greatest volume of external broadcasting in the world--approximately 1,400 hours per week. China is second, the Voice of America third, and the BBC fourth, broadcasting in forty-one languages. A point of saturation has almost been reached in frequency allocation. Latest techniques involve the use of satellites.

And what was happening at the other end, at the receiving end? There that remarkable invention the transistor was causing a revolution in receiver production techniques making 'portable' a word that could truly be applied to radio receivers. It also made them more efficient, more reliable and cheaper. It thus contributed to make radio broadcasting a truly popular mass communication medium and its place in programmes of development projects anywhere in the world can no longer be considered a sophisticated tool. Another figure which speaks for itself is the increase in the number of

receivers in tropical Africa over the last twenty years: from one and a half million to over fifteen million.

The average citizen expects his national broadcasting service to provide him at almost any time with what he considers to be entertainment, whatever his taste be and with information which must sound to him exact and impartial. He has also come to expect that programmes will contain a certain degree of education. He expects value for his money in all fields--art, sport, business and religion. Everything must sound perfect and when he has worries, he turns on his radio in the hope of forgetting them. The average national broadcasting service also sets out to provide these three basic needs for home consumption: entertainment, information and education. How many nations can claim success?

When the local radio programme is not satisfactory or is not on the air, our average citizen turns the tuning knob of his set in search of something that appeals to him. Does he always come across sounds that will quench his thirst for entertainment or news, or enrich his imagination in some way or other? Or does he not become caught in the spell of some subtle presentation coming from outside his country intended to create doubts in his own mind as to his traditions, his loyalties, his culture, his faith? What a versatile tool indeed, radio can be, in different hands! But to look on the positive side we may consider some remarkable achievements that have taken place in Columbia.

Columbia, with a mostly rural population of seventeen million is an exceedingly poor country. Some 41% of the under sixteens are illiterate. Only 7% receive secondary school education and less than 1% a university education. Healthwise the situation is no better. There are about four doctors per 10,000 inhabitants and it is estimated that one hundred Columbian children die each day because of malnutrition. Parasitic and venereal diseases are primary concerns; only about 20% of the houses have toilets.

Confronted with such huge problems, a difficult terrain, and without adequate means, one would be reduced to despair. However, a group called Accion Cultural Popular (ACPO) with missionary backing did not despair but

set out to initiate various forms of rural development using mainly the radio. The objective of one of the first campaigns was to encourage the scattered population of the rural zones to build latrines and to use them. By repeatedly outlining the dangers associated with diseases carried by insects and microbes and also by means of illustration carried around by trained rural leaders, the possession of a latrine very soon became a sign of prestige and progress. Another radio campaign brought about the creation of some 77,000 family gardens for the cultivation of vegetables for home consumption. A further programme encouraged the preparation of 'compost trenches'. Listeners were taught to combine manure together with roots and a mixture of ashes and limestone in a properly ventilated pit. Hundreds of thousands of such trenches were started, using organic matter to enrich soil stratum. Perhaps more important than these specific campaigns the radio served to create a sense of national community and by the knowledge imparted through the radio helped bring about liberation from fear.

In another instance, the results of a rural radio campaign far surpassed all expectations and even raised politico-economic issues in which the state had to take action on behalf of the villagers. The campaign had started as a simple, straightforward attempt to teach villagers in a region of Senegal to improve their methods of cultivating one particular crop - the groundnut. The reactions of the villagers to the broadcasts were collected and included in programmes but the effect of this was to bring before the public all the difficulties which the peasant encountered - from plant diseases and inefficient co-operative societies to the repercussions of world market price fluctuations on the sale of their crop. The economic value of this radio campaign was immense although the campaign had been launched with very limited funds.

Now let us consider the situation which confronts us here in Indonesia. In the process of educational development several projects have been started. A priority has been set for establishing a radio education service for teachers of primary schools, to be followed in due course by broadcasts for schools, then for the education of adults, and finally, in the widest

sense, educational programmes for the general population. There are 1128 primary schools in West Irian at the moment but only 3992 teachers, of whom a high proportion is insufficiently trained.

In the implementation of this particular project a radio education department has been set up at the Teachers' Training College (Pusat Pendidikan Guru), Abepura. The training of a team of four teachers in basic radio production started in January 1971, with a minimum of equipment. In view of the lack of technical facilities and of personnel at the local Radio Republic Indonesia station, it was decided to convert two adjoining storerooms in one of the new buildings under construction at the Abepura site for use as a recording studio. At the same time the necessary equipment, including radio sets to be distributed to the primary schools, was ordered.

The aim of the broadcasts to teachers was twofold: to improve their general background, and to help them improve their teaching skill. With this in view a series of programmes was prepared with the co-operation of the various departments of the Training College. The studio became operational in July 1971, and by September experimental broadcasts were under way. These broadcasts coincided with transmission tests carried out by RRI Djajapura with a new twenty kilowatt transmitter. Since January the programmes for teachers have been included in the normal RRI broadcasting schedules, now that the new transmitter has been put into regular service.

Four hundred radio receivers have already been handed over to the Government for distribution to the primary schools, for use by teachers in the first instance. The sets selected have sufficient tonal quality to enable them to be used by a normal class. The total number to be so distributed will be approximately one thousand. Other matters receiving attention at the present time are evaluation and feedback. It is hoped that at least one member of the team will be able to attend a course on these aspects, which it is proposed to hold in Djakarta. Last year two staff members attended a two-month course in educational radio production, the first in a series of courses intended to promote educational development by radio.

The project started in West Irian in the first of its kind in Indo-

nesia, and is being given wide attention as an experimental pilot project. The progress of the project will be constantly assessed in terms of its contribution to educational development here in West Irian and its possible extension to all of Indonesia.

POSTSCRIPT :

The programmes for primary school teachers were broadcast by the Djajapura station of Radio Republik Indonesia during the period October, 1971 to June, 1972, using their new 20 Kilowatt transmitter, in the 49 metre band (6.78 Megahertz), on weekdays from 17.15 to 17.30 hours. Another series is being planned to begin in September. The co-operation of teachers, other government personnel and missionaries in submitting reports as to the quality and contents of the programmes, would be greatly appreciated. Feedback is of the utmost importance in the planning of future programmes.

Communications may be addressed c/o The IRIAN or direct to PLPG, Abepura, Djajapura, West Irian.

NOTES ON THE PHONOLOGICAL HISTORY OF THE AUSTRONESIAN
LANGUAGES OF THE SARMI COAST¹

George W. Grace

ICHTISAR :

Artikel ini merupakan suatu usaha pendahuluan untuk menentukan perubahan perubahan bunji yang telah terjdadi dalam enam bahasa yang terdapat di pantai Sarmi. Bahasa2 ini adalah: Sobei, Wakde, Masimasi, Anus, Bongo, dan Tarpia. Penerbitan2 sebelumnya yang memberikan informasi tentang bahasa2 ini dju ga disebutkan, tetapi semuanya sangat terbatas dalam "scope"nja. Data yang dipakai dikumpulkan oleh penulis sendiri di Irian Barat pada tahun 1955-1956.

Kata2 dari bahasa2 ini dibandingkan dengan kata2 yang telah di rekonstruksi yang tergolong dalam rumpun bahasa Proto-Oceanic. Istilah "Proto-Oceanic" ini dipakai dalam situasi dimana sebuah bahasa dianggap ada dan hidup ribuan tahun yang lalu, dan yang djuga dianggap sebagai sumber bahasa2 Austronesia yang menurunkan bahasa2 di Melanesia, Mikronesia, dan Polonesia. Dalam daftar kata "cognate" terdapat 88 kata Proto-Oceanic yang masih diketemukan didalam salah satu atau lebih dari bahasa2 di daerah Sarmi itu.

Konsonan dari Proto-Oceanic ini dibahas satu per satu, dengan maksud agar perkembangannya bisa ditelusur pada masing2 bahasa modern Sarmi. Kelihatannya yang paling menjolok adalah penjatuan dari R, l, dan d menjadi satu bunji dalam bahasa2 ini. Satu hal lain yang perlu ditjatat ialah bahwa bukti yang bisa dipakai untuk membuktikan adanya satu seri tersendiri dari konsonan pre-nasal dalam sedjarah bahasa2 ini sangat terbatas.

Perkembangan vokal dari Proto-Oceanic lebih kabur lagi. Sebelum soal ini dibahas, diberikan suatu pembitjaraan mengenai fenomena2 yang lebih umum. Umpamanya saja, masing2 dari bahasa2 ini kehilangan vokal apapun dalam keada-

¹ The data for this study were collected in West Irian in 1955-56 under a grant from the Tri-Institutional Pacific Program, sponsored by the Carnegie Corporation of New York. This support is gratefully acknowledged. I am also grateful for the generous cooperation I received from members of the Netherlands New Guinea government. Especial mention is due to the Governor, Dr. Jan van Baal, and to H.K.J. Cowan, K.W. Galis, and C.J. Grader. Above all I am indebted to Dr. and Mrs. J.C. Anceaux, who provided me with the hospitality of their home in addition to aiding me in my research on a day by day basis.

The analysis of these data was carried out at the Department of Linguistics, Research School of Pacific Studies, of the Australian National University Institute of Advanced Studies. I am grateful to those concerned, and in particular to Professor Stephen Wurm, for the facilities and the tranquility that made it possible.

The materials collected consisted in vocabularies following the TRIPP list. The most complete lists were obtained for Sobei, Bongo, and Tarpia. There is somewhat less material for Wakde and Anus, and only a short list

an keadaan tertentu, jang berbeda dari satu bahasa ke bahasa jang lain. Ada djuga ber-matjam-matjam fenomena jang didjadikan satu dibawah nama "Breaking". Jang dimaksud dengan istilah ini ialah perkembangan dari suatu rentetan, termasuk semivokal atau vokal atas dengan paling tidak satu vokal jang lain. Bebe-rapa fenomena jang termasuk dalam kategori ini terdapat di semua bahasa2 jang sedang dibahas ini.

Penulis datang pada suatu kesimpulan bahwa bahasa2 ini kelihatannja termasuk dalam rumpun Oceanic itu tadi. Kalau kesimpulan ini benar, maka bahasa-bahasa tadi merupakan pengembangan ke barat dari rumpun jang terdapat di daerah Irian. Perlu ditjatat bahwa penelahaan ini didasarkan atas suatu data jang sangat terbatas. Djelaslah bahwa penjelidikan jang lebih mendalam masih diperlukan.

I. Introduction

This study is intended as a small contribution to the large task of analyzing the sound correspondences of Oceanic languages. There are still very few Oceanic languages whose sound correspondences, either with other related languages or with reconstructed proto-forms, have been studied at all carefully. However, more such analyses seem essential if the reconstruction of Proto-Oceanic is ever to achieve the solid foundation and the scope of Dempwolff's reconstruction of Proto-Austronesian.

The languages treated in the present study are geographically among the westernmost languages of the Oceanic subgroup. They are spoken in what was, during the Dutch administration (I have not been able to find any information on current administrative divisions), the Sarmi Subdistrict of the Hollandia District of Netherlands New Guinea (now West Irian).

for Masimasi. Although I also have some limited paradigmatic material, it is insufficient in quantity and design to provide any consistent structural picture. All that can be said is that the languages do employ possessive pronominal suffixes on nouns and pronominal(subject) prefixes on verbs. There was no opportunity for systematic checking of the lists, and they cannot make any pretense of being systematically phonemic. However, at this remove (the lists are of course, quite cold now) I do not recall that these languages presented any conspicuous difficulties to the ear. Although it is to be expected that errors in transcription have introduced some problems into the present study, I would not expect that their overall effect is such as seriously to distort the results.

Six vocabularies were used for this study. They are designated here by the following names (ordered on the basis of geographical location from west to east): Sobei, Wakde, Masimasi, Anus, Bongo, and Tarpia. More specifically, the respective locations are: (1) Sobei—the region of the settlement Sarmi on the north coast of New Guinea at approximately $136^{\circ} 45'$ east longitude, (2) Wakde—the island Wakde, (3) Masimasi—the island Masimasi, (4) Anus—the island Anus along with a settlement on the facing coast, (5) Bongo — the region of the settlement Armopa on the coast at approximately $139^{\circ} 36'$ east, and (6) Tarpia—the coast around the mouth of the Sermo Wai River (approximately 140° east). Austronesian languages are spoken on some other islands in the area, but it is likely that all are at least dialectally close to languages represented in the sample.

There is very little material in print on these languages. I have a vocabulary list labeled "Arimoa" which I copied some years ago from Meyer 1874. I have not been able to identify the language with certainty, but it appears to represent a member of this group. Unfortunately, my notes do not include whatever information Meyer gave about the location of the language, and I have not been able so far to obtain access to his work again. More recently, some information on languages of this group has appeared in Cowan 1949-50, 1952-53, and 1953, as well as in Galis 1955-56.

The data which were ultimately selected for use in the present study appear in the cognate list at the end. It has been my intention to include all forms that show enough likelihood of being cognate with the Proto-Oceanic reconstructions cited in conjunction with them as to require consideration in an investigation of the sound correspondences. In the case of these languages, as is so often the case in Melanesia, the number of cognates is not at all large. This would be true even if all of the forms cited were valid cognates, and this, of course, is not being claimed.

The Reconstructions :

I have attempted to use Proto-Oceanic, rather than Proto Austronesian reconstructions. This procedure involves some difficulties as there is no body of Proto-Oceanic reconstructions comparable in scope to Dempwolff's (1938)

Austronesisches Wörterverzeichnis. However, I find the difficulties and uncertainties involved in attempting to use Proto-Austronesian reconstructions even greater. I believe these difficulties will be apparent to anyone who carefully examines the Oceanic cognates proposed in Dempwolff 1938. Chrétien (1962) reported that there are 762 Proto-Austronesian reconstructions for which Oceanic cognates were proposed in that work. However, in the case of a very large number of these proposed cognates there are good grounds for questioning whether or not they are in fact cognate. Many show irregular phonological developments. Others require an analysis (often with no independent motivation) of the forms actually reported so as to permit certain phonemic sequences, abstracted from the whole, to be considered as representing the cognate portion. In other cases the semantic connection seems far-fetched. And numerous examples simultaneously involve more than one of these types of problem.

One factor that generally makes the identification of Proto-Austronesian retentions more difficult in Oceanic languages than in Indonesian is the greater loss of phonological information in the former. All of the modern Austronesian languages have lost some information—through phonological mergers and the like—as compared with Proto Austronesian. As a consequence a given form in a modern Austronesian language could often be derived by quite regular rules from any of several theoretically possible Proto-Austronesian forms. Often, in fact, more than one of these theoretically possible Proto-Austronesian forms have actually been reconstructed. But this kind of ambiguity is much greater in Oceanic than in Indonesian languages. The number of Proto-Austronesian reconstructions that must be counted—on purely phonological grounds—as possible ancestors of a particular Oceanic form is, on the average, significantly greater than in the case of Indonesian forms.

I should make it clear that I have no doubt at all that the Oceanic languages belong to the Austronesian family and that many of the Oceanic cognates proposed by Dempwolff are unquestionably valid. The difficulty is that the relationship between Dempwolff's Proto-Austronesian and modern Oceanic languages is a quite remote one, and, as a result, the number of cognates that

can be identified with any degree of confidence is often disappointingly small. I have, therefore, gradually become convinced that the strategy that is most likely to lead to some progress in working out the later history of the Oceanic languages will involve the comparison of the modern languages with a reconstructed Proto-Oceanic rather than directly with Proto-Austronesian.

With this objective in view I prepared a finder-list of Proto-Oceanic forms, or what I took to be reasonable candidates for that status (Grace 1969). I attempted to include in the list all suitable reconstructions that had been made and published elsewhere. Actually, only Milke has made formal reconstructions that were labeled as Proto-Oceanic. However, I included the forms reconstructed as Proto-Eastern Oceanic by Biggs (1965). I also included a number of additional Oceanic cognate sets which were not reflected in previous reconstructions, assigning to each the appropriate Proto-Oceanic shape.

The fact that some of these reconstructions are designated as Proto-Oceanic while others are explicitly intended just as Proto-Eastern Oceanic is no problem. The phonology of Proto-Eastern Oceanic as conceived of by Biggs and that of Proto-Oceanic in my conception (Milke's conception differed only in unessential details) are identical. According to the sound correspondences as they are now understood a Proto-Oceanic form that had been retained in the proposed Proto-Eastern Oceanic would show no change in shape whatever in the interval. Therefore, there is no obstacle whatever to comparing languages which would be presumed to be Oceanic, but not Eastern Oceanic, with a set of mixed (Proto-Oceanic and Proto-Eastern Oceanic) reconstructions. If we find that the language has a form cognate with a reconstructed form labeled Proto-Eastern Oceanic, it simply means that the label of the reconstruction but nothing else—is to be changed. The new label should reflect the fact that the form has been traced back at least as far as the last proto-language (e.g. Proto-Oceanic) common to the Eastern Oceanic languages involved and to the language being studied. In short, for present purposes these differences in labels can be disregarded.

Most of the reconstructions used in this study were taken immediately from the finder-list (Grace 1969). However, I have modified the orthography in

always enclosing in parentheses, first, all nasal consonant symbols that immediately precede another consonant (I find there is a tendency to take these indications too seriously), and second, all final consonants. These final consonants are generally based on the Proto-Austronesian evidence, and do not necessarily indicate that the consonant has been observed in Oceanic languages.

However, the finder-list, although I find it convenient, is not generally accessible, and does not in any case give the evidence on which the reconstructions were based. Moreover, in the course of the present study I have added a few reconstructions that are not represented on the finder-list. Therefore, I will briefly indicate where the evidence for the reconstructions appearing in the list at the end has been published, and when there is no previous publication, give some indications of the supporting evidence here.

I will take the reconstructions in numerical order, using the numbers appearing in the list. The abbreviations are as follows: B = evidence in Biggs 1965, C = evidence in Cashmore 1969 (occasionally accompanied by her spelling of the form), MA refers to Milke 1968, and MB to Milke 1961. The PAN citations are from Dempwolff 1938 in Dyen's orthography. The sources are as follows: 1. B, 2-4. C, 5-6. B, 7. Rotuman solo, Sa'a tolo, 8. B, 9. C (one(one)), but with initial *q based on Tongan ?one?one, etc., 10. MA, 11-13. B, 14. C(kam(i)u), 15-18. B, 19. C, 20. PAN hunuq and Sa'a hunu 'slaughter, butcher', etc., 21 MB, 22. B, 23. PAN (t)avu/mataq, Fijian tamata, Tongan tanjata, etc., 24. MB, 25. B, 26. MA, 27. MB, 28. B, 29. PAN binay, Samoan mafine, etc., 30. C(pati), 31. B, 32. MA, 33-34. MB, 35-36. B, 37. C, 38. B, 39. Tongan matolu, Rotuman mafolu, etc., 40. MA, 41-42. B, 43. MA, 44-45. C, 46. MA, 47. B, 48. PAN meñak, Samoan momona 'be fat', Nggela mona 'greasy', 49. C, 50. Mota rowo, Sa'a loho. 51. B, 52. C, 53. B, 54. C, 55. PAN panas, Tongan mafana, Rotuman mahmahana, etc., 56. B, 57. PAN puki, Dempwolff cites Fijian matavuki 's disease of the foot'. If this is not valid, I am not certain of any Oceanic evidence. 58. PAN puluq, Fijian sapavulu, Mota sapavul, Sa'a tanahulu, etc., 59. C(muri), 60. PAN nusa, Dempwolff cites Sa'a ñnute 'Florida Island', but we also have, e.g., Roviana nusa 'island'. 61. C (piri), 62. MB, 63. Fijian vitolo, Sa'a hiolo, 64. MB, 65. B, 66. MA, 67-68. C, 69. B, 70. MB, 71. B, 72. C, 73. B, 74. C, 75. B,

76-77. MA, 78-80. B, 81. PAN qaur(r), the precise Proto-Oceanic shape is in some doubt, but there seem to be cognates, e.g., Sa'a ñu, Mota ñu, Nggela ñu, Tolai kaur, etc., 82. B, 83. C, 84-85. B, 86. C(piri), 87-88. B.

II. Consonants

Proto-Oceanic P.:

*p becomes f in all languages but Tarpia, where it appears as p. Tarpia p is in fact frequently articulated as a bilabial continuant. The name of the language in other sources is usually written "Tarfia". Numerous examples of these correspondences can be found in the list. Sobei provides some evidence for a separate reflex for *mp (and *pp).

We find sobei p in items (46, 71, 73, 76). Of these only (46) shows cognates in other languages. In this case, Bongo agrees in showing p instead of f. However, Tarpia p in this form does not differ from the regular reflex of *p. There does not appear to be any hypothesis of environmental conditioning that could account for Sobei, Bongo p as regular reflexes of non-prenasalized *p.

However, we also find Sobei, Wakde b in (56). Since the following vowel in (56) is e in both languages, and since all examples of Sobei p cited above have following a, it seems possible that the distinction between Sobei p and b results from environmental conditioning. Note that Masimasi has f in (56) but that the following vowel is a. There is not sufficient information to attempt any further comment on this Masimasi form.

Proto-Oceanic t:

*t appears to have fallen together with *s in Tarpia. The reflexes appear to be: t before Tarpia non-high vowels (a, e, o), s before high vowels, and ? before a consonant or word boundary. For t from *t, cf. (5, 10, 16, 17, 23, 41, 49, 63). For t from *s, cf. (7, 21, 24, 27). For s from *t, cf. (4, 32). For s from *s, cf. (8, 33, 34, 60). For ? from *t, cf. (12, 22, 23, 45, 87). For ? from *s, cf. (33, 62).

One example shows s before o from *s (28). As there is only one ex-

ample (7) of t as the reflex of *g in that environment, the present interpretation—at least the specification of environments—may seem somewhat doubtful. However, in view of the substantial evidence that the reflexes of *g and *t have fallen together and the evidence that *t becomes t before o (16, 63), it seems best to retain the interpretation given, and leave (28) as the unexplained exception.

*t appears generally as t in all of the other languages. There are numerous examples in the list. However, there are a few apparent exceptions. Sobel has r in (17, 88) and ʔ in (39). (88) is the only example of a reflex of *t immediately following Sobel i, and (17, 39) are the only instances immediately preceding a Sobel consonant, the consonant being different in the two cases. It seems at least possible that one or more of these forms are genuinely cognate and that their reflexes may be explainable by some regular rule.

Masimasi shows g in one example (17) (note that the proposed Sobel cognate is also aberrant). I can propose no explanation, except the possibility that g represents the word-final reflex of *nt. However, this would constitute the only evidence that any of these languages reflect *t and *nt differently.

Proto-Oceanic s :

*g falls together with *t in Tarpia, as noted above. The reflexes of *g in that language have been discussed in the discussion of *t. Otherwise, *g appears as h in Wakde and as g in the remaining languages. There are numerous examples in the list, and exceptions are few. One unexplained exception is the loss of *s in initial position in one Wakde form (33). In the case of (34) the proposed Sobel cognate is presumably morphemically complex. It should be explained that Sobel form is included on the assumption that the sequence -sa- (not the sequence, dei-) represents a morpheme cognate with the reconstructed root.

Proto-Oceanic R, l, d (and r) :

*R, *l, *d, (and *r?) appear to have fallen together in all Sarmi languages,

although the conditioning is somewhat complex.

