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PART I

ANTHROPOLOGY, THE STUDY OF CULTURE
DONGENG TENTANG BUAH MONYET

Yorem Ke
ed. by Musa Lazarus

This story is about a young boy who offers to help an old woman pick walnuts from a tall tree. While climbing he sees human bones hanging from the upper limbs of the tree, and realizes that the woman wants to eat him instead of the nuts. He distracts her, and escapes to his village, where he informs his parents of what he has seen. Later, the old woman is invited to a village feast and is thrown into the fire in which a pig is roasting. This is her reward for having captured and killed village children who had heretofore been thought lost in the jungle. This story is from the Kemtuk area.

Di jaman dulu, pada suatu siang hari kira-kira pukul 12:00, duduklah seorang anak di rumah seorang nenek tua. Nenek tua ini bukan nenek anak itu. Nenek tua itu sedang mencari buah monyet untuk dimakan.

sama-sama dengan nenek tua itu membuat api. Kemudian mereka membakar buah monyet itu, dan memakannya bersama-sama. Sementara mereka sedang makan buah monyet ini, nenek tua itu berkata, "Baok pagi-pagi sekali kita pergbi mengambil buah itu, sebab bila siang hari pohon itu menjadi licin batangnya." Selesai mereka makan buah monyet itu, anak itu pulang ke rumah orang tuanya, yaitu ayahnya, untuk tidur.


Ketika anak itu memanjat pohon buah monyet itu dan melihat ke atas, tumpaklah olehnya tulang-tulang yang bergantungan di dahan-dahan dan ranting-ranting pohon buah monyet itu. Anak itu merasa takut sekali dan ia berkata dalam hati, "Wah, nanti nenek tua itu pasti akan memakannya aku." Lalu dicarinya akal agar ia terhindar dari bahaya yang sedang mengancamnya sekarang.


Setibanya di rumahnya sendiri, anak kecil itu menenggau iku dan bapanya yang sedang pergi ke kebun. Ketika ibu dan bapanya tiba di rumah, maka anak kecil itu memberitahu kepada ibu bapanya, bahwa anak-anak yang dahulu hilang dan dicari-cari sebenarnya tidak hilang di hutan, melainkan dimakan oleh nenek tua. Anak itu juga berkata, bahwa ia baru saja melihat banyak tulang-tulang manusia bergantungan di atas pohon buah monyet.


KEMTUK KINSHIP

Jelly van der Wilden
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0. Introduction

The aim of this paper is to describe some aspects of Kemtuk social structure including the kinship system, clan system, and various aspects of kinship behavior such as marriage. The present study is a working paper which reports findings and
suggests direction for further investigation.

1. Kinship terminology

1.1 Terms of Ego's generation (0°)

**aka**: older sibling of the same sex
parallel cousin who is the child of Pa01Sib, i.e. Pa01BrCh, Mo01S1Ch
child of any movsat or avsat
Hu01Br, Wi01SI

**sat**: younger sibling of the same sex
parallel cousin who is the child of PaYgSib, i.e. PaYoBrCh, MoYoS1Ch
child of any movsat or avsat
YoSiHu, HuYoBr, HuYoBrWi (female speaking)
WiSi, WiSiHu (male speaking)

**kendet**: brother (female speaking)

**kabui sro**: sister (male speaking)
HuSi, BrWi (female speaking)

**usu idi**: maternal cross-cousin; child of any wate, e.g. MoBrCh

**tema idi**: paternal cross-cousin; child of any nga nialo, e.g. PaSiCh

**mesa**: WiBr, SiHu, WiBrWi (male speaking)
HuSiHu (female speaking)

1.2 Terms of the first ascending generation (+1°)

**aya**: father

**mia**: mother, PaWi, wife of any wate, e.g. MoBrWi

**aysat**: 1. male of ego's father's generation and clan whose
direct ancestor is a younger sibling of ego's
direct ancestor, e.g. PaYoBr
2. spouse of female of ego's mother's generation and
clan whose direct ancestor is a younger sibling of ego's
direct ancestor, e.g. MoYoSi

**moysat**: 1. female of ego's mother's generation and clan whose
direct ancestor is a younger sibling of ego's
direct ancestor, e.g. MoYoSi
2. spouse of male of ego's father's generation and
clan whose direct ancestor is a younger sibling of ego's
direct ancestor, e.g. PaYoBrWi

1.3 Terms of the second ascending generation (+2°)

**babu**: grandparent; also any person of ego's mother's or
father's clans of the second ascending generation.

1.4 Terms of the first descending generation (-1°)

**do**: child
child of siblings and cousins of the same sex as the
speaker, i.e. BrCh, PaSiB'oCh (male speaking)
SiCh, PaSiB'oCh (female speaking)

**do kabung**: son-in-law, i.e. DaHu

**do kenin**: daughter-in-law, i.e. SoWi

**desui**: SiCh, PaSiB'oCh (male speaking)

**na sui**: BrCh, PaSiB'oCh (female speaking)

**temov**: used to specify child who is neither youngest or
oldest

1.5 Terms of the second descending generation (-2°)

**do mdat**: grandchild
consanguineal relatives of the second ascending
generation, e.g. ChCh, SiBChCh, PaSiB'oChCh

1.6 Terms used by third person (e.g. as in "He is her uncle."):

**betedon**: brother of a female, i.e. substitute for kendet
demonon**: sister of a male, i.e. substitute for kabui sro
2. Clans

2.1 The nature of clans

Kemtuk society is made up of patrilineal clans (sibs). A person is born into his father's clan and remains there. A woman does not become a member of her husband's clan.