In Sobel, the reflex appears to be d before vowels other than a. Examples are: (1) from *l, (a) before i (5, 11, 38), (b) before o (7, 18); (2) from *R, (a) before i (72), (b) before o (26, 46); (3) from *d, before u (15).

The reflex appears to be r before Sobel a. Examples are: (1) from *R (43); (2) from *d (6, 13, 75). We also find r before t in the one example (45) of a reflex before a consonant. One exception to the above rule shows d before a in (77). However, (77) is one of only two cases in which the reflex appears as the second member of a consonant cluster—the other is (75). (77) differs from (75) in that the cluster is medial rather than initial, and that the preceding consonant is voiced and nasal.

Two further apparent exceptions show the loss of *l (16) and *R (25) before Sobel (u) (where d would have been predicted). However, (16, 25) represent the only instances of the specific environment / o-u. Thus the loss may be conditioned by that specific environment (or a more generalized environment, say, between rounded vowels). Wakde and Anus show parallel developments in (16, 25).

The final reflexes are not clear. We find r from *l (84), from *d (59) and from *r (?) (47); but t from *l (58) and from *d(r) (61). Although t is preceded by high vowels in both cases and r by a in two cases, we find r preceded by i in (84). In any event the examples do not suggest that the different reflexes are due to any preservation of original consonant distinctions.

One additional case of an apparent exception should be mentioned. (43) shows apparent loss of the second instance of *R. However, in most examples, CVCVCV forms that were either inherited or developed through partial reduplication lose the second vowel in Sobel. Normally a consonant cluster results. However, the loss of the second vowel in (43) should have resulted in a cluster of two identical consonants. Since I have not noticed any geminate clusters in Sobel, it seems possible that they are regularly reduced, and that the r in (43) actually reflects both instances of *R.

In Wakde and Masimasi the reflex seems uniformly to be r. Examples

are (5, 6, 7, 11, 13, 15, 18, 26, 38, 58). However, as mentioned above (16, 25) show loss in Wakd . However, we may again tentatively assume that loss occurs just between rounded vowels. No Masimasi cognate of (25) was recorded, but (16) shows an aberrant development. Although the r is retained in this form, it appears to metathesize with the following y. It is possible that that is the regular Masimasi development in the specific environment.

Anus, Bongo, and Tarpia show d from *d in (16, 13). The following vowels are Anus e in (13), and a in the remaining forms. There is no other example of a reflex before Anus e or a. For Bongo and Tarpia there is one further example of a reflex (in this case, of *R) before a. In the latter case (43), the reflex in both languages is r. This might suggest different reflexes for *d and *R. However, the first two cases (i.e., 6, 13) are in initial position, while (43) involves medial position. The medial reflexes of *d appear to be r (cf. 15, 59, 61, 82, 86). However, there is only one other example of a reflex of any of these consonants in initial position, and that is Tarpia r (38) from *l. In this form the following vowel is i. In other positions the reflex of all is generally r (cf. 5, 7, 11, 16, 18, 26, 38, 45, 46, 47, 50, 63, 81).

I tentatively propose the hypothesis that these consonants have indeed fallen together, and that the reflex is d initially before a (or Anus e from an earlier a) at least, and at least not before i in Tarpia. Elsewhere it is r.

However, a few problems remain. Anus, like Sobel and Wakd , shows a zero reflex in (16, 25). Again, we can explain this as conditioned by the environment between rounded vowels if we can assume that the initial o of (15), which is not part of the inherited root, was added at a time subsequent to that in which the environment in question had its effect.

Further, we find Bongo final i from *R in (43, 46), and in (63) my notes show i where there was a second person subject, but r elsewhere (this is from *l). Since no other verbs showed this pattern, I cannot comment further except to suggest that final r in Bongo sometimes shifts to i under some—probably not phonological—conditions.

One further problem involves Bongo d from *l in (39). It represents the second member of a consonant cluster, but we find r as the second member of clusters in (11, 18, 45, 86). (39) differs from the first three of these in that it is a medial cluster which is involved. However, (86) must also be considered as involving a medial cluster since the root would be preceded by a pronominal prefix. Moreover, the following vowel is i in both cases. The only difference which it is possible to seize upon as a potential conditioning factor is the first consonant of the cluster, viz., l in (39).

Proto-Oceanic k :

*k is consistently reflected as k in Anus, Bongo, and Tarpia. There are numerous examples in the list.

In Sobel, it appears that *k is reflected as k before high vowels (22, 35, 37), otherwise as ʔ medially (47, 85), but in all other environments it is apparently lost (11, 14, 28, 31, 45).

*k disappears in all Wakd  and Masimasi examples in the list (11, 14, 22, 28, 31, 42, 57). However, in both languages the first person singular possessive suffix appears as k. The explanation is not clear. The suffix is most often reconstructed as *aku. This suggests that Wakd , Masimasi k may reflect only the prenasalized consonant, while *k without prenasalisation is lost. However, I have no further evidence of a separate reflex for *ak.

A second hypothesis would be that *k is retained in final position, but lost elsewhere. This hypothesis would require us to assume that the *k of (28, 42) was lost prior to the loss of the following vowel, but that the loss of the final vowel of *aku occurred earlier (i.e., before intervocalic *k was lost). The question cannot be resolved at present.

With respect to lost consonants it should be pointed out that in most of the languages y sometimes develops before initial a—including a which has become initial through loss of a preceding consonant—and that initial y sometimes develops when an initial consonant that was followed by a Proto-Oceanic rounded vowel has been lost. Cf. (14, 19, 41) for y, and (9, 11, 22) for y.

Proto-Oceanic m :

*m is reflected as m in all of the languages (numerous examples).

Proto-Oceanic n :

*n is reflected as n in all languages (numerous examples).

Proto-Oceanic ŋ :

*ŋ appears to have fallen together with *n (as ŋ) in all (4, 5, 58, 71, 73, 82). However, *ŋ appears not to be reflected in Sobei, Wakd'é, and Masimasi (5). I can only speculate that, as was suggested for *R in Sobei (43) above, the second vowel of the trisyllable was lost, and that a non-permissible internal cluster resulted. However, a similar cluster, although presumably across a morpheme boundary, does occur in Sobei (17).

Proto-Oceanic q :

*q disappears in all languages (9, 25, 27, 41, 53, 56, 74). As was noted above, of course, w or y sometimes develops before a vowel which comes to stand in initial position as a result of the loss of a preceding consonant.

Proto-Oceanic w :

*w appears to be reflected as w, at least in initial position, in all languages (26, 42, 51, 85).

III. Canonical Forms

Before dealing with the vowel reflexes it is useful to consider the canonical forms of inherited morphemes, particularly since vowels are regularly lost in some environments. Except for such regularly recurring morphemes as subject pronominal prefixes to verbs and possessive pronominal suffixes to nouns, I will generally disregard those cases where the form recorded appears to contain morphemic material which presumably does not belong to the proto-morpheme in question. This omission of forms which appear to involve compounding or unknown affixes seems necessary. In the first place it is impossible to know the earlier canonical shape of the unidentified elements. In the

second place polymorphemic forms will usually be of more than two syllables, and the data available to me permit only rather tentative suggestions about the development of trisyllables, while almost nothing can be said about longer forms.

Inherited Forms of the Shape (C)VCV :

Of the forms that qualify for consideration here, no verbs except for Boygo (86) and the quite doubtful case of Boago (35) retain the final vowel of the proto-form in any of the languages.

With three exceptions, proto-forms of this shape, other than verbs, never lose the final vowel in Sobei, Wakd'é, and Masimasi. The exceptions might with more information, prove to be regular. Most of the non-verbs are nouns. However, two of the exceptions are not nouns. (14) and (38) are, respectively, a pronoun and a numeral. It seems possible that some reformulation of the distinction, stated here as holding between verbs and non-verbs, would accommodate these cases. The remaining exception is Masimasi (42). This form involves an inherited medial consonant that is regularly lost in Masimasi. It seems reasonable to suppose that the single vowel which was recorded for this form reflects a sequence of two vowels that resulted from the loss of the intervening consonant. If that is the case, the loss of the final vowel would involve the development of a CVV, rather than a CVCV shape.

In Anus, Boago, and Tarpia these non-verbs fall into two classes of approximately equal size. One class loses the final vowel (2, 7, 9, 12, 13, 14, 19, 22, 26a, 33, 38, 40, 44, 46, 65, 78, 79). The other (8, 10, 11, 17, 18, 24, 26b, 35b, 37, 42, 48, 49, 52, 57, 64) does not. Although it is impossible from the available data to give a precise characterization of the basis of the classification, it is striking that the first class does not contain any nouns that were recorded with possessive pronominal suffixes. In fact, almost none of these forms would, on the basis of their meanings, be expected to take such suffixes. On the other hand, a number of forms in the second class were recorded with such suffixes, and several others might reasonably be expected to be permitted to take them. It seems possible, in fact, that some or all of these

forms might actually be marked for possession by a third person singular possessor.

In the limited paradigmatic data that I collected, I tended to neglect the third person singular forms. The reason was, I think, that they appeared uninteresting. Those that I have (for all of the languages) seem to consist of nothing but the root—that is, they lack the suffixes that are present for all other persons and for the plural. However, they do retain the final vowel. Thus, I am unable to suggest any means for distinguishing the form of unpossessed nouns of this class and nouns marked for a third person singular possessor.

There is, in Anus, a particular subclass of the class of forms which lose their final vowel which should be mentioned. The subclass in question consists in those proto-forms which has a as the first vowel and a high(i, u) second vowel, that is, the shapes (C)aCi and (C)aCu. These appear as Anus(C) eiC (2,4, 12, 13, 19, 35). The rule does not apply to (27, 53) which lost their second consonants. Two further exceptions are (79), which is perhaps a doubtful cognate anyway, and (14) where the expected development seems to have occurred except that the final vowel somehow remains. It may be of some significance that both of these problematic forms are pronouns.

Only four of the proto-forms under discussion here have vowels in initial position. In some cases the initial vowel is lost. Only one of these forms (19) belongs to the class which loses its final vowel in Anus, Bongo, and Tarpia. (19) is also the only one of the four forms which always retains its initial vowel. (8) loses the initial vowel in all six languages. In (24) the initial vowel is lost, at least in Bongo and Tarpia, and perhaps in Anus which has an unidentified prefix. The fourth case (37) is most unclear. The initial vowel is clearly lost in Tarpia. Anus and Bongo both show something in the position of the initial vowel, but in each case the particular development from *i is difficult to explain. If we were to regard the first vowel in these two forms as belonging to separate morphemes, we would be obliged also to question the Sobei form. One is tempted to suggest that perhaps, in forms

which regularly retain the second vowel *i is lost in all of the languages while initial *a is lost just in Anus, Bongo, and Tarpia.

Inherited Forms of the Shape CVV :

Included here also are forms whose Proto-Oceanic reconstruction has the shape CVCV where, in one or more languages, the second consonant has been lost. The vowel sequence of the CVV forms is usually reduced when the form has been lengthened by reduplication or added morphemes. Otherwise, where the second vowel of the sequence is a phonetically higher vowel than the first, the sequences prove quite stable (3, 6, 16, 27, 31, 51, 53). However, sequences where the second vowel is not higher are instable, except perhaps in Bongo. In these cases they appear reduced (Wakdó, Masimasi (15)), or may break into two syllables with a semivowel inserted between the two vowels (Anus, Tarpia(1,21) Sobei (76)).

Breaking :

In addition to the cases just mentioned there are a number of other cases of phenomena which may tentatively be grouped together under the heading of "breaking". All of them show the development of sequences involving a semivowel or a high vowel and at least one other vowel. One such phenomenon which has already been mentioned is the development of y before an initial vowel in (9, 11, 22). For completeness, at least, the development of initial y (14,19, 41) should also be recalled.

We may include also the development of Bongo ua from *u (8) and from *o (52, 63). There are further cases where Bongo ua does not correspond to a Proto-Oceanic rounded vowel, but where cognates in Tarpia or Anus do have a rounded vowel, thus raising the possibility that a rounded vowel was present in these forms at some stage in Bongo history. The examples are (23, 44, 48), and perhaps (15) might be regarded as providing further evidence. We may also mention the apparent breaking of *a to Bongo ia in (12, 24) and to Tarpia ava in the cognate forms in that language.

The examples suggest that Bongo ua normally corresponds to a rounded

vowel in Tarpia, but that when that would result in a Tarpia monosyllable of the shape CV, Tarpia shows breaking to VvV. An analogous rule would account for the breaking to Tarpia ava in (24), but (12) would require some sort of modification of the rule.

We should also cite a scattering of further forms which possibly are relevant to the question of breaking. These include Sobel (59, 68, 75), Wakd  (8), Masimasi (16), and Bongo (34, 37, 81). Finally, we should probably recall in this connection a development in Anus that was mentioned above. That is the development of Anus ei from Proto-Oceanic a which stood before a consonant which was followed by a high vowel that was subsequently lost (i.e.,/(C) - Ci, u).

Inherited Forms of the Shape CVCVCV :

Included here also are forms whose Proto-Oceanic reconstruction has the shape CVCV where in one or more languages the form has been expanded into a trisyllable, apparently by partial reduplication or, in some cases possibly, prefixation. As in the case of the (C)VCV forms, there seem to be two classes in Anus, Bongo, and Tarpia. One class (23, 29, 43, 45, 63) loses the final vowel; the other (5, 39, 54, 55, 80) retains it. Bongo (5) is misleading in that the form cited cannot immediately precede the possessive suffix, but rather is followed by the plural marker -di- which thus alters the canonical shape. When the final vowel is lost, the second vowel is retained. Conversely, when the final vowel is retained, the second vowel is lost—except in two Anus examples (39, 54). It seems at least possible that the second vowel of those forms is epenthetic.

Again as in the case of the (C)VCV forms, Sobel, Wakd , and Masimasi regularly retain the final vowel (there being no verbs among the examples for these languages). Generally, as in comparable cases in Anus, Bongo, and Tarpia the second vowel is lost (23, 45, 55, 60, 77, and Sobel 29, 39). However, it is retained in two cases in Wakd  (29, 39) unless the a found there is epenthetic.

In two cases (5, 43) we find the shape CVCV. My hypothesis, which was

mentioned above, is that the second vowel was lost as expected and that the resulting cluster was subsequently reduced.

One case (56) involves a Proto-Oceanic consonant which is regularly lost. The loss of this consonant, if it occurred prior to the loss of the second vowel, would leave the shape CVCVV. That is what we actually find in Sobel. The Masimasi form is comparable except that for Masimasi I wrote the semi vowel w where in Sobel I recorded u. The Wakd  form possibly represents the same development followed by reduction of the vowel sequence.

One final case (25) presents a variety of problems. The second consonant and very possibly the third (cf. discussion of *l, *R above) are regularly lost. The canonical shape has, furthermore, been altered, especially by reduplication, in most of the languages. It seems quite possible that the forms in at least some of the languages are genuine cognates with their current shapes resulting from quite regular rules.

I will not propose an explanation for the retention or insertion of a second vowel in some Wakd  and Anus examples. In view of the limited evidence available it would be possible to suggest a rule specifying either retention or epenthesis in environments defined in terms of the specific phonemes involved. However, I have found no rule that seems particularly attractive.

Lost of High Vowels in Bongo :

In our consideration of forms of the shape VCV we saw two forms in which the initial was *i. We observed that in one of these cases (8) and possibly the other (37), the initial *i had been lost in Bongo. There was no example of initial *u among the VCV forms, but we find that both *i and *u are lost from the first syllable of a number of forms of other canonical shapes (11, 18, 45, 57, 63, 86).

However, we find that the Proto-Oceanic high vowels are retained in cases where the following vowel has been lost (5, 20, 22, 29, 33, 62). This appears to suggest that the loss of these Proto-Oceanic high vowels in Bongo occurred at some time subsequent to the vowel losses (i.e., of some final vowels and some second vowels of trisyllables) discussed previously. One counter

-example appears in (86) where the proposed rules should have led to the loss of the second vowel and should, therefore, have blocked the loss of the first. I have no explanation of that form. The fact that it is the only verb showing that kind of vowel loss is probably not significant.

With regard to *Boggo* (86) it would be remiss not to mention Wang 1969. Superficially, at least, this form appears to represent precisely the kind of problem that would be expected as a residue of competing sound changes which intersected in time.

It should be added, moreover, that the loss apparently does not occur in the case of CVV forms (68). As we have seen, the development of forms of this shape seems to be governed by quite different conditions. Thus, it seems that the environment in which the vowel loss occurred must have required a following consonant as well as a vowel subsequent to that.

There are two remaining counter-examples (32, 52). Both of these forms show vowels apparently reflecting *i and in each case the vowel in question is followed by a consonant and a vowel as required. However neither of the actual reflexes is a high vowel. I would tentatively suggest that these vowels had already been lowered before the time in which the rule in question (which, as we have seen, is probably chronologically recent) operated.

IV. Vowels

Proto-Oceanic e :

There are very few examples of *e. These suggest that the regular reflex is perhaps e in all languages. Examples are *Sobei*, *Wakd *, *Masimasi* (9), *Sobei* (29), and *Wakd *, *Anus*, *Boggo*, *Tarpia* (41). However, we find unexplained *Sobei* o in (70) and *Wakd * i in (29).

Proto-Oceanic o :

With the possible exception of *Wakd * and *Masimasi*, where the limited amount of evidence leaves some uncertainty, the most common reflex in all languages is o. However, we find a as a second regular reflex in certain environments in *Sobei*, and presumably *Wakd * and *Masimasi*.

In *Sobei*, *Wakd *, and *Masimasi* *o appears as a when followed by a consonant plus a vowel (7, 9, 46, 67, 70, 73). All of the examples just given involve the initial syllable, but *Wakd * (39)-if the vowel in question is not epenthetic-is evidence that that is not a necessary characteristic of the environment.

Sobei generally shows o in other environments (7, 21, 26, 28, 46, 74). All examples except (21, 25) involve final position, and neither of the latter involves both a following consonant and a vowel. Of these etyma, *Masimasi* has o in (7), and *Wakd * has o in (7, 28) but u in (21, 26) and perhaps (25). I can offer no explanation of the distribution of o and u reflexes in *Wakd *; (7) and (26) are a near minimal pair.

One *Sobei* exception is (77), which shows a. The fact that this is the only case where a consonant cluster precedes may be significant. An additional exception is (56), where the reflexes appear to be *Sobei* e, *Masimasi* i. There is no basis for attempting an explanation.

Anus, *Boggo*, and *Tarpia* consistently show o in closed monosyllables (7, 28, 46, 50, 65, 67, 70) with the single exception of (9), where all have e. (9) exhibits a kind of breaking which has been mentioned above. Its explanation may lie in that fact.

Aside from the closed monosyllables the only other examples of reflexes of a first syllable *o are (21, 48). (21) involves an originally unstable vowel sequence and subsequent breaking (cf. Canonical Forms). (48), which has *Anus* o, *Boggo* e, and *Tarpia* a, is a generally aberrant form--a fact that raises doubts about the etymology.

(25) can only be mentioned for completeness. It presents unique conditions. There are, likewise, no comparable data for assessing the conditions involved in *Anus* e in (39), but there is the possibility that it is epenthetic.

In all other cases of *o which was not in the first syllable of the root, the *Tarpia* reflex is o (26, 52, 63, 83). However, although *Boggo* has o in (26), it shows (breaking to ?) ua in the other two instances (52, 63). An *Anus* cognate was recorded only for (52), where the reflex is u. I cannot propose an

explanation.

Proto-Oceanic u :

The most usual reflex in all languages is u. However, there are a number of examples of i, particularly in the western languages. The conditions determining the appearance of i cannot be stated conclusively, but some suggestions are possible.

The reflexes of *u in Sobei, Wakdé, and Masimasi present a number of uncertainties. *u as the first vowel of CVV forms generally appears as u: Sobei, Wakdé, Masimasi (15), Sobei (76), Wakdé (1). However, we find Sobei, Masimasi o in (1).

In closed monosyllables we find Sobei, Wakdé u in (20). However, there are two possible counterexamples in Sobei (47, 59). If the etymologies suggested for the forms are correct, elements have subsequently been attached so that the vowels in question are no longer in the first syllable of the words. This circumstance may have played a role in their subsequent development.

We may now consider the cases where the first syllable reflex of *u is followed by a consonant plus a vowel. Where the following vowel is rounded, the usual reflex is i: Sobei, Wakdé (18), Sobei (33, 72, and the doubtful 88). Wakdé (33) shows i, but the Proto-Oceanic rounded vowel of the second syllable has now become unrounded. Whether or not this form constitutes a counter-example to the proposed rule depends on the chronological ordering of the changes. However, it is possible that the environment that conditions the reflex i in Wakdé involves a high vowel rather than a rounded vowel in the following syllable.

One counter-example appears to be Sobei (60), which has a. However, the consonant cluster which follows that reflex may be the explanation for it.

Where the following vowel is not rounded, the conditioning factors are obscure. (11), with Sobei, Wakdé a and Masimasi i, may show the effect of breaking. However, according to the rules proposed for *k in Sobei, the Proto-Oceanic u in this form must already have made some shift in order to permit

the loss of initial *k in Sobei (thereby freeing the vowel for that type of breaking).

(22) shows Sobei u, but Wakdé i. This appears again to suggest that a following high vowel, rather than a rounded vowel as was proposed for Sobei, might be the factor that conditions Wakdé i. However, an alternative explanation might be based on the breaking in Wakdé.

Sobei (45) and Wakdé (57) are further problematic cases. There are environmental factors in each that cannot be properly evaluated with the data at hand.

The reflexes of *u which was not in the first syllable are again usually i or u.

Where preceded immediately by a vowel, the reflex appears to be u: Sobei, Wakdé, Masimasi (6, 16), Sobei, Wakdé (53), Sobei (and perhaps Wakdé)(25) and perhaps Sobei (68) which involves either a suffix or breaking.

Otherwise, we find i in the following examples: Sobei, Wakdé, Masimasi (2, 12), Sobei, Wakdé (39), Sobei (67) and (13), but with Wakdé, Masimasi u in (13). It may be significant that in all but one case (67) the preceding consonant is an apical. It may also be noted that the preceding vowel is a in all cases except (39)(and the Wakdé form shows preceding a in (39) as well). However, two possibly significant facts concerning Sobei (39) should be mentioned. (39) is the only instance where the reflex in question is preceded by a consonant cluster rather than a single consonant, and the preceding vowel—Sobei a—derives ultimately from *a.

In most of the cases where the Sobei reflex is u, the preceding consonant is not apical. Examples are (37), (44), (58) (also Masimasi), (33)(but with Wakdé i), and (8) (but with Masimasi i, Wakdé iu). However, two examples do show preceding apicals. In one (66), moreover, the preceding vowel is a. In the other case (56), Wakdé shows o which may represent the fusion of two vowels (*uo), while Masimasi shows u. The preceding vowel is Sobei, Wakdé a, Masimasi a, from *i.

There are two aberrant reflexes, in both cases preceded by an apical consonant. In (22), Sobei shows a (but Wakdé i). In (18), Sobei shows o and

Wakd \acute{e} u. It may be significant that the preceding vowel is a high vowel in both cases.

It is apparent that the available data do not make it possible to formulate rules to account for all of these reflexes. However, there does seem to be sufficient patterning to suggest that, if we could obtain more accurate knowledge of the order in which the changes have occurred, and therefore of the environments that existed at various stages in the history of the languages, many of the present reflexes might prove to be precisely predictable.

In Anus, Bongo, and Tarpia, *u generally appears as u. Examples are (1, 6, 8, 11, 15, 16, 18, 20, 22, 25, 33, 37, 45, 53, 58, 59, 68, and 88?). In Anus we find exceptions. Anus i appears in (18). Note that this reflex is followed by a consonant plus a rounded vowel—an environment that seems to condition the occurrence of i in Sobei, and possibly other western languages. In (11) we find Anus e. It may be of significance that the reflexes of the cognates in the western languages were also unexplained. There are only two cases where the word-final reflex is not u. These turn out to be the only cases where the preceding segment is an apical consonant. This is reminiscent of the tendency, noted above, for *u to be reflected as i in the western languages when preceded by a vowel followed by an apical consonant. In (39) the Anus reflex is i as in Sobei and Wakd \acute{e} . In (18) it is o as again in Sobei. No explanation for the reflexes in (18) is apparent.

There are several Bongo exceptions. (8, 81) do not present any problem except for what appears to be breaking of different kinds. (39) shows final i after an apical. (47, 66) represent more or less questionable etymologies, and each, if cognate, is complicated by combination with other morphemes.

There are two exceptions in Tarpia. (47) as in Bongo and Sobei must be regarded as representing a doubtful etymology. (57) shows the reflex i. With respect to the latter, it may be significant that proto-forms which had high vowels, like or unlike, in two successive syllables regularly show like high vowels (usually u-u) in Tarpia (cf. 11, 18, 45, 59).

Proto-Oceanic i :

The most usual reflex in all languages is i. However, there are sporadic instances of other reflexes. The possibility that the reflexes of *i and *u have fallen together in certain restricted environments is noted.

In Sobei, Wakd \acute{e} and Masimasi the reflex is generally not i when followed by a consonant plus a vowel. The only counter-examples are Masimasi (38) and Sobei (37). In the latter case there is some doubt that the vowel in question actually derives from the reconstructed morpheme (cf. the cognates in other languages).

There are not enough examples to be specific about regular reflexes in this environment. We find Sobei, Wakd \acute{e} e and Masimasi a in (56), and Sobei, Wakd \acute{e} a in (32). Wakd \acute{e} has a in (29), but there is the possibility that it is epenthetic.

In morpheme-final position we find i immediately after a vowel (31) (and Wakde 34?). Following a consonant we have i in three cases (11, 32, 73) and u in one (19). As it happens, all of the three cases where the reflex is i show a preceding apical consonant, while (19) does not. This parallels the rule suggested for i and u reflexes of *u in these languages, and suggests that in the western languages, as perhaps also in Tarpia, the reflexes of *i and *u fall together in certain restricted environments.

Sobei (88) provides one further possible counter-example in final position. However, the etymology is quite doubtful.

All environments not so far covered consistently show i. The only examples are from Sobei: in closed monosyllables (38, 61, 84); followed by a vowel (68).

In Anus the reflex is consistently i. The only counter-example is the doubtful initial syllable of (37).

In Bongo and Tarpia the reflex is generally not i when followed by a consonant plus a vowel. Bongo (32, 52) have a (37) has wu, but, as has been suggested before, this may reflect a separate element. Tarpia (52) has a, while (63) has o, and (32) has i. (32) has i in the following syllable; this

may be the factor responsible for raising the first vowel (or for preventing its being lowered).

In final position i is the usual reflex (32, 35b, 57, 64, 86, 3, 27, 31, 51). However, (11) shows u in both languages. This may be connected with the tendency, noted for Tarpia, for high vowels of adjacent syllables of the same morpheme to become alike.

The same phenomenon may be involved in (45) in both languages. Generally the reflex in closed syllables is i (29, 38, 61, 62). Boggo (5), with e, represents an exception, but this reflex may be due to the following consonant cluster produced by the addition of the plural suffix -di.

The only example of i immediately before a vowel is Boggo (68), where the reflex is i.

Proto-Oceanic a :

The most common reflex in all languages is a. However, there are frequent instances of other reflexes. A number of hypotheses regarding environmental conditioning are proposed. In addition to several environments which appear to condition a in all languages, suggestions are made as to environments producing the following reflexes: Sobei e, Masimasi e, o, Anus ei, o, e, and e or a and Boggo e and e or a.

Sobei, Wakd , and Masimasi generally show a in CVC forms. The one exception, Sobei (35) has no apparent explanation.

As the first member of a vowel sequence we find Sobei, Wakd  a (6, 30, 31, 53), but in Masimasi there is partial assimilation to the following vowel. In Masimasi, we find e before i (31) and o before u (6).

Before a consonant followed by a vowel we generally find a (2, 12, 13, 17, 19, 24, 26, 40, 41, 44, 54, 58, 66, 69, 71, 74), and Wakd , Masimasi (10), Wakd  (25, 29, 39). However, Sobei has e in (10, 25, 43). Sobei e is the regular reflex before a consonant cluster (see below). Thus, the reflex in (43) provides additional support for the hypothesis that the medial consonant in that form represents a reduced cluster.

Sobei, Wakd , and Masimasi show i in (5), which also involves a pos-

sible reduced cluster. Other unexplained exceptions are Sobei (85) and Wakd  (23).

Before a consonant cluster, Wakd  has a in the single example (23). There are no Masimasi examples. In the same environment, Sobei has e (23, 29, 39, 55, 77), but a in (45). There are two environmental factors in the case of (45) that might be significant. It is the only word-initial example (that is, without a preceding consonant), and it is the only case where the following consonant is an apical (viz., x).

In final position a variety of reflexes offer no discernable pattern. The most frequent are a and o. With a we find Sobei, Wakd , Masimasi (10), Sobei, Wakd  (24), Wakd , Masimasi (17), Sobei (43, 55, 71), Masimasi (5, 38). With o we find Sobei, Wakd  (54), Sobei, Masimasi (40), and Sobei (23, 60, 69, 72, 85). In addition, there is i (Sobei, Wakd  (5)), e (Sobei 45, 76)), and u (Wakd  (40)).

In the case of Anus, we have already mentioned the rule whereby an original CVCV form whose first vowel was *a and whose second vowel was a high vowel, and which belonged to a class which normally lost the final vowel, assumed the shape CeiC. Examples are (2, 4, 12, 13, 35a, 39). The lone exception is (79), a pronoun. This form seems a bit suspect because of the fact that the comparable pronouns in the other languages cannot be derived from this proto-form, and yet seem suspiciously similar to the Anus form (e.g., Tarpia dim, Boggo duom, Masimasi iem, Wakd  idim).

In CVCV forms where the second vowel was not high and where the second vowel was lost, the rules are not clear. The only verb (36) shows a. (26, 40) have o. The o in (26) may be due to what seems to be a rule changing a to o after an initial w (26, 42, 51). The different reflexes in (36) and (40) are not so easily explained. There are some reasons to speculate that the loss of final vowels in verbs and some nouns may have occurred independently. If that were the case, it would constitute no more than a possible clue as to the direction in which the explanation might be sought. On other hand, the parallel environments of (40) and (23), which shows the reflex o in a non-initial closed syllable is suggestive. (23) is also unexplained, and it may be mentioned

that both (40) and (23) present problems in other languages.

Before a consonant plus a vowel, when the latter was a, the reflex is generally ə or ɛ. I find no way to account for the distinction between what I have written ə and what I have written ɛ in either Anus or Bongo. I wonder if they do not represent the same phoneme. Examples of ə as a reflex of *a in this environment are (49, 58). Examples of ɛ are (10, 24, 54, 55). We also find ə in (5, 17, 39). In each of these cases the following vowel is ə. However, in (5, 17) this ə presumably comes from original *a (I will suggest below that it may be a recent development). Note, however, that *a seems to be reflected as ə before a consonant cluster (5, 55). Note further that the same reflex appears in two cases where we would have expected a cluster, but where that cluster is interrupted by a vowel (39, 54). The possibility has been mentioned that these vowels which interrupt the expected cluster are recently introduced epenthetic vowels.

Before a consonant followed by a vowel other than a, the reflex is generally a (41, 54, 58, 64). However, (23, 29) are unexplained exceptions.

In final position, the normal reflex is a (10, 24, 49, 55). However, we find o in (42, 48, 54). I would suggest that the first two are due to a recent rule that changed a to o where the preceding vowel was o. (54) remains a problem, and in view of the obscurity in which the history of its preceding vowel reposes, is likely to continue to do so for the time. We also find ə in two cases (5, 17). I suggest that, as in the case of the final o, these represent a recent assimilation to the preceding vowel under some unspecified conditions.

In Bongo, *a when immediately followed by a vowel generally appears as a (6, 27, 30, 51). In final closed syllables we find a (2, 13, 14, 19, 26a, 36, 43, 69) except where (unexplained) breaking occurs (12, 23, 44).

Before a consonant cluster the reflex is ə (39, 55, 80). Before a single consonant plus a vowel, we generally find ə or ɛ (which possibly represent the same phoneme) where the following vowel is a (10, 17, 35a, 43, 49). An exception is (42) where we find u (possibly significantly) between v and k.

Where the following vowel is not a, the reflex is usually a (26b, 41, 64, 66). However, there are exceptions. (23, 29) are unusual in that the following vowel is in a closed syllable (if the sequence ua can be regarded as falling in-to a single syllable). (4,5) both involve considerations (including added morphemes) that are difficult to assess.

Where final *a has been preserved it generally appears as a (10, 17, 24b, 42, 49, 21, 55, 80), except in cases of breaking (24a, 48).

In Tarpia *a generally is reflected as a. I have not discovered any conspicuous gaps in the set of environments in which this reflex occurs. Nevertheless there are a number of exceptions. In (12, 24) we find the breaking to ava which has been mentioned previously. In addition there are several cases where *a appears as i or u. Examples of the i reflex-(4, 5, and perhaps 34,25) The first three of these involve *i in the environment in such a way that one wonders if some kind of metathesis may have played a role. The same question arises with regard to some classes of u (e.g., 44, 60, and possibly 48). No such explanation is available for the remaining cases of u (23, 29). It must be significant that the items that are problematic in Tarpia are usually problematic in suggestively similar ways in Bongo and Anus.

Items showing at least one example of Tarpia a for *a are (1, 2, 3, 5, 6, 10, 13, 14, 19, 21, 23, 26, 27, 30, 31, 35, 36, 41, 42, 43, 49, 51,83).

V. Conclusions

Nothing in the results presented here appears to give any occasion to doubt that these languages do belong to the Oceanic subgroup of Austronesian. Although, there were, not surprisingly, a number of cases where it was impossible to account for the particular reflex of a particular Proto-Oceanic phoneme in a particular form, I am not aware of any cases where the explanation would benefit from recourse to Proto-Austronesian reconstructions rather than Proto-Oceanic. On the other hand, all of the array of phonological developments that characterize Proto-Oceanic as distinct from Proto-Austronesian appear to be reflected.

I once suggested (Grace 1955:338) that the Oceanic subgroup (there called "Eastern Malayo-Polynesian") extends no farther west than approximately the western border of Australian New Guinea. The present study, therefore, gives notice that that earlier statement requires amendment.

One feature of this analysis that might be of significance is the paucity of evidence for a distinction between prenasalized and non-prenasalized consonants. Of course, such paucity of evidence can hardly be regarded as conclusive in view of the small number of cognates available at all. Moreover, a separate reflex in some languages for one prenasalized consonant, *mp, seemed fairly likely. However, it does seem possible that the development of prenasalization in these languages has been different from that in some other parts of Oceania--particularly parts of eastern Melanesia--and presumably from Indonesia as well. Whether further information on these languages or other languages of the area might throw some light on this so far most mysterious phenomenon it is impossible to guess.

The number of individual segments that could not be fully explained is, of course, fairly large. However, I do not think that is at all surprising. The number of available cognates was small. Moreover, there seem to have been considerably more conditioned changes than has been the case (or than have been identified and reported) in many Oceanic languages. The vowels in particular do not show the remarkable stability that we find in some languages of eastern Oceania. Various indications in the course of the study suggest to me that many of the doubtful phenomena would become clear if we had more information that would permit us to reconstruct the sequential order of the various changes.

Finally, the only fitting conclusion must be the expression of the hope that these languages will some day receive the more serious field study that they deserve.

VI. Cognate List

	Proto-Oceanic	Sobei	Vaké	Masimasi	Amu	Bogco	Tarbia	
1.	pua (q)	*afo	afu	afo	fowo	fukwa	pava	fruit/seed
2.	manu(k)	maninetio	mani	mani	mein	man	man	bird
3.	mai	ama	-ma	-ma-	-ma, -ae	-mai, -mi	-mai	come
4.	taji(s)	-tan	-tan	-tan	-tein	tanian	-nsin	cry
5.	taliŋa	tidi-	tixi-	tira-	terne-	teren	tarni-	ear
6.	(n)da(u)n	rau	rau	rou	deu	deu	deu	leaf
7.	solo	sado	haro	saro	sor	sor	tor	mountain
8.	isu(g)	su-	hiu-	si-	su-	sua-	siwi-	nose
9.	qone	wane	wane	wane	wen	wen	wen	sand
10.	(ŋ)meta	(meta (meta	-meta -meta	-meta-	meta	meta	meta	sharp tooth
11.	kuli(t)	wadi	wari	wiri	keri	kru	kuru	skin
12.	patu	fati	fati	fati	feit	fiat	paya?	stone
13.	(n)danu(m)	rani	ranu	ranu	dein	dan	dan	water
14.	kamu	yam-	yam	yam	keimu	kam	kam	ye
15.	dua	daidu	ru	ru	oru	erkuat	erko	two
16.	tolu	tou	tou	tour	tou	tor	tor	three
17.	meta	somarnam 'eye'	mata-ro 'face'	masa malna 'eye'	mete-keino 'eye'	meta-keia 'eyebrow' meta-dani 'tear'	meta-keia 'tear'	
18.	pulu	fido	firu	firo	firo	fru	puru	feather
19.	api	yafu	yafu	yefif	yefif	af	yap	fire
20.	puu(q)	(-fun	-fun	-fun	-fun	-fun	-pun	hit kill

<u>PO</u>	<u>Sobei</u>	<u>Vakde</u>	<u>Masimasi</u>	<u>Anus</u>	<u>Boygo</u>	<u>Tarpia</u>
61. pi(dr)i	-fit					twist
62. pi(n)sa					fiasis	how much?
63. pitolo					ftuar, ftuai	hungry
64. ta(n)si			tasi		tasi-	yo. brother
65. toko(n)			(kai)tok		tok	stick
66. natu	natu				teinasteia	child
67. topu	tafi				tof	sugar cane
68. niu(r)	niue				niu	coconut
69. (n)sama	samo				sam	outrigger
70. po(n)se	faso				fos	paddle
71. papa	(kin)pana					eat(food?)
72. Ru(g)ma(q)	dimo					house
73. (g)poni	pani					night
74. qato(p)	ato rau					roof
75. pada(n)	frau					pandanus
76. (m)pua	puve					betel nut
77. malo	menda					bark cloth
78. ki(n)ta			kit			we, incl.
79. kami			kim			we, excl.
80. mamesa					mensa	dry
81. qau(rR)					awur	bamboo
82. (n)dojo						to hear
83. lalo					-rnek	in
					raroi	

<u>PO</u>	<u>Sobei</u>	<u>Vakde</u>	<u>Masimasi</u>	<u>Anus</u>	<u>Boygo</u>	<u>Tarpia</u>
84. pili(q)	fir					choose
85. wa(g)ka(g)	wofo					canoe
86. pi(dr)i					-fri	braid(ropo
87. tanu(m)					-tniei	bury
88. pu(n)ti	firo				fun	banana

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BEBERAPA ASPEK KEHIDUPAN ORANG ARSO

Parsudi Suparlan

ABSTRACT :

This article is a preliminary ethnographic survey of the Arso people who live approximately forty kilometers to the southeast of Djajapura. There are some 2000 people in the district living in twenty-seven villages. The survey was centred in the village of Arso which is the headquarters of the Catholic Mission. Arso is one of ten villages speaking the Tajket (or Abrab) language; elsewhere Manem or Melowa is spoken.

Sago is the principal food but gardens for growing taro, sweet potatoes etc; are made; fish and shrimp are also important in the diet. Sago areas belong to the clan (keret) but in recent years trees have been planted; these belong to the nuclear family which is the principal unit in all economic activity.

Clans are exogamous patrilineal units and traditionally there were restrictions on intermarriage between members of certain clans; nowadays these restrictions are breaking down. Each clan has a head (juakwontor) who also functions as the war leader. The clan has its own totem which is represented by a symbol painted inside the house. Land ownership is vested in the clan. The mother's brother is a person of great importance in Arso social organization. He has the main responsibility for providing his sisters son's bride price; in return he is rendered various kinds of support by his nephew.

During pregnancy both husband and wife must observe various taboos. In earlier years delivery took place in a special house built apart from other houses in the village but such houses no longer exist.

Soon after birth the child is given a Christian name; the traditional name is chosen by the mother's brother and is given one to two months later. On this occasion there is a small feast; the parents provide the food and the maternal uncle brings arm bands and stone axes for the future bride price.

At the age of twelve or thirteen young boys enter the mum-ja, the house for initiants located away from the village. There they are kept awake all night and frightened by old men who strike them with banana leaves and sing and play sacred flutes. Each boy is given a new name by his jarwo, an old man who acts as guardian, and presented with a net bag and a waluh (penis covering). Boys stay in the mum-ja for two to three months during which time they receive instruction in the myths, learn to hunt and to play the sacred flutes. After this period they move to the bachelors' house (jatija) where they live until the time of marriage.

During the period of bachelorhood the young man will try to hunt as many pigs as possible; the pigs killed are given to his jarwo and maternal uncle. When the young man has killed more than thirty pigs a feast (jongwai) is held and the young man is deemed ready for marriage.

In early years bride exchange was customary and the family still, in theory, chooses the husband. In actual fact nowadays the girls themselves

initiate many of the marriages; the girl makes a gift of tobacco and betelnut to the boy of her choice. Elopement is not uncommon. Marriage is not an occasion for a large feast. The family of the bridegroom comes to the house of the bride where they are fed; the bride price is then handed over. There are still, it is noted, a few cases of polygyny.

The influence of the mission and government is very strong in the area and although some aspects of the traditional culture yet continue to endure, it seems that the Arso have moved into a new era.

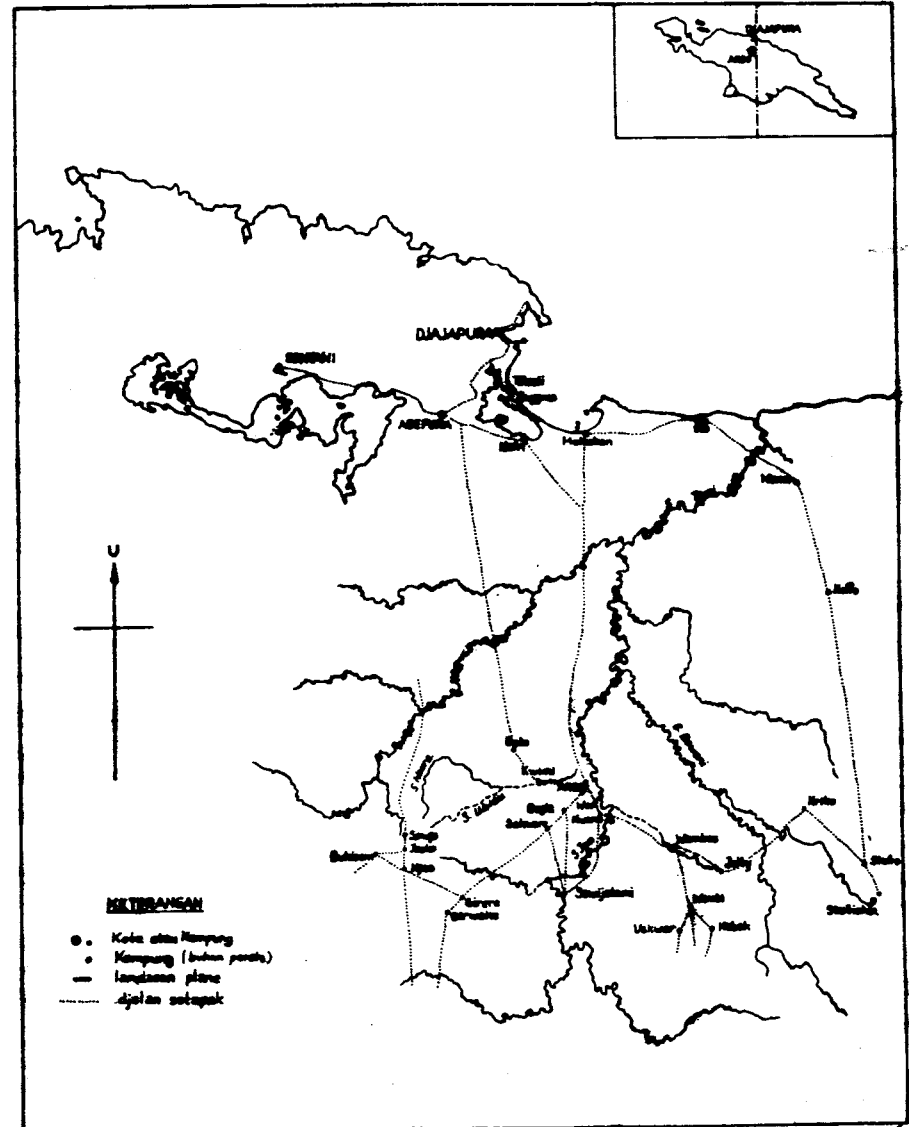
Orang Arso tinggal dikampung Arso dan di-kampung2 sekitarna jang terletak diarah tenggara dari kota Sukarnapura. Djaraknja dengan kota Sukarnapura kira2 40km, dan bila menggunakan pesawat terbang Porter Pilatus kira2 memakan waktu 20 menit.

Kampung Arso pada masa sekarang ini merupakan pusat pemerintahan dari Distrik Arso jang meliputi 27 buah kampung. Djumlah seluruh penduduk Distrik Arso lebih kurang 2000 orang. Dan penduduknja ini terbagi atas berbagai kelompok bahasa jaitu: Tajket atau Abrab, Manem dan Melowa. Jang termasuk dalam kelompok bahasa Tajket ialah kampung2: Arso, Wor, Kwana, Sajotami, Bagia, Sekware, Girere, Kwimi, dan Bate. Djumlah penduduk kesepuluh kampung ini ada 900 orang, dan djumlah penduduk kampung Arso jang merupakan pusat dari tulisan ini ada 341 orang.

Walaupun kesepuluh kampung ini menggunakan bahasa jang sama dan djuga ada djalinan2 hubungan2 kekerabatan diantara anggota2 masjarakatnja, tetapi setiap kampung ini adalah berdiri sendiri dan tidak berada dibawah supremasi kampung jang lain, ataupun merupakan sesuatu federasi, dan bahkan pada djaman dulu sering terjadi perang antara satu kampung dengan kampung jang lain.

Disamping merupakan pusat pemerintahan dari Distrik Arso kampung Arso djuga merupakan pusat penjebaran agama Katholik. Disini terdapat Sekolah Dasar Missi Katholik tempat anak2 mendapat pendidikannja. Seluruh penduduk Kampung Arso beragama Katholik, ketjuali beberapa pegawai Pemerintah jang bertugas didaerah ini jang tidak berasal dari kampung Arso.

Walaupun pada zaman dulu sering terjadi "peperangan" antara kampung Arso dengan kampung2 jang lain, lebih2 dengan kampung Jetti dan Kriko jang



terletak disebelah timur dari kampung Arso, tetapi hubungan damai antara satu kampung dengan kampung jang lain itu tetap ada pada waktu2 tertentu, jaitu pada waktu ada pesta2 babi, jang mempunyai nilai rituil, disamping merupakan tempat pertemuan berbagai kampung tempat mereka mengadakan tukar menukar benda-benda berharga seperti, manik2, kapak2 batu, gelang2 Trfia, dsb. Pesta babi seperti ini dinamai pesta "jongwai".

Daerah Arso dan sekitarnya sesungguhnya merupakan suatu daerah jang baru seperti lintas sadja diteliti, dan ini terlihat dalam berbagai karangan karangan lepas seperti misalnja tulisan dari Hoogland (Hoogland, 1955, hal. 85), dalam *Verslag van de Militaire Exploratie van Nederlandsch Nieuw Guinea 1907-1915: 1920, 290,*, dan oleh later Rombout P.W. O.F.M. (Rombout P.W. O.F.M. 1959, no.1, 2, 3).

Penelitian didaerah ini kami adakan pada tanggal 23-3-1965 s/d tgl. 26-3-1965, dan pada tgl.7-4-1965 s/d 14-4-1965, sebagai salah satu bagian survey jang diadakan dalam rangka penempatan transmigran didaerah ini. Djuga penulisan ini dapat dikatakan merupakan suatu "preliminary report" jang tentu akan diteruskan dalam suatu tulisan jang lebih luas dan lebih mendalamkan berdasarkan penelitian2 jang akan kami adakan lebih landjut.

Kehidupan se-hari2

Seperti pada umumnja masjarakat2 di-kampung2 jang ada di Irian Barat, mereka hidup dari hasil2 sagu dan berladang (berkebun), disamping berburu babi hutan dan binatang2 liar lainnja, dan sekali2 mentjari udang dan ikan.

Pada umumnja hampir seluruh kegiatan perekonomian se-hari2 dilakukan oleh sebuah keluarga batin (nuclear family) sebagai basis. Djuga pada waktu berburu babi hutan dilakukan lebih sering setjara perseorangan dan setjara bersama-sama dalam kelompok2.

Pada umumnja pembagian kerdja jang ada didasarkan atas pembagian jang didasarkan atas perbedaan kelamin atau sex dan umur. Pada waktu mengambil (memukul) sagu, jang dilakukan tiga hari sekali atau seminggu sekali, tergantung dari pada banjknja sagu jang diambil dan dibawa kerumah sampai habis untuk dimakan selama beberapa hari, si-suami memotong batang pohon sagu sampai ro-

boh ditanah, membersihkannya, membelahnja, memukul hati pohon sagu itu, dan kemudian si isteri jang memeras hati pohon sagu jang sudah hantjur itu, merendamnja dengan air sampai mendjadi sagu, mengisikannya kedalam tumang (wadah dari djalinan2 daun sagu) dan kemudian membawanja kerumah.

Dulunja hutan2 (dusun2) sagu jang ada itu tidak ditanam orang, dan merupakan milik anggauta2 keret(clan) setjara bersama. Dengan bertambahnja djumlah orang, setiap orang mulai menanam hutan2 sagunja sendiri dan mendjadi-kannya miliknya sendiri setjara perseorangan. Dusun2 sagu jang sekarang dimiliki oleh orang2 Arso setjara perseorangan itu, dulunja telah ditanam oleh orang2 tua mereka jang kemudian diwariskan kepada mereka setjara patrilineal, artinja hanja anak laki2 sadja jang berhak untuk memperoleh warisan dusun2 sagu orang tuanja dan mempunyai hak atasnja. Anak2 perempuan hanja mempunyai hak untuk mengambil sagu dari dusun sagu saudara2nja, dengan seidjin saudara2nja jang bersangkutan. Djuga ini berlaku bagi wanita2 jang sudah kawin.

Kalau mereka tidak pergi mengambil sagu, mereka pergi kekebun jang terletak beberapa kilometer disekeliling kampung mereka. Dikebun, mereka tanam pohon2 keladi, pisang, ubi kaju, ubi rambat, tembakau, pepaja, dan sajur2 an seperti, bajam, gedi, ketimun. Djuga mereka tanam pohon2 sukun, keluwih, dan djeruk, dan kelapa. Pohon2 ini djuga diwariskan setjara patrilineal.

Hari2 biasa, biasanja mereka pergi kekebun untuk memetik hasil kebun dan mengambil kaju bakar. Dikebun biasanja laki2 memeriksa tanaman2nja, mengambil hasilnja, dan siisteri dan anak2nja mentjari kaju bakar., mengumpulkan hasil kebun, dan membawanja pulang kerumah. Selama pergi dan pulang dari kebun si suami tidak lepas dari parang, busur dan anak panahnja. Ini untuk mendjaga adanja kemungkinan serangan dari musuh, dan kemungkinan adanja babi hutan atau binatang hutan jang lain jang bisa segera dibunuh, untuk nanti dagingnja bisa dimakan.

Rumah2 mereka pada masa sekarang didirikan diatas tiang2 dan berdenah segi empat, jang terdiri atas serambi muka, satu atau dua kamar tidur atau lebih, dan dapur. Dapur ini pada umumnja terletak diatas tanah. Sebuah rumah biasanja didiami oleh lebih dari sebuah keluarga batin. Tetapi ada djuga rumah2 jang didiami hanja oleh sebuah keluarga batin. Disekeliling dinding di-

dalam rumah dibuat tempat2 tidur dari kaju untuk tidur kaum pria, dan ditengah-tengah dibuatkan tempat2 tidur untuk kaum wanita dan anak2 (Verslag van de Militaire Exploratie van Nederlandsch Nieuw Guinea, 1907-1915 1920, hal.290 skets no.10). Sesungguhnya taraf hidup mereka masih berada dalam taraf subsistence, artinya memproduksi hasil2 kebun dan benda2 lainnja hanya untuk dimakan dan dipakai sendiri. Tetapi dengan masuknja sistim wang, jang diintroduisir oleh Pemerintah dan Missi Katholik didaerah ini, maka taraf subsistence ini mulai tergojah. Orang2 mulai memproduksi hasil kebun dan hasil2 hutan sagu tidak untuk dimakan sendiri tetapi mulai diusahakan supaya ada surplus. Surplus ini mereka djual kepada Koperasi Pemerintah dan kepada Koperasi Missi jang belum lama berselang didirikan didaerah ini, dan wang hasil pendjualannja dipakai untuk membeli barang2 import, untuk keperluan rumah tangga dan konsumsi. Tidak ada usaha2 untuk menimbulkan kakejaan untuk mempertinggi status seseorang didalam masyarakat.

Sistim kemasjarakatan

Kelompok2 Keekerabatan. Kelompok keekerabatan jang terpenting dalam masyarakat orang Arso adalah suatu kelompok keekerabatan jang keanggotaannya diusut melalui garis orang laki2 atau berdasarkan prinsip keturunan jang dalam ilmu antropologi disebut prinsip patrilineal. Kelompok2 keekerabatan serupa ini disebut keret. Keret pada orang Arso itu dalam istilah antropologi dapat disebut clan, seperti apa jang dikemukakan oleh Murdock (1960:68). Anggota2nja sering tinggal dalam rumah2 jang mengelompok menjadi satu dalam pola perkampungan desa, dan diantara anggota2 sesuatu keret jang sama itu ada larangan untuk kawin.

Keret2 jang ada di kampung Arso ialah, keret Naujager, Barotian, Tajket, Tafor, Tuamis, Girbis, Girjar, Kijauwet, dan Wangot. Diantara anggota2 keret2 jang tersebut diatas itu ada jang tidak boleh saling kawin, dengan alasan bahwa nenek moyangnja masih bersaudara kandung. Seperti antara keret Wangot dan keret Naujager, dan antara keret Tafor dan keret Girjar, itu anggota2 anggota keretnja sampai sekarang tak diidjinkan untuk saling kawin. Djuga antara keret2 Tajket dengan Naujager, Girjar dengan Naujager, Kijauwet dengan

Naujager, dan Tuamis dengan Naujager, itu dulunja tak bisa saling kawin. Tetapi pada masa sekarang larangan ini sudah dilanggar dan perkawinan2 jang terjadi diantara anggota2 keret2 tersebut dianggap biasa.

Setiap keret dipimpin oleh seorang kepala jang dalam bahasa Arso disebut juskwontor. Dengan statusnja sebagai juskwontor itu, mereka tidaklah mempunyai sesuatu hak istimewa jang tertentu jang membedakannja dari anggota2 keretnja jang lain. Hanya dalam penggunaan tanah oleh orang2 jang menumpang, dalam soal2 perkawinan, pertengkaran atau perselisihan, biasanja juskwontor inilah jang memberikan kata jang terakhir dengan djuga persetujuan orang2 tua. Bahkan pada waktu masih sering terjadi perang antara satu keret dengan keret jang lain dan antara satu kampung dengan kampung jang lain, juskwontor inilah jang menjadi kepala perangnya. Setiap keret, djuga mempunyai totem2 tertentu dan "dewa" tertentu jang selalu mereka sebut atau minta tolong dalam keadaan susah. Dewa ini mereka sebut "Tuhan Tanah". Setiap totem mempunyai simbol simbol tertentu, jang selalu mereka lukiskan di-rumah2 mereka masing2. Setiap keret mempunyai daerah tanah sendiri, ditengah mana anggota2 keret jang bersangkutan membuat ladangnja dan berburu binatang2 hutan seperti, babi, kasuari, burung2 dsb. Djuga setiap keret pada djaman dahulu mempunyai rumah budjang sendiri jang mereka namakan jatija, tempat tinggal orang2 dewasa jang tidak atau belum kawin, tetapi karena kemudian satu kampung didiami oleh lebih dari satu keret, karena adanya sistim menumpang, maka kemudian satu kampung tjukup mempunyai satu rumah budjang¹. Sesungguhnya keret jang memiliki tanah2 sekeliling kampung Arso adalah keret Naujager. Karena keret Naujagerlah jang pertama kali datang dan berdiam dikampung Arso. Keret2 jang lain baru kemudian datangnja setjara berturut2. Dan karena keret2 jang ada dikampung Arso itu sudah saling berkawin, maka semuanya bisa memakai dan menggunakan tanah disekelilingnja kampung Arso dengan tidak banjak persoalan.

¹ Hal ini dikemukakan djuga oleh Hoogland sbb.: De nederzetting bestaat daar uit: 1e. een familiegroep (clan) met een hoofd; 2e. een grondgebied (oeten) en 3e. een kampong (dorp), en een vaak een mannenhuis met daarbij behorende fluiten (1955:85).

Diantara anggota2 satu keret ada perasaan in-group, terutama dalam hal hubungannya dengan kawannya seorang anggota keret yang bersangkutan. Dengan kawannya seorang anggota sesuatu keret akan terlibat seluruh anggota2 keret yang lain dari keret yang bersangkutan dalam hal pengumpulan mas kawin yang harus dibagikan (kalau laki2), dan dalam pembagian mas kawin yang diterima (kalau wanita). Juga dalam "peperangan" dan pembalasan dendam, solidaritas diantara orang2 yang berasal dari keret yang sama cukup kuat. Bahkan isteri dari keret yang bersangkutan yang tinggal bersama suaminya dikampung yang lain, bisa turut membantu keretnya untuk membunuh suami dan anggota2 keret suaminya.

Perasaan in-group dalam kelompok yang lebih besar, adalah diantara anggota2 masyarakat satu kampung yang merupakan suatu gabungan dari beberapa keret.

Walaupun demikian, tetapi keluarga batin juga merupakan suatu kesatuan yang amat penting didalam kehidupan sehari2 seperti telah diutarakan diatas. Juga hutan2 sagu merupakan milik suatu keluarga batin yang juga merupakan suatu kesatuan rumah tangga (household) yang diwariskan setjara patrilineal hanya dalam hal tertentu, yaitu kalau tidak ada yang mewarisinya, karena tidak punya anak laki2, maka hutan sagu itu diserahkan kepada keretnya dan berada dibawah pengawasan juskwontor.

Walaupun perasaan solidaritas terutama terdapat diantara orang2 yang berasal dari suatu keret yang sama, tetapi didalam kehidupan sosial orang Arso peranan dari paman dari pihak ibu amatlah besar terhadap ego². Seorang paman dari pihak ibu dari ego turut berkewajiban untuk membantu dengan memberikan sejumlah benda2 untuk mas kawannya, pada waktu ia lahir dan pada waktu ia akan kawin. Begitu juga seorang paman memegang peranan yang penting dalam proses sosialisasi kemenakannya ini.

Sebaliknya seorang ego mempunyai kewajiban2 tertentu terhadap paman dari pihak ibunya. Membantunya pada waktu si paman dari pihak ibunya ini membuka ladang2 yang baru. Memberikan bagian2 yang terbanjak dari hasil buruannya di hutan, seperti babi hutan, ksuari, dll., sedangkan ia sendiri tidak memakan apa2 dari hasil buruannya itu.

Istilah2 Kekerabatan. Sistem istilah kekerabatan dalam bahasa Arso atau Tajket, terutama dibedakan atas perbedaan sex dan angkatan. Keterangan mengenai sistem istilah kekerabatan dapat dibagi menjadi dua matjam istilah kekerabatan yaitu: a. term of address yaitu dipakai oleh ego untuk memanggil seseorang kerabatnya apabila ia berhadapan dengan kerabat tadi dalam hubungan pembijaraan langsung; dan b. term of reference, yaitu dipakai oleh ego apabila ia berhadapan dengan seseorang yang lain, berbitjara tentang seorang kerabat¹.

a. Term of address :

aijuwa	= ajah
mana	= anak, dan yang seangkatan
sen	= ibu, dan yang seangkatan
jamrau	= ipar laki2
kaise	= ipar perempuan
nataba	= kakek angkatan ke I dari seorang ego
aupa	= nenek angkatan ke I dari seorang ego
nataba	= kakek angkatan ke I dari seorang ego
nautaba	= nenek angkatan ke II dari seorang ego
tijeba	= mertua laki2
tuoba	= mertua perempuan
ntuba	= kakak laki2 ajah dari seorang ego
naba	= adik laki2 ajah dari seorang ego
imbetiokre	= kakak laki2 ibu dari seorang ego
imbetsanggi	= adik laki2 ibu dari seorang ego

b. Term of reference :

aijuwa	= ajah
mama	= ibu
sen	= anak
sendire	= anak laki2
sendirum	= anak perempuan
enatar	= kakak laki2
jurum	= kakak perempuan
jendir	= adik laki2
junor	= adik perempuan
jamrau	= ipar laki2
kaise	= ipar perempuan
nataba	= kakek angkatan ke I dari seorang ego
aupa	= nenek angkatan ke I dari seorang ego
nataba	= kakek angkatan ke II dari seorang ego
nautaba	= nenek angkatan ke II dari seorang ego

¹ Periksalah hal ini didalam tulisan dari G.P. Murdock (Murdock, 1960, hal 97-98).

tijeba = mertua laki2
 tuoba = mertua perempuan
 ntuba = kakak laki2 ajah dari ego

Untuk istilah2 saudara sepupu (cousin) rupa2nja kurang dimengerti, dari interview jang kami lakukan tidak dimengerti, tapi kami masih berusaha untuk mendapatkan kepastiannya.

Pada umumnja saudara sepupu dipanggil atau disebut dengan menggunakan namanja sadja. Begitu pula untuk sebutan atau panggilan anak, adik, kakak, le-bih disukai untuk mengambil atau menjebutnja dengan menggunakan namanja. Sedang kan memanggil atau menjebut dengan menggunakan namanja dari seorang paman dari pihak ibu dari ego adalah tahu. Begitu pula terhadap ipar (saudara laki2 dari isteri).

Sesungguhnya bahan2 ini djauh daripada lengkap.

Lingkaran hidup individu

Masa hamil dan kelahiran :

Bila seorang wanita hamil, maka suami isteri jang akan mendjadi ajah ibu itu berada dalam keadaan krisis dan tegang. Tjalon ibu dan ajah harus mengindahkan berbagai pantangan makan makanan tertentu, dan sampai kelahirannya sibaji, sitjalon ajah dilarang untuk memotong pohon2 kaju jang besar, karena adanya kepertjajaan bahwa kalau pohon kaju besar jang dipotong itu roboh, maka tjabang2nja akan terbenam didalam tanah dan sukar ditjabat. Ini diasosiasikan dengan nanti akan sukarnya sianak lahir didunia.

Satu atau dua minggu sebelum sianak lahir, tjalon ibu diasingkan dalam sebuah rumah ketjil ditepi kampung dan tak boleh didatangi oleh sembarang orang. Biasannya didampingi oleh ibunya atau oleh kerabat2 wanita jang lain. Pada masa sekarang tjalon ibu melahirkan anaknya dirumahnya sendiri dengan ditolong oleh djururawat jang ada di Arso dengan pertolongan ibu dan kerabat2 wanita jang lain.

Setelah kira2 satu minggu atau lebih si anak lahir, ia mendapat nama Kristen (Katolik). Hal ini tidak terjadi sebelum agama Katholik ada di Arso. Setelah dua atau tiga bulan umurnja, ia mendapat "nama tanah", jaitu nama jang asli jang diberikan oleh paman2nja dari pihak ibunya. Untuk upatjara pemberian

nama ini diadakan pesta makan2 ketjil. Orang tua sianak menjediakan makanan2 dan saudara2 laki2 ibunya membawa manik2, kapak2 batu, gelang2 Tarfia, dan benda2 import jang lain, sebagai hadiah kepada sianak, sebagai tanda mata dan sebagai bekal mas kawinnja nanti, dan djuga sebagai tanda akan adanya kewadji-ban kewadji-ban tertentu dari sianak terhadap pamannya dari pihak ibunya ini. Makanan2 jang disediakan oleh orang tuanya untuk paman2nja ini dimaksudkan supaya kalau sudah besar nanti sianak tidak lupa kepada paman2nja, untuk menje-rahkan bagian terbesar dari hasil2 buruannya terutama babi hutan dan burung kasuari, dan djuga djangan lupa supaya selalu membantu paman2nja pada waktu tenaganja dibutuhkan.

Itu kalau jang lahir adalah anak laki2. Terhadap anak perempuan djuga djalannya upatjara pemberian nama tidak berbeda dengan jang terdjadi pada anak laki2, hanja arti dari pada pemberian2 paman dari pihak ibu di artikan lain, jaitu bahwa si anak tidak akan lupa kepada paman2nja, dan bila ia kawin nanti paman2nja ini akan mendapat sebagian dari mas kawin jang diterima oleh anak si -anak ini. Setelah sianak lahir sampai berumur lima tahun, ajahnja dan ibunya dikenakan pantangan2 untuk memakan ular, burung mambruk, burung kasuari, buaja dan burung elang. Dengan alasan bahwa kalau memakan ular, maka kalau anaknya sakit anak ini akan melilit lilit seperti ular, dan kalau makan burung kasuari maka sianak akan mudah dapat sakit panas dan gemetar, kalau makan burung mambruk sianak akan lambat bisa berdjalan karena burung mambruk itu berat badannya dan tak mudah terbang. Kalau makan buaja, sianak akan mudah mendapat sakit tjatjar. Dan tak boleh makan burung elang karena burung elang itu dianggap panglima perang, dan kalau makan, maka sianak akan tjelaka. Pada masa sekarang ini, pantangan2 sematjam ini hanja berdjalan sampai lebih kurang sianak berumur tiga atau empat bulan.

Didalam kehidupan se-hari2 sianak lebih lazim dipanggil dengan menggu-nakan nama Kristennja, dan tidak menggunakan "nama tanahnja".

Masa kanak2 :

Tidak ada sesuatu pesta khusus jang diadakan pada waktu sianak mendu-duki status sebagai anak2. Dalam masa pertumbuhan anak2 ini sampai mengindjak umur 12-13 tahun saudara laki2 ibu memegang peranan penting dalam kehidupan

sianak. Anak2 ber-main2 se-hari2 dengan teman2 sebahaja atau bila takut, ia ikut dengan orang tuanya keladang. Permainan anak laki2 biasanja dilakukan setjara ber-sama2 dan biasa merupakan suatu pendidikan persiapan untuk nantinya setelah dewasa siap untuk kehidupan dimasyarakatnja. Permainan2 itu antara lain ialah, perkelahian banting membanting jang mereka namakan sekija, bermain panah2an atau innottitya dengan menggunakan andjing sebagai sasaran panah mereka, dan permainan sembunji sembujian atau sangwa.

Anak2 perempuan biasanja djuga bermain ber-sama2 sembunjian dengan kawan2 sedjenisnja jang sebaja, biasanja bermain petak2 jang diintrodusir dari luar daerah ini. Umumnja anak2 perempuan lebih banyak membantu ibunya didapur dan mengasuh adik2nja jang lebih ketjil. Dengan adanja sekolah dasarMisi di Arso, anak2 mulai enam atau tudjuh tahun mulai memasuki bangku Sekolah Dasar, dan mendapat pengadjaran disekolah.

Masa Remadja :

Waktu datangnya masa remadja kira2 12-13 tahun, anak laki2 dan perempuan mulai dipisahkan. Anak2 laki2 harus masuk mum-ja atau rumah seruling sutji jang telah didirikan diluar kampung dan dipagari agar tidak terlihat oleh wanita dan anak2 ketjil. Di mum-ja inilah anak2 laki2 jang mulai dewasa dinisiasi. Sebelum anak2 dimasukkan kedalam mum-ja, orang2 tua dari anak2 tersebut dan paman dari pihak ibunya, menjediakan makanan2 se-banyak2nja untuk pesta2. Dan orang2 tua2 mulai memotong bambu2 dibuat seruling.

Orang2 tua2 kemudian meniup seruling dan anak2 setelah makan sekenjang-kenjangnja makan masuk ke mum-ja. Waktu anak2 akan masuk mum-ja masing2 mereka diberi waluh atau penis koker, dan nokken2 (tas jang dibuat dari djalinan kulit2 kaju jang sudah dihaluskan), oleh seseorang tertentu, Orang itu djuga jang memberikan nama jang baru kepada sianak. Orang ini dinamai jarwo atau sinama dari sianak. Mendjelang malam waktu anak2 akan masuk kedalam mum-ja, mereka di-takut2i oleh para orang2 tua2. Waktu mereka baru berada dalam mum-ja, mereka dipukuli dengan menggunakan pelepah2 pisang hutan oleh orang2 tua2 sampai ada jang pingsan, tergantung dari sikap mereka pada waktu2 sebelum masuk mum-ja jaitu apakah hormat pada orang2 tua dan terutama kepada orang tuanya dan paman dari pihak ibunya. Setelah dipukuli anak2 disuruh duduk dilantai,

orang2 tua2 mulai menjanji dan meniup seruling sambil berpesta pora makan2, sedangkan anak2 semalam suntuk tidak boleh tidur. Pada siang harinja orang2 tua2 memotong babi. Tetapi jang boleh memakan hanja orang2 laki2 sadja, sedangkan wanita2 dan anak2 tak diperbolehkan. Daging babi itu dimakan pada waktu pesta pada malam harinja Sedangkan anak2 hanja memakan papeda (bubur sagu), ikan2 ketjil2 dan sajur. Mereka tak boleh memakan pisang, sukun, babi dan segala daging ikan2 jang besar, pepaja, ubi djalar, dan ketela pohon.

Anak2 tinggal dalam mum-ja selama tiga atau empat bulan. Dan selama itu mereka diadjar meniup seruling setjara bagus, diadjarakan bagaimana bisa berburu dengan se-baik2nja. Dan djuga diadjarakan kepada mereka tentang mitologi mereka masing2. Selama seorang anak berada di mum-ja, jarwo nja itulah jang mendjadi pelindung dan mentornja. Djasa jarwo ini dibalas oleh si anak dikemudian hari, jaitu kalau ia berburu babi hutan dan berhasil mendapatnja, ataupun burung kasuari, ia tak melupakan jarwo nja dengan djalam mengirinkan bagian2 daging tertentu pada jarwonja. Jarwo ini adalah orang2 tertentu jang bisa berasal dari keret mana sadja, dan didjabat setjara timbal balik. Artinja, kalau dari keret Borotian pernah mendjadi Jarwo dari seorang keret Girbis, maka pada kesempatan jang lain kalau ada anak dari keret Borotian memasuki mum-ja, maka jarwo nja adalah dari keret Girbis.

Anak2 jang masuk mum-ja sampai mendjelang kawin dinamai sinbewagi. Dan setelah mereka ini berada kira2 3 atau 4 bulan didalam mum-ja, dan oleh orang2 tua2 telah dianggap tjukup, mereka lalu ditjukur rambutnja dan dibariskan dihalaman muka mum-ja. Lalu seorang tua kemudian memanah matahari dan dengan demikian selesailah sudah masa ini siasi bagi anak2 muda itu.

Setelah sinbewagi atau anak2 muda itu keluar dari mum-ja, mereka lalu tinggal dirumah budjang atau dalam bahasa Arso disebut jatija. Mereka tinggal disini terus sampai mereka kawin dan meninggalkan jatija. Sesungguhnya masa inisiasi seperti disebutkan diatas pada masa sekarang ini sudah tidak dilakukan lagi. Ini pertama karena dilarang oleh Pemerintah Hindia Belanda pada waktu itu, dan djuga ditentang oleh penjebar agama. Sehingga pada masa ini anak2 melalui masa remadjanja tanpa sesuatu godokan tertentu seperti masa2 dahulu, ketjuali pada Sekolah Dasar jang hanja sampai ketingkat atas kelas tiga seba-

gai kelas jang tertinggi sekarang dimana sudah sampai kelas lima. Walaupun telah keluar dari mum-ja tetapi makanan2 jang dulu dipantang waktu mereka ber ada di mum-ja masih tetap dipantang, sampai orang2 tua dari anak2 jang bersangkutan memberikan idjin untuk memakan makanan jang dipantang itu. Selama mereka tinggal di jatija, mereka masih tetap makan dirumah orang tuanja. Dan selama itu mereka tetap berusaha untuk bisa membunuh babi hutan se-banjak2 nja. Daging babi hutan jang dapat ia bunuh itu ia serahkan kepada orang tuanja paman dari pihak ibunya, jarwonja, dan kerabat2nja jang lain, sedangkan ia sendiri tidak memakannya sekali. Manja tengkorak dari babi hutan itu ia simpan di langit2 atap jatija. Kalau seseorang sudah biasa mengumpulkan tengkorak2 babi sebanjak tigapuluh ekor atau lebih, dan ber-sama2 dengan lima orang kawannya jang lain jang telah mengumpulkan tengkorak2 babi hutan dalam djumlah lebih sedikit, lalu diadakan pesta "jongwai".

Pesta ini merupakan pesta dansa jang dilakukan terus menerus sampai kira2 4-6 bulan, dan dihadiri oleh orang2 dari kampung2 disekiling kampung Arso. Bagi seorang jang djadi "jongwai" peristiwa ini merupakan suatu puntjaknja peristiwa dalam kehidupannya. Dan untuk mengadakan pesta itu orang tua dan kerabat2nja sedjak ber-bulan2 telah menimbun sebanjaknja. Dalam pesta jongwai itu orang jang bisa membunuh babi hutan se-banjak2nja itu mendjadi orang jang dimasuki roh jongwai dan mendjadi "leading star" dalam pesta itu. Kalau seorang anak perempuan mengindjak dewasa, haid untuk pertama kali ia mulai dipisahkan dari teman2nja dan dikurung didalam rumah selama lebih kurang satu setengah tahun. Masa isolasi ini pada masa sekarang hanja berdjalan kira2 3 bulan. Selama diisolasi didalam kamar ia diadjar oleh ibunya tentang pekerjaan rumah tangga pada umumnya dan tentang keradjanan tangan. Dan selama itu ajahnja dan saudara laki2nja serta kerabat2nja jang lain menimbun se-banjak2nja untuk pesta kawinnja nanti.

Setelah selesai masa isolasi ini, anak perempuan itu lalu dikawinkan dengan orang laki2 tertentu, kepada si anak perempuan itu ia telah dipertunangkan pada waktu ia masih ketjil.

Perkawinan :

Perkawinan pada umumnya adalah monogami. Pemilihan djodoh seringkali

sudah diatur oleh orang2 tua mereka, lama sebelum mereka jang bersangkutan sadar akan artinja perkawinan, tetapi tidak djarang pula pemuda pemudi kawin dengan pilihannya sendiri. Biasanja djenis perkawinan jang terachir tersebut diatas adalah atas inisiatif pihak wanita. Artinja pihak wanita jang menjatakan keinginannya kepada laki2 dengan tjara2 memberikan sirih pinang, tembakau, atau makanan kepada si laki2.

Dari beberapa informan didapat keterangan bahwa pada djaman dulu sekali, unsur mas kawin itu tidak ada dalam perkawinan orang Arso dan disekitarnya, tetapi jang ada ialah kawin tukar pengantin wanita (bride exchange). Dan pesta2 besar pada waktu kawipun tidak ada. Dari kerabat2 jang bersangkutan se kedar berkumpul dan makan2 dirumah orang tua dari pengantin wanita, dan dengan disaksikan oleh kepala2 keret masing2. Dengan demikian perkawinan dianggap sudah sjah. Perkembangan selanjutnja ialah bahwa meskipun tjara perkawinan jang dilakukan adalah perkawinan tukar menukar pengantin wanita, tetapi pihak lelaki memberikan sedjumlah benda2 sebagai maskawin seperti misalnja kapak2 batu, gelang Tarfia dan barang2 import. Pengantin wanita jang ditukarkan ialah itu tidak selamanya adalah saudara kandung dari pengantin laki2. Bisa djuga kerabat2 nja jang terdekat atau orang jang berasal dari keret jang sama. Tetapi ada djuga terdjadi perkawinan tanpa pertukaran pengantin wanita oleh salah satu pihak. Dalam hal sematjam ini mas kawin jang diminta adalah tinggi nilainya.

Kawin lari atau melarikan wanita terdjadi dalam kehidupan orang Arso dan di kampung2 disekelilingnja. Baik terhadap wanita jang sudah dipertunangkan sedjak ketjil dengan seseorang, maupun isteri orang. Akibat dari ini adalah pembunuhan bagi orang jang bersangkutan dan akibat2 jang lebih luas adalah "perang" antara keret2 jang bersangkutan. Akibat jang paling lunak dari ini adalah keharusan membayar denda bagi jang bersalah kepada jang mempunyai anak perempuan atau isteri.

Walaupun pada umumnya bentuk perkawinan adalah monogami, tetapi ada djuga orang2 jang mempunyai isteri lebih dari satu. Ini pertama karena adanya alasan bahwa isteri jang pertama telah terlalu tua, sehingga sebagai bagian dari suatu kesatuan ekonomi tidak bisa mendjalankan fungsinya lagi dengan se-baik2nja dan djuga karena adanya perkawinan levirate.

Dari mereka jang kawin lebih dengan seorang isteri pada umumnya orang2 jang sudah agak lanjut usianya.

Setelah kawin suami isteri hidup ber-sama2 dan merupakan suatu kesatuan rumah tangga. Rumah tangga ini merupakan dasar kehidupan ekonomi sehari-hari.

Pertjeraan antara suami isteri jarang2 terdjadi. Dan bila terdjadi maka sebab jang utama adalah karena siisteri mengadakan hubungan kelamin dengan laki2 jang lain. Tetapi jang sering terdjadi sebagai akibat daripada berdjainnja siisteri dengan laki2 lain adalah suami membunuh isterinja, dan karena tak bisa diterima oleh kerabat2 isterinja bisa timbul "perang" antara keret2 jang bersangkutan.

Kematian :

Sakit dan kematian menurut kepertjajaan orang Arso dan di-kampung2 sekitarnya, adalah disebabkan oleh gangguan hantu2 dan karena dibunuh, karena soal pelanggaran tanah ulajat, atau karena berdjinah dengan isteri orang lain.

Setelah seseorang mati, dengan tjara2 gaib tertentu djenasahnja diminta untuk menundjukkan siapa jang telah membunuhnja. Dan sebagai akibat dari pada ini adalah pembalasan dendam dan timbul lagi "perang" antara keret jang bersangkutan. Djenasah kemudian ditaruh diatas sebuah para2 jang dibuat dihutan dan ditinggalkan begitu sadja. Dan djalan jang dilalui untuk membawa djenasah itu kehutan ditutup. Atau ada djuga jang dikubur. Pada masa sekarang orang jang mati lebih lazim dikuburkan.

Pada masa belum lama berselang ini, kalau seseorang mati karena digigit oleh babi hutan, maka majatnja ditaruh diatas perapian darirnja sampai mendjadi kering seperti ikan asap. Lalu majat itu dibungkus dengan kulit kaju dan disimpan di-bohon beringin.

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THE POTENTIAL FOR POTATOE PRODUCTION IN WEST IRIAN

Peter Foster

ICHTISAR :

Kentang adalah djenis umbi2an jang terbanjak ditanam dinegara dengan iklim sedang. Kentang berssal dari daerah Andes di Amerika Selatan. Kita beranggapan tentang suatu djenis umbi di daerah tropis jang hanja menghasilkan suatu djumlah jang tidak berarti dari bahan makanan manusia di negara2 tropis. Tetapi merupakan bahan makanan pokok didaerah dengan iklim sedang.

Dengan adanya pemeliharaan untuk perubahan pertumbuhan, maka kentang telah dapat ditanam dalam suatu lingkungan jang sangat berbeda.

Perubahan pertumbuhan jang sangat istimewa adalah mungkin merupakan djawakan terhadap panjangnja hari.

Kentang jang didatangkan dari negeri Belanda ketanah datar beriklim sedang didaerah Irian Barat pada lebih dari 20th jang lalu masih tetap memberi hasil baik, walaupun tidak ada bibit2 baru jang diimport.

Projek FAO-FUNDWI 27/28 baru sadja mendatangkan sebanyak 35 djenis dari Meksiko jang akan memberi hasil lebih baik dari djenis2 jang telah ada. Disamping itu djenis ini akan ditjoba djuga di-daerah2 pesisir.

Umbi2 didaerah tropis mempunjai potensi makanan jang lebih tinggi dari pada bidji2an serta perbandingan portein jang lebih baik.

Menggunakan rata2 1 kg kentang sehari dapat menghasilkan semua asam2 amino ketjuali untuk methionine dan cystine jang kesemuanja dapat dihasilkan oleh 2 kg.

Tanda2 ini menundjkan adanja kebutuhan akan kentang di Irian Barat dapat dipenuhi ditempat, disamping adanja suatu djumlah jang diimport untuk diperjual-belikan dipasar.

Penduduk asli memerlukan lebih banjak protein sajur2an dalam makanan mereka maka seharusnya mereka dijakinkan untuk menanam lebih banjak tanaman berprotein tinggi seperti katjang2an. Untuk mengganti makanan, mereka tentu memerlukan waktu jang tjukup lama, oleh sebab itu djenis kentang jang mempunjai djumlah protein jang paling tinggi harus mulai ditanam. Tidaklah perlu untuk memulai suatu rentjana pemeliharaan kentang di LP3M, Amban. Kita harus pertjaja kepada hasil karya lain2 instansi.

Ada djuga kemungkinan bahwa kita telah mempunjai kentang jang sangat baik mutunja serta sesuai dengan iklim Irian Barat. Hal ini perlu diselidiki dengan tjermat sekali.

Kentang dapat diserang oleh banjak penjakit dan dibanjak negara bibit2 kentang jang sehat dibuat didaerah jang berdjauhan letaknja dari tempat dimana kentang itu ditanam.

Rupanja kentang di Irian Barat akan tinggal sehat maka tidak perlu untuk mendatangkan bibit2 baru.

Sungguh menggembarakan bahwa tetangga2 kita di Irian Timur dengan tjepat berobah kearah "fish and chip" (ikan dan keripik).

The potato, Solanum tuberosum, is the most widely grown root-crop of north temperate countries. With a total annual production of 300 million tons, it is, in fact, the most abundantly produced food crop of all exceeding even the cereals.

Potatoes originate from the mountains in central South America. So, we have the paradox of a tropical tuber which, apart from a small area in the mountains of South America, forms only an insignificant part of the diet of the people of tropical countries, but is a staple food in temperate latitudes.

The potatoes grown in the high Andes of Peru and Bolivia came from wild ancestors found in those countries. They were first introduced to Europe in the late 16th century by the Spanish and, within two centuries, had spread throughout the temperate zone where they adapted to a temperate climate. During the 19th century, potatoes became very popular and were grown everywhere as a major food crop. By the end of that century, modern varieties had been bred, and some of them are still important today. With breeding for genetic changes, the potato had been adapted to a totally different environment.

The most significant genetical change is probably response to day-length. The tropical Andean potato is adapted to low temperatures and short day-lengths of 12 to 13 hours, and it crops in seven to eight months. In temperate latitudes, potatoes grow and flower profusely during the long summer days but do not produce large tubers until days shorten in the autumn, and growth is checked by winter frosts. They crop in from three to seven months of planting. When grown under short day-lengths from the start, tuberizing is accelerated, foliage growth is reduced, and flowering is inhibited; and a smaller crop in a shorter time results. Late varieties grown in photoperiod conditions of 12 to 13 hours crop in about four months.

Temperate latitude potatoes are known as the Tuberosum group, and they have been evolved by a genetic alteration of photoperiod response. Day length is not the only physiological factor in potato evolution, although it is probably the most important. Temperature, reacting with photoperiodicity, is also significant although, so far, little understood. Lower temperatures tend to favour rapid tuberizing.

The Andigena potatoes in the Andes do well at high altitudes but poorly between altitudes of 300 m to 3,000 m. It is again a paradox that the main-crop or late main-crop potatoes grown in the cool, long-day climate of Holland, and introduced to the highlands of West Irian some twenty years ago, are still producing well in the valleys at these lower altitudes.

We have recently imported 35 new clones into this country of seed potatoes from Mexico. The purpose is to attempt to improve our highlands stocks, which have not been stimulated by the introduction of any new varieties for many years, and to see if they will grow economically in our tropical lowlands. So, these potatoes have gone from their native tropics to temperate zones and back again to the tropics after a long period of breeding and selection.

It may be asked: "Why bother with potatoes when we already have sweet potatoes which the people like?" The answer is that tropical root-crops have a higher food potential than the grains, and protein comparisons can be better. The potato has, at least, a similar potential to the established root-crops, and it is reasonable to argue that tropical potatoes can make a useful contribution to agricultural and dietary diversity. The potatoes seen more and more in the coastal town markets come from the West Irian highlands, Celebes or Java, which indicates that there is a growing demand.

The total protein in potatoes is higher than is usually thought, and it is also of reasonably good composition with respect to essential aminoacids. An average of 1 kg of potatoes per day would supply all the aminoacids required by an average adult male except for methionine and cystine. Two kgs a day, which is within the culinary capabilities of the Irianese, would supply even these limiting amino acids.

The potato has been accepted into many tropical diets. It is already popular in many tropical countries, and the demand is often satisfied by importation from very distant producing countries. But all of West Irian potato requirements could be supplied locally.

It is well known that the Irianese require more vegetable protein in their diet, particularly nursing mothers and children, than they consume at

present. It is argued that the best way to achieve this is to induce the people to grow high-protein foods such as beans and groundnuts rather than to attempt to breed or introduce higher crude protein content varieties of sweet potatoes, potatoes, and other root-crops than those currently grown. We should continue to promote both these methods of improvement as it often takes a very long time to change a people's diet and may prove to be almost impossible. The potato here is not simply a food; its consumption plays an important part in ritual and social customs.

There is no doubt that potato breeding can provide clones adapted to the tropics at middle elevations (300 m to 2,000 m), and it seems certain that the products of local breeding will always, in the long-run, do better than imported clones, however valuable they may be to start with. Should we carry out a potato breeding programme at our Agricultural Research Institute in West Irian? We think not. Over forty years of work at the Scottish Plant Breeding Station, about one seedling in 20,000 was thought worthy of naming, and one in 100,000 was actually a successful variety¹. Our means are very limited, and we could not contemplate a programme of anything like that magnitude. We must rely on the results of the work of other institutions. And there is the interesting and gratifying thought that we may already have here, almost by accident, clones that have adapted and are as good or better than anything that can be imported. This thought is worthy of a serious investigation.

The potato is unique among major crop plants in the fact that very bulky planting material is produced under highly-specialized conditions in places usually very distant from the areas of production. The reason for this is phytosanitary. Potatoes are subject to about six significant virus diseases, three of which are serious, a formidable array of fungus diseases, and eelworm. Some twenty diseases can be carried on the tubers, and the potato seed-producing trade has developed in response to the need for the continuous supply of healthy seed. It was known in Britain that seed from cool, windy places was

¹ Reports of the Scottish Plant Breeding Station, Edinburg. Journals of the Faculty of Agriculture, University of the West Indies.

healthier than that from the producing districts, but it was not until this century that the reasons were understood. Harsh climates discouraged the aphids that carried the viruses. Again, it is most gratifying to know that the potatoes in West Irian have been reproduced for many years without any new introductions and without any serious degeneration. This must indicate that we are relatively disease free, and the country may become a source of healthy tropical seed. There is no doubt that West Irian has a tremendous advantage over other tropical countries in that it will probably be able to supply its own requirements of sound seed potatoes as well as potatoes for consumption.

It may be significant that our East Irian neighbours are rapidly becoming "fish and chip" orientated.

TJERITERA DONGENG MENGENAI BURUNG TAHUN2:

TAREI ATAKAM IR

(AN ASMAT MYTH ABOUT THE HORNBILL)

Jeremias Mbait

Pada asal mulanja, disuatu kampung, berdiamlah dua orang beradik-kakak. Adapun nama kedua orang itu Djunch dan Taunoh. Keduannya tidak berkeluar-ga. Karena kampung itu tidak ada orang lain, hanja hidup adik-kakak berdiam di-situ, karena tidak ada punja perempuan djuga. Pada suatu hari adik-kakak pergi ke hutan untuk potong perahu. Sesudahnja itu mereka kerdjakan perahu. Dimuka perahu itu, mereka gambarkan seekor burung jang tidak punja nama dan mereka me-
-ngukir semua dipinggir perahu sebelah-menjebelah semua. Sementara itu mereka berdjandji, "Kami gambarkan engkau dimuka perahu ini, seekor burung, kami ti-dak ada punja perempuan. Kami berdjandji disatu kampung bernama Sereuw". Pada kampung tersebut ini, ada satu perempuan jang bernama Mbuawut (air besar). Se-telah perahu selesai mereka turunkan di air. Setelah itu malam muka perahu jang terukir/gambar burung itu, malam djadikan burung Ir besar. Dia terbang naik hinggap diatas pohon beringin besar. Sesudah siang adik-kakak bangun turun me-lihat perahu dikali, mereka melihat bahwa muka perahu jang terukir gambar bu-rung itu, sudah tidak ada. Lalu mereka me-lihat2 kiri kanan. Lalu burung itu bersuara dari atas pohon beringin, " Ha Ha Haasaaaa". Sementara dia bersuara, lantas dia terbang turun dimuka djunch dan Taunoh. Lalu burung bersuara dan berbitjara, "Saja bernama burung Ir sampai turun temurun sebut saja dengan na-ma burung Ir". Sementara itu, Djunch dan Taunoh berdjandji lagi kepada burung itu, kami tidak ada perempuan, dikampung Sereuw ada satu perempuan bernama : Mbuawut. Pergi tolong ambil dia. Burung tersebut ini sebelum fadjar terbit, dia terbang dimana kampung jang mana telah ditundjukkan oleh Djunch dan Taunoh.

Pada pagi hari perempuan2 kampung Sereuw pergi mendjaring dimuara su-ngai, dan burung Ir ini terbang turun dan hinggap diatas tali dikali Minin. Dia memperhatikan perempuan jang mana didjandjikan oleh Djunch dan Taunoh:wak-tu mereka pergi dia melihat sadja. Waktu mereka mendjaring mendapat ikan ba-njak sekali. Sesudah mereka habis mendjaring mereka pulang. Sampai dipertenga-

han, Mbuawut merasa sakit perut. Lalu Mbuawut turun didarat, dimana burung Ir tinggal. Lalu burung Ir turun dari atas tali ditanah. Lalu dia mendjelma manu-sia, bikin rupa Mbuawut punja tunangan laki2 bernama: Mbiwirpitsj. Sesudahnja buang air besar, berdirilah Mbuawut, sementara Mbuawut mau berdiri begini, Ir mulai kelihatan kepada dia. Lalu Mbuawut bersuara takut lalu dia bertanja,"Ka-mu siapa?". "Saja bernama Mbiwirpitsj", djawabnja. Sesudah mereka berbitjara, lalu Mbiwirpitsj minta hubungan kelamin, lalu mereka berbuat. Sesudahnja habis berbuat lalu Ir mulai berbitjara dan mendjawab, "Saja bukan engkau punja tuna-ngan laki2, saja bernama; Ir datang maksud mengambil engkau. Sementara Mbuawut mendengar bitjara itu, Mbuawut mengerutkan kening. Lalu Ir mentjeriterakan apa jang terjdadi waktu itu. Dan Mbuawut bitjara, "bagaimana saja mau ikut engkau dengan djalan apa sebenarnja nanti". Ir berbitjara lagi, "saja datang maksud mengambil engkau, karena ada dua orang jang berdjandji kepada saja, dan mereka berdjandji begini", "Engkau pergi terbang dikampung jang bernama Sereuw ada satu perempuan jang bernama : Mbuawut, pergi ambil dia bawa datang kepada ka-mi". Lalu saja datang mentjari engkau". Waktu itu Mbuawut setudju untuk ikut dia. Mbuawut bertanja kepada Ir, "Bagaimanakah dengan saja, sedangkan engkau burung bisa terbang dan saja manusia nanti saja djalan kaki sendiri. Sedangkan kampung itu saja tidak tahu apa2". Lalu Ir mendjawab, "Djangan takut, engkau tjoba duduk diatas leher saja ini."Lalu mereka mulai terbang naik. Mereka tu-run dimana perempuan2 jang tinggal menunggu Mbuawut. Perempuan2 itu melihat bahwa saudaranja Mbuawut ada duduk diatas burung besar itu. Lalu perempuan2 takut dan terperandjat semua tidur diperahu itu. Lalu mereka mendjawab,"Hai saudara2, djangan takut. Tidak tahu saja sudah buat bagaimana, sehingga terdja-di begini ini. "Saudara2 djangan takut, ikan banjak2 itu kamu punja, hanja sa-ja minta satu ekor ikan kakap dan satu tangkai buah nipa untuk saja". Lalu mereka memberikan dia. Sesudahnja itu, keduannya mulai terbang naik dan saudara saudara Mbuawut menangis.

Burung besar itu dan Mbuawut terbang terus, sampai ditempat tudjuan-nja dimana tinggal Djunch dan Taunoh. Waktu itu djuga Djunch dan Taunoh tidak pergi kemana-mana. Mereka menunggu kedatangan burung Ir itu. Sedang mereka me-nunggu,burung besar itu dan Mbuawut turun dimuka rumah. Mbuawut turun dari a-

tas burung itu. Kedua adik kakak itu sementara waktu tidur dan waktu itu djuga mereka tidak tahu jang burung dan Mbuawut sudah tiba dimuka rumah mereka. Lalu Mbuawut memanggil Djunoh dan Taunoh. Keduanja mendengarkan suara matjam ber-mimpi. Lalu mereka terbangun dengan terperandjat dan keduanja keluar dan men-tjium Mbuawut. Mbuawut lalu minta banjak² terima kasih kepada burung Ir dan mereka memberi makanan kepada dia. Sesudahnja itu, burung besar itu terbang na-ik kembali diatas pohon beringin. Dan pada sore harinja, adik Taunoh mengawin kan Mbuawut kepada kakaknja Djunoh. Demikianlah tjeritera mengenai terdjadinja burung Ir atau tahun². Jang mana setiap perahu patung, dajung jang berukiran perisai, dan matjam ukiran jang terdapat burung tahun² atau paruh burung ter-sebut ini.

In the beginning there were two men living in a village. Their names were Djunoh and Taunoh. Neither of these young men was married because there were no other people and hence no females in the village. One day these two young men went into the forest to cut out a dugout canoe. On the front of the canoe they made a carving of a bird (the hornbill) which at that time had no name. They requested of the carving help in obtaining women. In the night the carved bird became a live bird and flew up to the branches of a nearby tree.

When morning came the two young men looked out and saw only the canoe. The head, or carving was missing. They looked everywhere and then heard the voice of the bird from up above. The bird descended and informed them, "My - name is Ir (hornbill)". Djunoh and Taunoh reiterated that there were no women in the village. They had heard, however, that there was a woman in the village of Sereuw¹ by the name of Mbuawut (Big or High water). They asked the bird to help by bringing her to them.

The bird flew to the river Minim² and there prepared to seize the girl as he promised. In the morning the girls of Sereuw went out to net fish.

¹ Sereuw is a village from the spirit world. This is expressed in the terms Sefan Ju mum or land to the south, and also Mbu asam semot, or the village under water. The Mbu asam semot is just like its village counterpart in reality. It has death when the real village has birth and birth when the real village has death. ² The river Minim is from the same spirit world.

When they had caught a good many fish, they made ready to return to the village. Half way home, Mbuawut became sick in the stomach. She went ashore right to the spot where the big bird was waiting. After the girl had rested and was about to arise and resume her journey, she saw the bird and cried, "Who is that?" The bird replied, "I am your boyfriend Mbiwirpitsj". After they had talked for a time Mbiwirpitsj suggested a little diversion. Subsequently, when Mbuawut complied with that suggestion, the bird told her, "I am not really your boyfriend, but I want you to come with me." When Mbuawut heard this she scratched her head and asked, "Why should I come with you?" The bird answered, "I have already told the men that I would bring you back".

Mbuawut agreed to go with Ir the bird, but she pointed out that while he was a bird and perfectly able to fly, she was only a human being and could not fly at all. Ir said, "That's all right. Just sit on my neck and I will carry you". They flew for a time and returned to the other girls who were still making their way back to the village. When the rest of the girls saw the big bird and Mbuawut arrive, they were afraid, and fell in the bottom of the canoe. "Because we caught plenty of fish", Mbuawut told them, "I want one of the big ones and also a branch of the nipa palm". These things they promptly gave her. The bird and the girl again flew off and the girls from Mbuawut's village cried. They always cry when people die or go away.

Meanwhile, Djunoh and Taunoh waited in the village. The two wanted to be sure that they were home when the bird returned with the girl. The bird, the girl on his back, landed in front of the house occupied by the two young men. Mbuawut called to them, and the men heard her voice as if in a dream. Of course they ran out to meet her and embraced her. The girl then turned and thanked the bird who flew up and sat on one of the high branches. Later Taunoh, the younger of the two males married Mbuawut to the older Djunoh. And there ends the tale of hornbill which is often seen on the carvings from Asmat.

THE EKAGI-WODANI-MONI LANGUAGE FAMILY OF WEST IRIAN

Gordon F. Larson and Mildred O. Larson

ICHTISAR :

Karangan ini memuat hubungan antara bahasa2 Ekagi, Wodani dan Moni dari daerah Paniai dipegunungan tengah Irian Barat. Ketiga bahasa ini merupakan satu rumpun.

Kira kira 3000 tahun jang lampau Ekagi dan Wodani mendjadi dialek2 jang terpisah dari Moni. Mendjelang 2000 tahun jang silam Ekagi dan Wodani dipisahkan mendjadi dialek2 tersendiri. Meskipun demikian ternjata bahwa antara Moni dan Dani terdapat banjak persamaan kata2 bila dibandingkan dengan Ekagi dan Moni. Suatu analisa mengenai bunji utjapan2 jang dipakai dalam bahasa Wodani dan Moni menundjukkan pula bahwa kedua bahasa tersebut mempunjai persamaan jang erat dewasa ini.

Introduction

For some time it has been known that Ekagi (or Kapauku), Wodani (or Wodaa) and Moni (or Migani) of the Paniai region of the central highlands of West Irian are related languages (compare Boelaars 1950; see map by J.V. de Bruijn in Rhys 1947:71). Only more recently has it been realized that these constitute a family of languages which, together with the Greater Dani, Uhunduni and Dem families, form a single micro-phylum.¹ Although evidence for the classification of the Greater Dani dialects has been presented elsewhere (see Bromley 1961, 1967), little has been written on the historical relationships between Ekagi, Wodani and Moni, other than what is mentioned in broader linguistic classifications of the area (see Galis 1960 and Wurm 1961), and what is found in unpublished papers written by us some years ago (Larson and Larson 1955, G. Larson 1958a, 1958b). The purpose of this paper is to present the phonological and lexico-statistical evidence given in these papers con-

firming these relationships between Ekagi, Wodani and Moni.

Speakers of Ekagi number about 60,000 (see Doble 1960 and Steltenpool 1969); Moni about 12,000 and Wodani about 3,000. The Ekagi occupy valleys surrounding and to the north and west of the Paniai-Tigi lakes; the Moni are found mainly in the Kemandoga and Dugindoga valleys to the east of the Lakes; while the Wodani are wedged between these, residing mainly in the Mbijandoga and lower Kemandoga valleys (see Map, Appendix B). To the east, particularly in the lower Dugindoga and upper Kemandoga, there is much bilingualism, intermarriage and trade between Moni groups and those speaking Western Dani, Nduga or Uhunduni.² Accordingly, speakers in these border valleys form a link between the Ekagi-Wodani-Moni (hereafter: Ek-Wo-Mo languages) to the west, and the Greater Dani and Uhunduni families to the east.³

Phonological Study

The dialects compared in this study are given in Table I (two from Ekagi, three from Wodani and three from Moni):

TABLE I
Dialects Compared

Code	Language	Location	Source
1. EK(t)	Ekagi	Tigi Lake area	Doble's dictionary (1960)
2. EK(p)	Ekagi	Paniai Lake area	Doble's dictionary (1960)
3. WO(lmb)	Wodani	Lower Mbijandoga	writers' check in area
4. WO(umb)	Wodani	Upper Mbijandoga	writers' check in area
5. WO(mk)	Wodani	Mid-Kemandoga	writers' 3-month study
6. MO(k)	Moni	Kemandoga	writers' extended study
7. MO(h)	Moni	Hegenagai	writers' check out of area
8. MO(d)	Moni	Dugindoga	writers' check in area

Whenever a language is referred to with no specific dialect designation, the central dialect of that language is intended, i.e., the Paniai dialect of Ekagi (EK-p), the Kemandoga dialect of Moni (MO-k), and the Upper Mbijandoga

dialect of Wodani (WO-umb).

Phoneme inventories of EK-WO-Mo

The sound systems of Ekagi, Wodani and Moni exhibit the following segmental and (lexically contrastive) supra-segmental phonemes:

TABLE II

Phoneme Inventories of Ekagi, Wodani and Moni

Ekagi (see Doble 1962a):

P	t	k	
b	d	g (g ¹)	
m	n		
w	j (y, ʃ)		
	i	u	:
	e (ɛ)	o	/
	a		

Wodani (pmb)

P (P ^h)	t (t ^h , t ^ʰ , ʃ)	k (k ^h , g)	
b (b ^h , b)	d (d ^h , d, dl, ʃ)	g (g ^h , k ^h)	
m _b	n _d	n _g	
m	n		
w (w, ʃ)	j (z, ʃ, y)	h	
	i	u	:
	e (e, ɛ)	o	/
	a		n

Wodani (mk)

P (P ^h)	t (t ^h)	k (k ^h , g)	
	s (tʃ, ʃ)		
(rest the same as WOumb)			

Moni (see Larson and Larson 1958)

P (P ^h)	t (t ^h)	k (k ^h , g)	
	s (s, ʃ)		
b (b ^h , b, ʃ)	d (d ^h , d, l, dl, ʃ)		
m _b	n _d	n _g	
m	n		
w (w, ʃ)	j (z, ʃ, y)	h	
	i	u	/
	e (e, ɛ)	o	n
	a		

Each of these languages has a voiceless stop series including phonemes /p/, /t/, /k/; bilabial voiced stops /b/ and /d/; nasal /m/ and /n/; bilabial and alveolar continuants (with fricative allophones) /w/ and /j/; and a five vowel system composed of /i/, /e/, /a/, /o/ and /u/. Ekagi and Wodani also have laterally released velar /g/ (g¹) to complete the voiced stop series, which is not found in Moni, whereas Wodani and Moni each occur with /h/ and a prenasalized stop series of /^mb/, /ⁿd/, and /ⁿg/ which are lacking in Ekagi. Only Moni and Mid-Kemandoga dialects of Wodani have the sibilant /s/.

Besides these segmental phonemes there are three lexically contrastive supra-segmental phonemes in these languages: vowel tone--or vowel stress --/'/ in each language; vowel length /:/ written as the second vowel of geminate sequences: /ii/, /ee/, /aa/, /oo/ and /uu/⁴ in Ekagi and Wodani, but not in Moni; vowel nasalization /ⁿ/ in Wodani and Moni, but not in Ekagi. Examples of the occurrence of most of these phonemes--both segmental and supra-segmental in open (C)V and (C)VV syllables only⁵--can be found in the word list in A, except for vowel nasalization which is as follows:

WO: /hiⁿja tena/ ('Iiya t^hɛ'na) 'to be in an uproar'; /wiⁿja/ ('biya) 'two'
 MO: /asⁿ/ ('gɛ) 'to call to a pig as when leading it'; /ae/ ('aɛ) 'life, raw'

Phonemic similarity between Wodani and Moni

From the above it can be seen that, in so far as their phoneme inventories are concerned, Wodani and Moni are more closely related to each other than are Wodani and Ekagi, or Moni and Ekagi. Further evidence for this phonological similarity is the fact that there is more sub-phonemic variability in Wodani and Moni than in Ekagi. While this phenomenon characterizes many sounds in these two languages (see Table II), it is particularly noticeable in the production of the alveolar stop /d/. Thus while in all three languages /d/ may be manifested by an implosive (d^h) in utterance-initial stressed syllable, only in Wodani and Moni does it occur as either of the following in

inter-vocalic position: as a voiced stop (d), a flap (ɾ), a lateral (l) or a laterally-released stop (dl). In Moni, (ɾ) occurs between identical high vowels /i/ or /u/, freely fluctuating with (d), while (l) occurs in other word-medial environments freely fluctuating with (dl); in Wodani (ɾ), (d) and (l) freely fluctuate in most word-medial positions.

WO: /diⁿgi/ ('dⁿiɟi, 'dingi) 'dark'; /bido/ ('bido, 'biɾo, 'bidlo) 'bird'

MO: /dode/ ('d^oole, 'dodle) 'words, message'; /idi/ ('iɾi, ili, idli) 'five'; /^mbode dija/ ('^mbole 'diya, '^mbole'liya) 'to fight, make war'

The sound systems of Wodani and Moni show great similarity also in the fact that both /w/ and /j/ in these languages occur with more friction than they do in Ekagi. In fact, there is a gradual increase in the degree of friction characterizing these sounds in Ek-Wo-Mo as one moves west to east from dialect to dialect beginning at the Lakes area and ending in the Dugindoga. Thus, while the continuant /w/ occurs without friction in all environments in Ekagi, in both Wodani and Moni this sound is realized with rather intensive bilabialization immediately preceding high and mid vowels /i/ and /e/. Further, /j/ is characteristically realized in Ekagi as continuant (y), in Wodani as alveopalatal (ʒ), but in Moni as fricative (z). The only exceptions to these allophonic occurrences of /j/ are the following: in Ekagi, /j/ occurs as alveo-palatal (ʒ) immediately preceding /i/; in both Wodani and Moni, /j/ is always realized as continuant (y) immediately preceding /a/ in word-medial position, with the exception that in the most eastern Dugindoga dialects of Moni this sound is always produced with palatalization as (ʒ) immediately preceding /a/ and following /i/.

/w/ EK: /wido/ ('wido) 'three'

WO: /wido/ ('bido, 'biɾo) 'two'

MO: /wi/ ('bi) 'husband'

/j/ EK: /jape/ ('jape) 'enemy, war'; /jina/ ('ʒina) 'animal'

WO: /jape/ ('ʒapⁿe) 'enemy, war'; /jinina/ ('ʒini'na)

'to twist it'; /wija/ ('biya) 'two'

MO: /ja^mbaija/ (za'mbaiya) 'to sever, cut off'; /hija/ ('hiya) 'two'; /ju/ ('zu) 'boy'
MO(D): /hija/ ('hiɾa) 'two'

But if phonological evidence would lead us to classify Wodani and Moni as more closely related to each other than either is to Ekagi, lexical evidence leads us to the opposite conclusion: Ekagi and Wodani share closer ties than do either Wodani and Moni or Moni and Ekagi.

Lexico-Statistical Study

In this section lexico-statistical procedures developed by Swadesh (1952, 1955) have been employed to determine the relative time depth of separation between the eight dialects of Ek-Wo-Mo under study in this paper. Swadesh, following Sapir (1916), presupposes that the core or 'intimate' vocabulary of language—as contrasted with its less stable 'cultural' vocabulary—changes at a slow and relatively constant rate, and therefore lends itself best to measuring rates of language change. He has, therefore, developed a 100-word list of core vocabulary items, intended to be universally applicable for time-depth comparative purposes. Though the list has been criticized elsewhere (see Bergsland and Vogt, 1962), it will be used here in comparing the basic vocabularies of Ek-Wo-Mo dialects (see Appendix A).

Basic vocabulary list

Swadesh's 100-word list was not entirely satisfactory as a core vocabulary check list, since nine items were of necessity eliminated for the following reasons: (1) because they were unknown to the interior (numbers 29 FISH and 41 HORN), (2) because they were too difficult to match (numbers 5 GREEN and 100 YELLOW), and (3) because the term which matched was the same root already matched by another term in the list (term for number 23 EAT was already matched with item 19 DRINK; term for number 36 HAIR, with item 27 FEATHER; term for number 54 PERSON, with item 51 MAN; and the term for number 75 SKIN, with item 3 BARK). There were, therefore, only a total of 91 items

in the Swadesh list which were compared.

Some items required a narrower definition than that given in the list. For example, number 2 ASHES was translated into each dialect by a term expressing 'coarse hard ash' rather than one indicating 'fine white ash'; number 4 BELLY was matched with local words for 'stomach' instead of those given for 'intestines'; forms indicating 'coldness of air', in contrast to those meaning 'coldness of an object', were chosen as equivalent to item 15 COLD; those indicating 'fulness of a container', rather than 'fulness of one's stomach', were given for item 32 FULL; and number 66 RED was rendered 'rusty red' instead of 'bright red'.

Basis for cognation

Items between the dialects were regarded as cognate, and thus received a plus (+) reading rather than a negative (-) one, first, if each form was identical (i.e., phonemically analogous):

Number 31 FOOT: EK: /bado/, WO: /bado/, MO: /bado/.

Items were also considered cognate if the only difference between them was one or more series of correspondent sounds:

Number 98 HOT: EK: /tani/, WO: /ndani/, MO: /ndani/, where the series of correspondencies is: t-, nd-, nd-; number 67 ROAD: EK: /itá/, WO: /hindá/, where two series of correspondencies are identified: ð-, h- and -t-, -nd-.

The only difference between a number of cognate forms was the presence of compounding or suffixation in one dialect but not in the other:

Number 88 TONGUE: WO: /debegada/, MO: /dabe/1 where /-gada/ is the second half of the compound; number 57 NAME: EK: /eka/, WO: /ekada/, where the nominal suffix /-da/ occurs with the Wodani form.

Still other items received a plus reading because their stem forms were known to be identical:

Number 16 COME: EK: /mei/, WO: /mena/, MO: /mija/, where the verb stem in each dialect is /me-/ and the respective suffixes: /-ei/, /-na/ (or /-ina/), and /-ija/.

Rates of Retention

In Table III the dialects within each language of Ek-Wo-Mo are compared. The high percentage of cognation between each grouping (94.6-100%) reveals that each language of this family is highly homogeneous. In Table IV, on the other hand, the lexical retention rates between the language of this family are seen to be relatively low, especially between Ekagi and Moni: 51.1-52.8% between Ekagi and Wodani (see the inner block of Table IV), 38.6-41.8% between Wodani and Moni (see the bottom row), but only 27.5-28.6% between Ekagi and Moni (see the right column). These relationships can be generalized

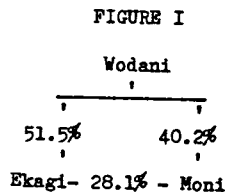
TABLE III

Rate of Retention between Dialects of Ek-Wo-Mo Languages				
Language	Dialect Pairs	Total Items	Cognate Items	Percentage of Cognation
Ekagi	EK(T)-EK(P)	91	86	94.6
	WO(UMB)-WO(MK)	91	88	96.7
Wodani	WO(UMB)-WO(LMB)	88	84	95.4
	WO(MK)-WO(LMB)	88	84	95.4
Moni	MO(H)-MO(D)	91	91	100.0
	MO(H/D)-MO(K)	91	90	98.9

TABLE IV

	Rate of Retention between Languages of Ek-Wo-Mo Family			
	Wodani (LMB)	Wodani (UMB)	Wodani (MK)	Moni (K/H/D)
Ekagi(T)	51.7 (45.5:88)	51.1 (46.5:91)	50.5 (46:91)	28.6 (26:91)
Ekagi(P)	52.8 (46.5:88)	51.1 (46.5:91)	51.6 (47:91)	27.5 (25:91)
Moni(K/H/D)	38.6 (34:88)	41.8 (38:91)	40.1 (36.5:91)	

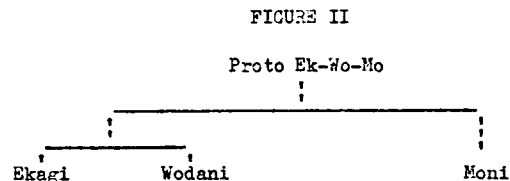
by averaging the percentages of cognation between each language pair and representing them as follows:



Conclusion

From these comparisons we can infer that in the diversification of proto Ek-Wo-Mo, the first separation was between dialects of proto Ek-Wo and proto Moni; the second between those of proto Ekagi and proto Wodani. By glottochronological time depth measurements (Swadesh 1955), the former would have taken place about 3000 years ago; the latter about 2000 years ago. These separations, however, could hardly have been clear-cut, since Moni shares 15.9% of its basic vocabulary with Wodani which it does not share with Ekagi, and another 1.6% with Ekagi which it does not share with Wodani (see sections 3 and 4 of word list, Appendix A). This suggests that during the periods of intensive diversification, proto Moni and the Wodani branch of proto Ek-Wo continued to influence each other more than did proto Moni and the Ekagi branch. It also shows that there has likely occurred more borrowing between Wodani and Moni than between Ekagi and Moni. Phonological similarity between Wodani and Moni also supports this conclusion.

The historical relationships between dialects of Ek-Wo-Mo are represented as follows:



NOTES

¹These terms: family and micro-phylum are based on Swadesh's classification of languages according to their percentage of shared basic vocabularies (Swadesh 1955) where dialects which share at least 31% of their vocabularies are regarded as members of the same language, those which share from 28-81% of their vocabularies, as members of the same family, from 12-28%, as members of the same stock, and from 4-12% as members of the same micro-phylum.

²Some Moni speakers are also bilingual with Dem in this area.

³Our own field work in West Irian has been done mostly among speakers of two of these linking languages: among the Moni of the Kemandoga valley during the years 1953-55 with occasional extended visits to Wodani groups in the lower Kemandoga and upper Mbijandoga valleys, and among the Western Dani in the Ilaga from 1956 to the present. Besides extensive field notes in these languages, material on which this paper is based include the following: a 2000 word dictionary which we prepared in 1955, and two papers on Moni phonology and morphology (Cutts 1956, Larson and Larson 1958); two Ekagi dictionaries (Doble 1960, Steltenpool 1969) and three essays on Ekagi (Doble 1962a, 1962b, 1962c).

⁴Doble interprets vowel length in Ekagi as the second vowel of a geminate sequence (1962a).

⁵Segmental phonemes occur only in open (C)V and (C)VV syllables in each language of Ek-Wo-Mo. In these environments their distributions are unlimited, except for the following: in Ekagi and Wodani, only sequences of geminate vowels mentioned above and the following non-identical vowel sequences are permitted: /ai/, /au/, /ei/, /eu/, /oi/ and /ou/; in Moni geminate vowel sequences do not occur, and only the following non-identical

sequences are possible: /ai/, /ae/, /ao/, /au/, /iu/, /ui/, /oe/ and /eo/.
For more detailed descriptions of these distributions in Ekagi and Moni, see
Doble 1962a: 152-155 and Larson and Larson 1958: 412-413.

6. Patterns of vowel reduction and vowel assimilation account for
these vowel losses: e + e e in Ekagi (mei me- + -ei); e + i e in
Wodani (mena me- + -ina); e + i i in Moni (mija me- + -ija).

APPENDIX A

Plausible Cognate Items between Representative Dialects of Ek-Wo-Mo

This list is based on Swadesh's 100 word basic vocabulary list of
1955. Here only cognate items between dialects of Ek-Wo-Mo are listed in the
following four sections: (1) between Ekagi, Wodani and Moni, (2) between
Ekagi and Wodani, but not Moni, (3) between Wodani and Moni, but not Ekagi,
and (4) between Ekagi and Moni, but not Wodani.

(1) Cognate Items between Ekagi, Wodani and Moni

ENGLISH	EKAGI(P)	WODANI(UMB)	MONI(K)
1. ALL	utoma	utuma	ondoma
3. BARK/SKIN	kadó	ebada	ada
11. BREAST	ama	ama	ama
16. COME	mei	mena	mija
19. DRINK/EAT	nai	nona	nuija
22. EARTH	maki	makai	mai
31. FOOT	bado	bado	bado
33. GIVE ME	nenii	nenina	nindija
39. HEAR	juwii	juna	jutija
42. I	ani	nii, niime	a, andi
43. KILL ME	nagii	nagina	nutija
44. KNEE	kaguma	kaga	aka
64. MAN	jame	me	me
71. SAY	etii	henena	ndija, hindija
73. SEED	ijo	ijo	iu
74. SIT	animakai	anina, animakana	ambikija
76. SLEEP	uno umii	unu usina	unu undija
86. THIS	kii, kou	kome	ka, kogi
87. THOU	aki	akai	aka
91. TWO	wijá	wijá	hija

APPENDIX A (cont'd)

ENGLISH	EKAGI(P)	WODANI(UMB)	MONI(K)
93. HOT	tani	ndani	ndani
95. WE	inii, inai	ini, inime	i, indii
96. WHAT	má	má	má
98. WHO	meime	mf	mf

(2) Cognate Items between Ekagi and Wodani, but not Moni

4. BIG	ebo, ibo	ibu, ebo	tope
6. BIRD	bedo	bido	beka
9. BLOOD	emo	emo	eka
10. BONE	mitoo	mitoo	iwa
17. DIE	bokai	bokona	hitija
27. FEATHER	ijo	hijo	to
28. FIRE	bodija	bida	usa
45. KNOW	eipi	ipi	jaki
46. LEAF	ije	ije	hoka
50. LOUSE	uka	uka	amu
55. MOON	agoo	agoo	tinawi
57. NAME	eka	ekada	eje
58. NECK	ogo	ongooto, minaweda	kobo
61. NOSE	juma	juma	jange
63. ONE	ena, kate	naa	hako
65. RAIN	edi	hidi	janga
67. ROAD	itá	hindá	kejako
68. ROOT	mani, opa	mani	taki
69. ROUND	punugu	mbutugu	obo
72. SEE	dou	duna	inija
79. STAND	joonii	jinina	akikija
89. TOOTH	egó	hego	baga
90. TREE	pija	pija	bo
94. WATER	uwo	uwo	du
97. WHITE	pokado	pokode	peja

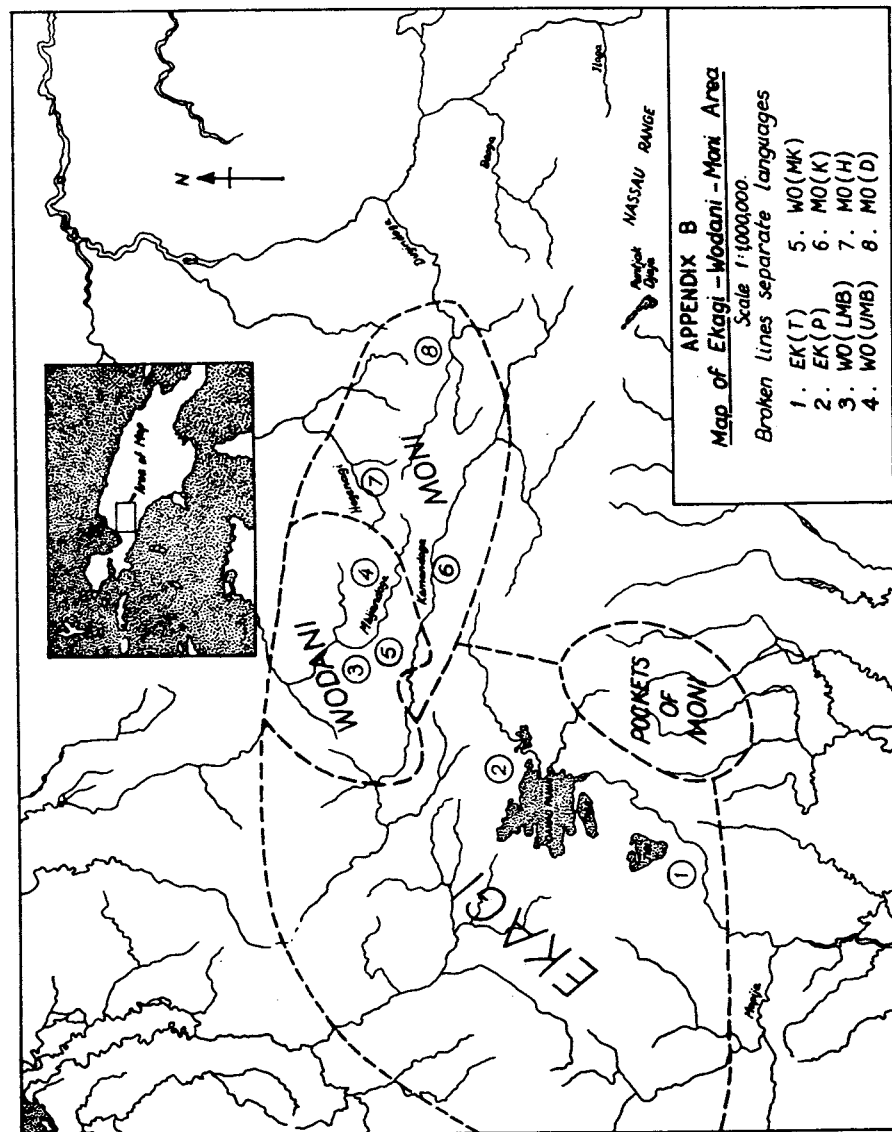
(3) Cognate Items between Wodani and Moni, but not Ekagi

4. BELLY	modo	tina	sena
7. BITE	takumai	waja tena, ngamena	wajaija
8. BLACK	dingi	dingi	dingi
14. CLOUD	jabai	tinu	kunu
20. DRY	wei, gee	kegogo tina	kekoko dija
26. FAT	daka	bamba	bamba
32. FULL	ebetume, edidaa	patuka tina	pasukija

ENGLISH	EKAGI(P)	WODANI(UMB)	MONI(K)
40. HEART	kegepa	digimba	dukumudu
52. NAFY	wedaba, umina	iba	epokoma
62. NOT, NO	beu	tau	tawa
70. SAND	fi	tadida	tadi
78. SMOKE	nakagi	undu, ugi	ugi
81. STONE	mogo	huma	homa
88. TONGUE	etá	debegada	dabe
92. WALK, GO	uwii	pigina	puija

(4) Cognate Items between Ekagi and Moni, but not Wodani

37. HAND	gane	jakada	hane
82. SUN	meuka(P), tani(T)	dame	emondani



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BOOK REVIEWS

GARDENS OF WAR : Life and Death in the New Guinea Stone Age.

Robert Gardner and Karl G. Heider with an Introduction by Margaret Mead (1968)
Random House, New York.

ICHTISAR :

Gardens of War adalah sebuah buku bergambar dengan tulisan singkat mengenai tata hidup orang Baliem. Penulisan buku ini adalah satu hasil dari Peabody Expedition ke Lembah Baliem yang diadakan oleh Harvard University pada tahun 1961.

Walaupun tata hidup orang Baliem mengalami perubahan dengan tjepatnaja akan tetapi foto2 yang indah dalam buku tersebut (kebanjakan berwarna) melukiskan suatu tata hidup yang tjemerlang pada waktu itu. Pengarang2 dari buku ini telah mengajukan pertanyaan kepada Gunung Agung di Djakarta dan Djajapura "Mengapa buku tersebut sangat sulit diperoleh di Indonesia tetapi mudah diperoleh diluar negeri?" Mereka pertjaja bahwa buku ini seharusnya tersedia oleh karena menjadikan suatu tjabatandokumentasi tata hidup dari suatu suku di Irian Barat yang sangat menarik.

Penindjau2 buku tersebut telah mengadakan kritik terhadap buku ini. Buku ini memuat beberapa kritik2 mengenai pekerdjaan para missionaris di Lembah Baliem, lagi pula dalam buku itu dikatakan bahwa orang2 Dani telah ditakdirkan menjadi "parasit2 sebagai akibat dari pada desakan untuk merubah tjara hidup mereka, chususnja oleh karena peperangan dilarang.-

Penindjau2 buku itu berpendapat bahwa Gardner dan Heider tidak memberikan penghargaan yang tjukup terhadap pekerdjaan para missionaries dan pejabat2 pemerintah dalam hubungan mereka dengan orang2 Baliem. Walaupun mengajukan kritik2, tetapi para penindjau buku itu mengakui bahwa buku ini adalah sebuah buku yang bagus. Mutu foto2nja sangat tinggi.

Many picture books have appeared concerning Irian Barat (West New Guinea). In words and pictures, these volumes have sought to portray the life and culture of its people. In some cases the accompanying descriptive texts have been considerably long, while in other cases, the texts have been quite short. Gardens of War, is one of these picture books with text.

Gardens of War, appeared as a result of the Peabody Expedition undertaken by Harvard University in 1961. The expedition focused its attention on the highlands of Irian Barat, in the Baliem Valley. Although the expedition

was undertaken in 1961, the book under discussion did not appear until 1968. The reason for the delay in publication is given by Gardner in the foreword. He tells us that the original responsibility for this publication was given to Michael Rockefeller. Due to the sudden and tragic death of Michael Rockefeller this was never to be. Hence, in 1968, Gardner with the collaboration of Karl G. Heider, produced the present volume.

The authors have chosen to divide the book into six sections or chapters. In each of these they describe in words and through the use of still photographs aspects of Dani culture. The first chapter, "Appearances", deals with what one sees as he looks at the Dani culture. Chapter two, "Skills", deals with how a stone age people build their houses, construct their fences, fashion their tools and weapons. The next section concerns itself with the nourishment of the Dani: their gardens, food, and the care of their pigs. Chapter four deals with the play of Dani children thereby providing in effect, a mirror of the realities of adult life: war and survival. "Ghosts" is the topic of chapter five. Here the authors present the magical practices and beliefs of the people. The last chapter from which the authors have drawn the theme for the book as a whole is on warfare or "Violence." This, in the authors' view, is the central theme of Dani culture.

To accomplish these purposes the authors made appropriate choices from a total of 26,000 photographs originally taken by the expedition. Of these, 8,500 were colour exposures. Three hundred and thirty-seven photographs taken by various members of the Peabody expedition are used in the present volume. The result of their choices is obvious. The pictures contained in the book are, on a one to one basis, good. They are instructive and of such quality that they will be recalled over and over again by anyone who sees them. That so many unique pictures should appear in a single volume is not surprising. The people photographed by the expedition were completely unaware of what a photograph was. In addition, the members of the expedition were very careful never to show their results to the people themselves. (Personal communication from Karl G. Heider to Father Jules Camps.) Thus, the people were unaware of the purposes of the strangers or the significance of their complex

apparatus. They were unconcerned at their presence.

The introductory remarks to each chapter do not pretend to be anthropological essays, as such. These remarks are pertinent, however, being both reliable and readable. In point of fact from these remarks one can imagine that he is present at the first meeting with the Dani. While reading this material one is drawn more and more into the reality of Baliem culture. As with Gardner and the other members of the expedition, one can see what they saw and feel what they have felt. The culture comes alive under the scrutiny of these two capable anthropologists who studied and revealed it.

The last chapter entitled "Violence" is apparently for the authors the climax of the Dani culture. Hence, they gave this book the title *Gardens of War*. Indeed, Gardner says this explicitly in the foreword: "The overall aim of the expedition was to make a comprehensive study of a single community of neolithic 'warrior' farmers".(XV) Typical of the author's views is the conclusion with which they finish this chapter, as well as the book. "Without it (meaning war), the culture would be entirely different; indeed, perhaps it could not find sufficient meaning to survive except parasitically as the novelty of missionaries or policeman". (p.144).

While we have chosen not to discuss the merits of such a trite statement, this reminds us of what we can read in Karl G. Heider's book, *The Dugum Dani*, published in 1970 by Aldine Publishing Company, Chicago. Here he also employs the word "parasites" when he presents his conclusions as to the future prospects of the Baliem Dani. His pessimistic conclusion is in accord with the sentiment expressed here in *Gardens of War*. We consider this vision unjustified. It stems from first, an incomplete understanding of the character of the Dani (to us the Dani appear to be sober and realistic); second, their idealization of the "noble savage"; and, third, a negative view of the work of missionaries and government agents in their contacts with the people.

The negative view of the missionaries is also demonstrated by Gardner in his foreword. He writes: "In other Dani areas, their success in making 'converts to Christ' seemed to be due more to a lavish use of trade goods and medicine than to propagation of a belief".(XIV) In our opinion a great

injustice is done to the missionary, particularly the Christian and Missionary Alliance (of whom he speaks), as well as other Protestant denominations. Although the author tries to modify his point, the unfortunate fact remains that he has committed himself in black and white. A pity!

These few mistakes, which might show a certain predisposition, are not detrimental to the value of the book, however. The pictures remain attractive and by and large, excellent. They will undoubtedly become more precious in time as a documentation of a passing culture. Already the culture depicted is changing and adapting to the greater society of Irian Barat and Indonesia. The remarks that introduce each chapter remain, in our opinion, well formulated and not over-burdening.

Should another printing of this volume be forthcoming, which seems highly probable, we would make some necessary corrections of errors that detract from the present edition. Upon close examination we see that some of the small texts are not in accord with their designated pictures. In particular, we refer to the texts found on p.30. These do not correspond with the photographs on p.36. When comparing these pages, the photograph numbered 74 and that numbered 75 do not correspond with the material presented. Number 74, is not the 'lashing of the wood', and number 75 is not of 'slipping the boards'; the reverse is true. On pps.44 and 51, we find a similar situation. Photographs 104 and 105 should be grouped together as they refer and depict the same activity. Number 106 is 'coal wrapping', 107 and 108 are of the 'slope burning', and 109 is, or should be, by itself. These inaccuracies should be corrected in a reprint of the volume. In addition, the full-page photographs on pps.56-57, 58-59, 60-61, are totally out of place. The photographs on pps. 56-57, and 60-61 do not belong in the chapter on nourishment, but in the chapter on violence. The photograph on pps.58-59, depicting funerals, belongs with the chapter on ghosts or perhaps violence. Although the placement of these may have been due to printing errors, the result is nevertheless confusing and perhaps misleading. One omission that we noted in the chapter on nourishment was the lack of pictures on dancing. As dances are a vital part of this particular activity among the Dani, we wonder at this. The photograph on p.60-61 is

described as being for the death of an enemy only.

Finally, we would make this remark, addressed particularly to the Djajapura and Djakarta "Gunung Agung". Why is this book so easy to obtain outside Irian Barat and Indonesia but so difficult to obtain within the country? Any visitor to the Baliem Valley upon seeing this volume is eager to obtain it. This book should be made locally available for it gives each visitor a lasting memory of an unforgettable land and its people.

Jules A.E.Camps ofm and Larry L. Naylor.

NOTICE CONCERNING BOOK REVIEWS

The editors welcome reviews of books that directly or indirectly have relevance to West Irian. Readers interested in reviewing particular books should submit to the editors the title of the work, the author, publisher and date of publication. A letter will be written to the publisher requesting a complimentary copy of the book for the reviewer. Suggestions as to books readers would like to have reviewed in the IRIAN are also welcome.

ON-GOING AND PROPOSED RESEARCH CULTURE CHANGE AND DEVELOPMENT IN THE BALIEM VALLEY

Larry L. Naylor

ICHTISAR :

Lembah Baliem adalah suatu lembah jang terletak dipegunungan tengah Irian Barat, sehingga terisolir dari dunia luar. Penduduknja diperkirakan berdjumlah 60.000 jiwa, dan terdapat di Grand Valley dan Dani Barat. Pada tahun2 terachir lembah ini didatangi oleh para imigran dari luar, baik dari Irian Barat sendiri maupun dari daerah lain Indonesia.

Walaupun lembah ini baru sadja terbuka bagi dunia luar, namun ia merupakan pusat perhatian ber-bagai2 matjam usaha jang bertudjuan membawakan perubahan perobahan kearah kemandjuan bagi penduduk dilembah ini. Matjam2 usaha telah dilaksanakan dan membawakan hasil2 jang berbeda beda pula dalam tjorak.

Lembah ini setjara keseluruhan mempunjai suatu karakteristik kebudayaan tersendiri jang sangat kuat. Biarpun demikian, perobahan2 kebudayaan telah ter-djadi dan perkembangan2 barupun sedang berlangsung. Penelitian2 akan penukaran penukaran kebudayaan dan kemandjuan2 didaerah ini sedang diadakan, dan sangat bernilai baik setjara praktis maupun setjara teoritis.

Mulai bulan November 1971 hingga bulan Februari 1973, akan dilaksanakan penelitian2 jang dipusatkan pada aspek2 penukaran kebudayaan dan kemandjuan2 jang telah tertjapai didaerah ini. Untuk mendapatkan perbandingan jang djelas, maka telah ditetapkan daerah daerah tertentu sebagai tempat penelitian terhadap kebudayaan orang2 Dani dewasa ini sedang dilaksanakan. Sesudahnja, suatu studi akan diadakan lagi meliputi berbagai bagai aspek kebudayaan jaitu meliputi matjam matjam perubahan jang terdjadi, tentang anggauta2 masyarakatnja, kekuatan kekuatan apakah jang sedang berlangsung, peranan peranan apakah jang dimainkan oleh orang2 asli Dani dan pengaruh2 dalam proses pendidikan. Penelitian2 an penelitian ini akan merupakan petunjuk petunjuk jang lebih lengkap lagi bagi kita untuk mengetahui tentang Lembah Baliem dan orang2nja.

Introduction :

Since the opening of the Baliem Valley, this valley located in the Central highlands of West Irian has drawn a great deal of attention. Although opened in 1954, extensive contact with the outside world really only began in the sixties when missionaries, government agents, and anthropologists began to spread throughout the valley. Interest in this area has been high owing to the natural richness of the valley in agricultural terms, and owing to the people found there living close to a stone age level, in a milieu where warfare was central to the way of life. The people occupying the Baliem have come to be

known as the Dani, their numbers approximating 60,000, although a complete census has never been taken. Traditionally, two linguistic groups have made up the population; the Grand Valley Dani and the Western Dani, both of which fall into the Greater Dani Language Family. The Grand Valley Dani are the more widespread and numerous, the Western Dani being found in scattered pockets. The exception to this pattern is in the northern extremity of the valley, an area forming the boundary or transition into the Greater Western Dani areas to the northwest.

Despite a short period of culture contact with the outside world, barely two decades, the people of the Baliem Valley have been the object of intense efforts aimed at their development and Christianization. Economic development has been attempted by the government, the United Nations Project for the Development of West Irian, and certain of the mission groups involved in the valley. These efforts have resulted in varying degrees of success, although they have been intensified in recent years and rapid. A general cultural resistance has characterized the Baliem Valley. Despite this, a great many plans are in the planning stages for future implementation.

Clear enough, culture change has occurred in the Baliem Valley. Warfare, once so characteristic of this valley and its people has all but vanished. Significant changes have also occurred in other areas of the culture, despite the heavy resistance from traditional sectors. The depth of the culture change and the progress of development, as well as future prospects, pose interesting research problems. Such research is now possible and desirable, having both practical significance and theoretical value.

The Research :

The research presently being undertaken, from November 1971 through February 1973, focuses on the issues and aspects of culture change and development in the Baliem Valley. It is being undertaken to provide useful information to the various agencies involved in the development of the valley and those interested in the study of the Baliem Valley and its people. While based in Wamena, the government centre of the valley, the study will extend into a

number of distinctive sections where contrast and extremes have been the result of contact. The presence of a number of very distinct cultural groups introduces a comparative element into the total study. Although in general terms the research focuses on the present state of Dani culture resulting from contact, the study also directs its attention to various aspects of culture change such as: the kinds of culture change taking place, the agents, the forces operative, the role of the native Dani, and the role of education in the development of this area.

Three distinct areas have been selected for intense study, having been selected on the basis of representativeness to the remainder of the valley. Each of these areas exemplifies one of the reactions of culture change found in the valley. The ultimate is of course to determine the aspects of culture change for the valley as a whole, in so far as possible using representative areas.

It is envisioned that the proposed research, as roughly sketched above will provide information of immediate practical value as well as to provide material of theoretical value for those interested in the study of the valley and its cultures. It is possible that the scope of this research will narrow as data is accumulated. Research of this type, on culture change or its processes, is conspicuously absent for West Irian. Therefore, it is felt that the study outlined should add to, or supplement our present knowledge of the Baliem Valley.

PERUBAHAN STRUKTUR SOCIAL MASJARAKAT DAERAH K.P.S.MIMIKA PADA MASA KOLONISASI BELANDA (1950-1960): STUDY DALAM RANGKA PENJUSUNAN THESIS

H. Renwarin

ABSTRACT :

This study, changes in the social structure of the people of Mimika from 1950 to 1960, is for a thesis in the History Department, Institute for Teacher Training, Djokjakarta. It is intended to examine the particular roles played by various groups during this period, namely, the Dutch, Missionaries, government personnel, as well as Kei islanders and other non-Mimika groups living in the area.

To date, the Mimika people have achieved little progress. The researcher attributes this to their semi-nomadic way of life, the fact that outside groups, particularly the Kei islanders have a different culture and tend to form almost a superior caste, and the presence of the Dutch as colonials during that period and the discriminatory education system they imposed.

Jang mendjadi dasar daripada study jang sedang saja lakukan ini ialah menjiapkan diri demi penunafan tugas.

Hal jang ingin diketahui ialah status dan peranan dalam struktur masjarakat Mimika jang terdiri dari sekelompok ketjil orang2 Belanda sebagai penguasa (baik penjebar2 agama maupun pegawai2 pemerintahan), golongan "perantara" (pegawai2 rendahan dari daerah Indonesia lainnja—terbanjak adalah orang orang Kei sebagai guru2 Sekolah Dasar dan orang2 Irian Barat asli jang bukan Mimika) dan orang2 Mimika asli jang ber-"perintah"- mentalitsir"(istilah Dr. J. Pouwer). Mobilitas vertikal sosial penduduk asli berlangsung sangat lambat. Hal ini disebabkan oleh :

1. keadaan penduduk Mimika asli jang semi-nomadis disertai perasaan etnosentrisme jang kuat.
2. pihak pendatang—terutama orang2 Kei berlatar belakang kebudayaan berkasta,
3. orang2 Belanda sebagai kolonialis dan
4. sistim pendidikan kolonialistis jang memang otokratis.

Adapun tudjuan jang ingin ditjapan ialah untuk mengenal djiwa sebagian besar penduduk daerah ini (orang2 Kei dan orang2 Mimika asli) dalam masa tersebut diatas. Pengenalan sebagaimana jang dimaksudkan memungkinkan dapat dilakukannja pengarahan pada satu aktivitas pembangunan. Sifat daripada study ini merupakan saran bagi pihak2 jang memerlukannja.

Dengan mengenal keadaan masjarakat pada masa itu kita dapat menarik "satu garis" melewati masa sekarang terus kemasa jang akan datang, terutama dalam hubungannja dengan projek pertambangan didaerah K.P.S. Mimika.

Ross Garnaut and Chris Manning*

ICHTISAR :

Penulis article ini adalah seorang ekonomi dari The New Guinea Research Unit, Port Moresby and Department of Economic, ANU, Canberra. Penelitian jang dilakukan ialah pengumpulan data ekonomi di Irian Barat, jang akan dianalisa untuk menentukan kemungkinan2 jang dapat ditempuh dalam politik ekonomi bagi Irian Barat pada waktu2 mendatang. Hasil penelitian jang dilakukan ini akan dimuat dalam "Bulletin of Indonesian Studies" dan akan diterbitkan oleh ANU pada bulan November j.a.d.-

In this survey we intend to gather some of the basic data on the economy of West Irian, look at present economic policy orientations and discuss some possible alternatives for the future. It is hoped that the survey will fill a gap in outside knowledge of the economic structure of West Irian and also provide information on recent economic developments.

We plan to divide the survey into a number of fairly distinct yet interrelated sections. It will begin with a review of basic physical and human resources (including data on natural resources, topography, skills, and population density) with the aim of providing a picture of long and medium term obstacles and inducements to economic change.

From the basic data we will look at various degrees of economic integration both within West Irian, and also West Irian integration within the national and international economy. A survey of trade and resource flows, price and wage limits, and transport costs should provide basic indices for measuring such integration. Special attention will be given to the communications network and government policies which both encourage and restrict economic integration locally, nationally, and internationally.

A detailed study will also be made of government and non-government

* The respective authors are from the the new Guinea Research Unit, Port Moresby, and the Department of Economics, Research Schools of Pacific Studies, ANU, Canberra. The survey is sponsored by the A.N.U., and the authors have also benefited greatly from support given by the University of Tjenderawasih.

development efforts especially since the initiation of the Five Year Plan, in 1969. Finally, bearing in mind present and potential economic integration we will attempt to evaluate the viability of present and past plans, and to look at possible alternatives for the future.

It is hoped that the survey will be published in the Bulletin of Indonesian Studies in November, 1972.

CONTROL OVER EXPORT OF ARTIFACTS

In recent months the depletion of the few remaining artifacts of historical worth has become so great that the authorities now appear to have been galvanized into taking drastic action. It is anticipated that stringent regulations will be laid down concerning the removal of artifacts. It is to be hoped that such regulations while arresting the removal of items that belong to the cultural heritage of the people will not impede the sale and export of newly made ethnographic items. The sale of bows, arrows, stone axes and the like represents a source of income (in some cases, virtually the only source) to people in the more remote areas.

What has precipitated the current concern has been the presence of professional collectors purporting to be anthropologists engaged in short "surveys"; these individuals have succeeded in buying up and removing many items of historical value. In more than one case scientists from reputable universities have either deceived the authorities as to the nature of their real intentions in West Irian or, while carrying out bona fide research, have collected valuable artifacts and removed them from the country under the label of "specimens". If the Indonesian authorities now display suspicion towards scientists from abroad wishing to "look into research possibilities" or to undertake short "surveys", it is understandable.

What is called for before it is too late is joint collecting expeditions undertaken by foreign museums in cooperation with our own university. The Rector and the Director of the Institute for Anthropology are anxious to hear from museums or universities interested in such joint undertakings.

Symposium on Educational Change in West Irian

M. Hasan

Sixteen papers were read at this symposium held at the University June 26 - 29th, 1972. The broad topics covered were policy and planning, teacher education, new media in education, education and development and the role of the university in development. Papers were read by participants from Djajapura, Djakarta, Port Moresby and Goroka.

The symposium revealed many weaknesses in the present educational system in the Province but in a positive way provided much data upon which revisions in the system could be made. In drawing many people together who are concerned with education the symposium served to stimulate much discussion and bring about an awareness of the part individuals can play in working for improvements.

Symposium pendidikan di Irian Barat 1972 telah liris dengan suatu Diskusi Pendahuluan yang diselenggarakan pada tgl.16,17, dan 18 Desember 1971 bertempat dikampus Universitas Tjenderawasih Atepura. Dalam Diskusi Pendahuluan itu telah didengar pandangan tokoh2 pendidikan tentang beberapa masalah yang dirasakan ada dalam penyelenggaraan pendidikan di Irian Barat. Mengingat denikian kompleksnya masalah itu maka dianggap perlu merumuskan pandangan yang dikemukakan selama tiga hari diskusi oleh suatu team yang terdiri dari wakil2 instansi, lembaga dan jajasan yang ikut dalam diskusi tsb. Perumusan itu dikenal sebagai Concluding Report yang berkesimpulan, bahwa kebijaksanaan umum pendidikan harus ditrapkan di Irian Barat dengan memperhitungkan kondisi lokal Irian Barat, kemungkinan jawaban terhadap masalah pendidikan di Irian Barat dan dukungan terhadap gagasan Symposium Pendidikan yang direntjanakan akan dilaksanakan sekitar bulan Djuni/Djuli 1972.

Untuk membantu menetjahkan beberapa masalah dibentuklah suatu team lain yang dikenal dengan nama Study Centre. Study Centre ini telah bekerdja dengan membahas berbagai persoalan yang dilontarkan dalam Diskusi Pendahuluan. Pekerjaan itu diachiri dengan penjunusan dan pengiriman angket yang melalui Perwakilan Departemen Pendidikan dan Kebudayaan Propinsi Irian Barat disebarkan kepada 110 SD diseluruh Irian Barat; jumlah 110 ini adalah sebagai sample (10%).

Demikianlah sebagai realisasi harapan yang terdapat dalam Diskusi Pendahuluan, maka bertempat dikampus Universitas Tjenderawasih pada tgl.26, 27, 28 dan 29 Djuni 1972 telah berlangsung Symposium Pendidikan dengan thema Pembaharuan pendidikan di Irian Barat. Para pemrasaran yang terdiri dari tokoh2 dan ahli2 pendidikan yang berada di Irian Barat, Djakarta dan TPNG berdjumlah 16 orang, masing2 mengemukakan sebuah paper yang semuanya berkisar sekitar pokok pembahasan tentang :

1. Kebidjaksanaan dan perentjanakan
2. Pendidikan Guru

3. Media Baru dalam pendidikan
4. Pendidikan dan pembangunan
5. Peranan perguruan tinggi dalam pembangunan Irian Barat.

Terlepas dari bagaimana hasil Symposium itu dan bagaimana follow-up-nja yang rasanja masih terlalu pagi untuk menilainja sekarang, maka beberapa hal yang menarik perhatian tentang Symposium itu sendiri perlu djugalah ditjatat:

- (1) Enambelas papers telah masuk dan dibatjakan oleh :
 - 1 orang ahli dari BPP Djakarta;
 - 6 orang ahli dari instansi pemerintah dan universitas di Djajapura;
 - 3 orang ahli dari Unesco Djajapura;
 - 2 orang ahli dari Jajasan² di Irian Barat;
 - 1 orang ahli dari Unesco TPNG;
 - 2 orang ahli dari Department of Education TPNG;
 - 1 orang ahli dari University of PNG.
- (2) Keenambelas papers itu memperoleh sambutan yang hangat dari para pe-serta, sehingga dirasa kekurangan waktu untuk pertanjaan². Hanja 1 paper yang terpaksa tidak dapat dibahas, tetapi tetap dibatjakan oleh orang lain karena penjusunja berhalangan hadir.
- (3) Semua sidang² Symposium sedjak sidang pertama sampai sidang ke-7 mendapat perhatian yang besar dari masyarakat, baik yang khusus diundang maupun para peminat lain, ternjata dari djumlah yang hadir yang masing² tidak kurang dari 100 orang.
- (4) Meskipun para peserta terdiri dari orang² yang tidak semuanya mahir berbahasa Indonesia, namun sidang² tetap berdjalan lantjar. Para pe-serta yang mahir berbahasa Indonesia menggunakan bahasa Indonesia, yang tidak mahir, berbahasa Inggris. Meskipun interpreters tersedia tetapi rupa²nja terdjemahan hanja diperlukan dari bahasa Indonesia kebahasa Inggris dan tidak sebaliknya.
- (5) Ikut sertanja partisipan dari luar Djajapura banjak memberikan bahan bahan baru tentang masalah pendidikan di Irian Barat disamping masalah² baru yang djuga dikemukakan oleh ahli² dari Djajapura sendiri, baik yang datang dari pedalaman Irian Barat maupun dari Djakarta dan TPNG. Djakarta membawakan djuga udara segar dalam pengu-kuhan pengetahuan masyarakat daerah ini tentang kebidjaksanaan Pusat. TPNG menambah rasa saling mengerti bukan sadja antar masalah pendidikan di Irian Barat dan TPNG melainkan djuga antara kita dengan negara Tetangga kita yang setjara geografis adalah yang terdekat.

Adakah manfaat yang dapat dipetik dari Symposium ini ? Untuk mendjawab pertanjaan demikian tentu sadja pendapat orang amat ber-beda², tergantung dari segi mana pandangan itu diarahkan. Tetapi betapapun besarnja tjela, kelemahan² dan kekurangan²nja, baik dalam penyelenggaraan maupun dalam isinja, rasanja manfaat itu pasti ada:

1. Dengan data yang dikemukakan oleh para partisipan diakui atau se-tidak²nja diketahui kekurangan², kelemahan² dan kesalahan² dalam pe-laksanaan pendidikan didaerah ini selama ini.
2. Memang hasil Symposium bukan merupakan resolusi apalagi keputusan yang mengikat yang mesti didjalankan, namun dengan ikut-sertanja pihak² penjelenggara pendidikan didaerah ini, baik pemerintah maupun jajasan² swasta, maka hal² yang dikemukakan dalam Symposium itu sedi-kit banjak dapat didjadikan bahan oleh pihak² bersangkutan dalam usaha perbaikan. Tentu sadja amat diharapkan adanya pengambilan lang-kah langkah positif oleh pihak² bersangkutan itu.
3. Betapapun ketjilnja, sudah ada usaha kearah pembaharuan pendidikan didaerah ini. Selama langkah itu tidak berpengaruh negatif, maka ia akan merupakan sumbangan positif, sebab tanpa adanya langkah² pasti tidak akan terdjadi perubahan apa². Apabila dalam pembaharuan pendid-ikan itu kita toch masih djuga belum maju, maka se-tidak²nja de-ngan Symposium ini kita sudah mulai 'djalan ditempat', dus sudah ada gerak, yang mudah²an akan dilandjutkan dengan pelaksanaan "madju-djalan".
4. Symposium ini melibatkan demikian banjak orang di Djajapura dan se-kitarnja. Semangat Symposium terasa benar disekitar hari² penjeleng-garaannya. Ini dapat dipandang sebagai salahsatu puntjak gelombang yang mudah²an dapat menimbulkan riak² lain dalam rangkaian kegiatan yang sematjam, baik itu merupakan seminar², penelitian² ataupun usa-ha² lain yang menjangkut segi² akademis. Getaran demikian memang di-rasa perlu untuk menggugah dan menimbulkan gairah penelitian dikala-ngan para sarjana dan ahli² didaerah ini, baik pada lingkungan ins-tansi-instansi pemerintah, jajasan² swasta maupun dan terutama dida-lam lingkungan universitas.

Seminar di Agats

Melalui kerdjasama dengan lembaga Anthropologi, suatu seminar mengenai persoalan² pembangunan di Asmat telah diadakan pada bulan Mei yang lalu bertem-pat dikeuskupan misi Katolik Salib Sutji di Agats. Tulisan² telah dibatjakan oleh pihak Misi Katolik dan petugas pemerintah (KPS). Djuga sebuah tulisan yang dibawakan oleh Jacque Hoogerbrugger mengenai situasi ukiran Asmat saat ini dan sebuah tulisan yang dibawakan oleh Dr.Gottfried Leng, Professor Anthropol-ogy dari Universitas Colorado, USA yang mengemukakan mengenai pembangunan setja-ra teoritis. Ia telah mengadakan penelitian mengenai koperasi kaju yang telah diusahakan oleh Misi Katolik di Asmat.

Semua tulisan pada seminar dan djuga keputusan hasil diskusi akan dimu-at dalam penerbitan IRIAN yang akan datang.

Under the auspices of the Institute for Anthropology, a seminar dealing with problems of development in Asmat was held last May at the Catholic Crozier Mission, Agats. Papers were read by both mission and government personnel. There was also a paper by Jacques Hoozebrugger on the present state of Asmat woodcarving and a theoretical paper on development by Dr. Gottfried Lang, Professor of Anthropology from the University of Colorado, USA who has been making a study of the lumber co-operatives initiated by the Catholic Mission in Asmat.

The papers read at the seminars as well as summary statements of the discussion will comprise the next issue of the IRIAN.

Childrens' Art Competition

An art competition for primary school children was organized by the University with the cooperation of the Education Department and UNESCO. Over 800 entries were received from virtually all parts of the Province. Some 150 of the drawings were placed on display at the University during the symposium. A selection of the forty best drawings was made by a panel of judges and prizes, the cost of which was met by UNESCO, were awarded. It is hoped that this competition will become an annual event.

University Symposium Papers

It is hoped that a grant from UNESCO will make it possible to publish the papers read at the symposium on Educational Change in West Irian. Those interested in receiving copies should write to Drs. H. Hasan, University of Tjenderawasih.

Appeal for Archaeological Data

Anyone obtaining information on potential archaeological sites anywhere in West Irian is asked to write to Mr. Bob Mitton, c/o the Institute for Anthropology. Mr. Mitton has consented to organize a central file of such data on behalf of the Institute. In writing the exact location of the site and general characteristics should be noted.

Barangsiapa yang mendapatkan penerangan bagi seorang ahli ilmu purbakala bertempat dimana sadja di Irian Barat diminta menulis pada Mr. Bob Mitton c/o The Institute for Anthropology. Mr. Mitton telah menyetujui untuk membentuk suatu pusat pengumpulan data untuk Institut. Dalam menulis harap ditjantumkan bidang yang tepat dan tjiri umum.

EDITORIAL

The printing of the IRIAN by the Summer Institute for Linguistics represents a decided step forward for this bulletin. Lack of finances and poor typing facilities still pose immense problems but with the printing of this and future issues a major hurdle has been overcome and there is reason to hope that the IRIAN will endure.

It is disappointing to report that although the number of subscribers to the bulletin has steadily built up, few American or Dutch scholars who have carried out field work in West Irian during earlier times have responded to appeals soliciting articles. The orientation of the Bulletin is practical rather than theoretical. However, a number of articles from scholars with research experience in West Irian would not only lend much needed status to the publication at this early point in its history, but also would be a demonstration on the part of former researchers of an enduring concern for the welfare of the indigenous peoples of the Province.

Research in virtually all fields is sorely needed in West Irian. But there is a clear need also to make existing data available to the authorities—particularly that which may have a bearing on policy decisions. It is to be expected that in their desire to achieve rapid social and economic development among the peoples of West Irian those charged with the responsibility for obtaining results will display impatience at what may appear to be obstinateness or an unwillingness to cooperate, but which, in fact, may stem from deep-rooted and quite reasonable cultural impediments to change. There is, after all, every reason why the Dani may be reluctant to abandon their traditional duelling—a unique adaptation to local social and physical factors—in favour of another type of dwelling and compound arrangements, just as there are many reasons why members of the Ekagi or any other inland or coastal people, for that matter, may display an understandable reluctance to relocate their villages along a road-side—a step which while making for easier contact and administration may well, through confusion over land rights and the kindling of old enmities, create more problems than it solves.

Perhaps it is as well at this point to clarify publication policy. On the one hand, we wish to make known what is taking place in terms of research, development and change or where, in the opinions of contributors, the most pressing developmental needs lie. In this latter connection articles advocating certain policies and programmes are equally welcome as those describing on-going programmes or appraising programmes that have already terminated. On the other hand, we wish to disseminate ethnographic data of all kinds on the cultures of West Irian. If we are to succeed in this regard we must have the cooperation of those scholars who have carried out research in West Irian as well as that of missionaries and government personnel now in the Province who are in possession of valuable data.

A serious shortcoming in the issues of the IRIAN thus far produced is the lack of articles by Indonesian contributors. There have been assurances from several quarters that the bulletin has been well received but clearly it is undesirable if the principal support in terms of published material must

come from foreigners. It is now planned to form an editorial committee for the IRIAN in order to spread responsibility and lighten the load which now falls on the present editors. It is hoped that the Indonesian members of this committee will succeed in soliciting more articles from their countrymen.

As is noted in the section dealing with University and Institute News, the next issue of the IRIAN will comprise the papers read at the Agats Seminar dealing with development in the Asmat. A later issue will be a special number entitled The Community at Kugapa, a short monograph by anthropologist Fr. B.O. van Nunen. It is our hope that this publication will be the first of a monograph series on the cultures of West Irian.

Pertjetakan IRIAN oleh Summer Institute of Linguistics merupakan sebuah langkah maju untuk penerbitan ini. Kurangnya biaya dan fasilitas penerbitan masih tetap merupakan kesulitan yang luar biasa, tetapi dengan penerbitan ini dan penerbitan berikutnya rintangan yang luar biasa itu bisa teratasi dan ada harapan bahwa IRIAN akan dapat bertahan.

Sangat menggetjewanakan untuk melaporkan bahwa meskipun langganan bulletin ini telah meningkat, hanya sedikit sardjana Amerika dan Belanda yang telah bekerdja di Irian Barat selama waktu yang silam yang tertarik untuk menulis tulisan bagi bulletin ini.

Orientasi dari pada bulletin ini lebih menekankan praktek dari pada teori. Namun demikian, sedjumlah tulisan dari sardjana yang berpengalaman dalam penjelidikan di Irian Barat pada masa permulaan sedjarah daerah ini tidak hanya memberikan kesempatan untuk publikasi tetapi juga merupakan petunjuk bagi penelitian kemudiannya yang sangat bermanfaat bagi peningkatan kesedjahteraan penduduk asli.

Pada hakekatnya penjelidikan pada semua lapangan masih sangat dibutuhkan di Irian Barat. Data lengkap tentang daerah ini masih sangat dibutuhkan, terutama bagi para penguasa Pemerintah Daerah dalam menentukan policinya. Hal ini diharapkan dapat membantu dalam usaha peningkatan kemadjuan sosial dan perkembangan ekonomi bagi orang-orang Irian Barat yang selalu dituduh sebagai orang-orang yang tidak mau kerdja sama dan bermasa bodoh terhadap kenyataan yang dihadapinya; kenyataan, bahwa yang selalu menjadi pokok rintangan dalam usaha peningkatan masyarakat didaerah ini ialah kurangnya approach kita, disebabkan oleh kurangnya pengetahuan kita tentang latar belakang kebudayaan yang dimilikinya. Seperti misalnya, mengapa orang-orang Dani enggan melepaskan keunikan tradisinya yang selalu suka berperang antar suku, disebabkan pengaruh sosial dan alam sekitarnya. Demikian pula orang Ekagi di Paniai maupun orang-orang dipantai tidak mengerti petunjuk untuk menempatkan desa mereka sepanjang djalang yang merupakan suatu langkah untuk mempermudah hubungan dan pemerintahan, sehingga permusuhan yang biasanya terjadi pada waktu lalu lebih muda diatasi.

Alangkah baiknya apabila pada kesempatan ini kami memberikan penjelasan tentang rencana penerbitan pada waktu mendatang. Hal yang akan mendapat perhatian adalah tulisan dari para penjokong bulletin ini tentang

Willem G. Manua adalah seorang Indonesia tamatan kursus B-II Pedagogik Bandung tahun 1961. Sebelum bekerdja di Irian Barat beliau menjadi guru SPG Negeri Manado. Beliau berada di Irian Barat sejak Desember 1962 dan berturut-turut menjadi Kepala SMP/JPK Biak selama 14 bulan dan Kepala SPG Negeri Dja-japura dari thn. 1964 s/d Febr. 1969. Kemudian bekerdja pada Inspeksi Pendidikan Guru. Sejak October 1971 diangkat Kepala Kantor Pembinaan Pendidikan Guru dan Tenaga Teknis Perwakilan Dept. P dan K Prop. Irian Barat di Djajapura.

Jeremias M'Bait :

An Asmatter, Jeremias M'Bait has been a teacher of religion and also associated with the FUNDWI handicraft project. He is a previous contributor to the IRIAN.

Beliau adalah seorang Asmat, Jeremias M'Bait menjabat sebagai guru agama dan djuga berhubangan dengan project keradjanan tangan FUNDWI. Beliau adalah pembantu utama dari IRIAN.

R.D. Mitton :

R.D. Mitton, an Australian, completed his studies in Geography at Monash University, Victoria, Australia in 1970 after spending a year in Papua New Guinea where his interest in Melanesia was first kindled. He first came to West Irian with Kennecott Mining Company which was exploring a large lease in the eastern highlands. He has now returned to West Irian with Newmont Mining Company which will be working in the Baliem and Enarotali regions.

R.D. Mitton menjelesaikan studinya dalam ilmu Bumi pada Monash University, Victoria, Australia pada thn. 1970, setelah tinggal di Papua New Guinea selama setahun dimana minatnya terhadap Melanesia pertama-tama dikobarkan. Beliau datang mula-mula di Irian Barat dengan Kennecott Mining Company (Perusahaan Pertambangan) yang sedang menjelidiki suatu daerah yang luas dipegunungan timur. Sekarang ia telah kembali didaerah Baliem dan Enarotali.

Larry L. Naylor :

Larry Naylor is a graduate student in Anthropology from Southern Illinois University, USA. He holds an MA in History and before commencing graduate study in Anthropology was, for a number of years, a high school teacher of History. He has had field work experience in Ecuador. It is anticipated that his present field work in the Baliem Valley will lead to a doctorate in Anthropology.

Larry Naylor seorang mahasiswa Anthropology pada Universitas Southern Illinois. Beliau mentjapai gelar sarjana (MA) dalam bidang sedjarah dan sebelum beliau memulai studinya dalam bidang Anthropologi selama beberapa tahun ia telah menjadi guru sedjarah selama beberapa tahun di sekolah Landjutan Atas. Beliau telah banjak pengalaman bekerdja di Ecuador. Ini adalah suatu penghargaan bahwa dalam bidang pekerdjaannya sekarang di Lembah Baliem akan

memegang peranan utama dalam gelar doctornja dalam bidang Antropologi.

Parsudi Suparlan :

Drs. Suparlan, an anthropologist and former staff member of the Institute gained his MA from the University of Indonesia. He is currently studying for a Ph.D. in Anthropology at Northern Illinois University, USA.

Drs. Suparlan adalah seorang Antropolog jang memperoleh gelar sardjana pada Universitas Indonesia. Kini beliau sedang melandjutkan pendidikannja untuk memperoleh gelar doctor (Ph.D.) dalam Antropologi pada Northern Illinois University, USA.

Manuscripts :

The editors of the IRIAN welcome manuscripts of a theoretical or practical nature that directly or indirectly bear on West Irian. Manuscripts should be typed, double space and may be submitted in either Indonesian or English. If articles are submitted in Dutch the editors will endeavour to have the material translated into one of the above languages. Two copies of articles are required. Each article must be accompanied by an abstract of 200-400 words which, if possible, should be in the language other than that in which the manuscript is written. Articles should be accompanied by a brief biographical note on the author.

Note :

Pandangan2 jang dinjatakan dalam artikel apa sadja dalam IRIAN ini adalah pendapat pengarang2 dan tidak perlu mewakili pandangan dari Pemerintah Indonesia atau Pembesar2 Pemerintah setempat. Para penerbit dari Bulletin ini dan Universitas Tjenderawasih tidak memikul tanggung djawab atas pertanjaan2 jang mungkin muntjul dalam suatu artikel.

The views expressed in any material produced in the IRIAN are the authors' and do not necessarily represent those of the Government of Indonesia or local government authorities. The editors of the IRIAN and the University of Tjenderawasih accept no responsibility for statements that may appear in any article.