In Kemtuk-Gresmi there are around 45 different clans. Each clan has a different name, but there is no special meaning of the clan name. Some people know where their clan originated. One person told me that his clan originally came from the Nimboran area. After his clan had won a battle with another clan, they seized the opposition's land and the defeated clan had to retreat into the bush.

Each clan builds its houses in a group, so that the territory of a village is divided among different clans.

2.2 The clan leader

The clan leader is one of the most powerful men in the village. There would ordinarily be more than one clan leader in each village since there is more than one clan in each village. Clan members must give honor to him and he is the one who makes the decisions for the clan. When there is a problem or something has to be discussed the leader must be consulted.

The position of clan leader is passed down from a man to his oldest son. If a clan leader dies and his son is still too young, the younger brother of the deceased can be the temporary clan leader. The son of the original clan leader has to wait until the temporary clan leader is old before he can claim the position of clan leader. It is said that long ago it was the custom that the eating of certain birds was prohibited for clan leaders, but nowadays this custom is not adhered to.

2.3 Andua clans (friend clans)

There sometimes exists a relationship between clans in which members of one clan refer to certain other clans as andua "friend clans". Marriage restrictions prevent a person from marrying a member of a friend clan. Informants describe the relationship between two such clans as that of mutual assistance: "They help each other like friends do." There is apparently no concept of having descended from a common ancestor. Thus far, I have found just three friend clans. Whether or not this should be described as a phratry system is not yet clear.

3. Marriage

3.1 Marriage restrictions

A number of restrictions are observed in the choice of a mate. First of all it is required that one marry out of his own clan. Further one is prohibited from marrying a member of his mother's clan, or one of his paternal grandmother's clan.

Further, as was mentioned in 2.3, one cannot marry a member of a friend clan.

The tendency seems to be that a clan will try to contract marriages with as many different clans as possible. This of course, only includes those clans with whom clan members are allowed to marry. Presumably, the purpose of this system is to set up friendly alliances with as many other clans as possible.
3.2 The marriage arrangement

When a boy wants to marry a girl, he first approaches her father, or, if the father is deceased, the male person who is responsible for her, namely her brother or her paternal uncles. The father (or other male responsible) then approaches the girl and asks her opinion of the match. If she agrees, her father, brothers, and paternal uncles go to the boy's village to discuss the brideprice with the boy's clan (or his family). A brideprice is usually worth about Rp. 100,000 in cash, certain kinds of stones (wada), and special antique beads (n gorge). There are four different kinds of beads:

(a) ng oey seglue
(b) ng oey tugo
(c) ng oey natu
(d) ng oey jawang

They are distinguished by a difference in color. The ng oey seglue beads are the most important ones. These are an obligatory part of the brideprice, while the others are not. Sometimes a boy has to wait until after his sister is married before he can marry, because of a lack of stones or beads.

The girl's family can give a time limit in which the brideprice must be paid. The boy must live in the girl's village until the whole price is paid and must work in her father's garden. When the whole debt is paid the couple moves to his village and will start their own garden and build their own house.

If the father is not able to pay the whole brideprice, he is assisted by the head of the clan (deg wenna) and all other members of the clan. If a woman's total bride price has not yet been paid when her daughter gets married, the daughter's brideprice will go to finish payment of the mother's brideprice.

The brideprice might be better called a progeny price because (1) if the woman does not produce children, she can be sent back and (most often) the brideprice must be returned; or (2) if the brideprice is not paid the children become members of the mother's clan.

When a wedding takes place the bride's clan is responsible for supplying pigs for the wedding feast. Each person gives as much as he is able. The wedding feast is not obligatory to the marriage, but is always desirable.
3.3 Divorce

The wife can be taken back by her clan if her husband's clan refuses to complete the payment of the previously agreed upon brideprice. If there are children, the father cannot consider these children as part of his clan; the children then become members of the mother's clan.

Another ground for divorce is barrenness. In this case, about 90% of the brideprice must be returned to the husband's clan if they have been married for only a short time, e.g. two years. But if they have been married for a long time, none of the brideprice is returned.

3.4 Polygyny

If a man bears only daughters her husband will not divorce her, but he is apt to marry a second wife to provide himself with a male heir. Another ground for marrying a second wife is the possible sickness of the first wife, and her consequent inability to work.

3.5 Death of spouse

When a woman dies, her husband can marry her sister or some other woman in her clan, but this is not obligatory. If he does marry someone else from her clan, he will pay approximately half of the usual brideprice.

If a man dies, his brother or another male person from his clan can marry his wife but half of the usual brideprice has to be paid again. If a man dies and no one marries his widow, she moves to the house of her brother, or to the house of her oldest son if he is married. When a woman with young children dies, her husband is assisted in the care of the children by his parents, and if the maternal grandparents live in the same village, they may also assist.

If the child does not have paternal grandparents, the father's sister cares for them. If there is no paternal aunt, then the mawmat (MoYoSi, FaYoBrWi) and mowtrang (MoOlSi, FaOlBrWi) care for them. Finally, if none of the preceding are living, then the mother's brother cares for them.

In the case of a girl who has lost her father, her brothers still have a stronger voice than her foster father in matters such as her marriage. In one case a girl was married to a certain young man. Before her marriage the girl had been living with her Father's Older Brother's son, since her parents had died when she was small. However, when her brother heard about the marriage, he came to her village to voice his disagreement with the terms of the marriage. Since the boy's family could not pay the brideprice all at once, the agreement had been made to give them a time limit in which to finish payment. However, since her brother disagreed with such an arrangement, the girl had to leave her husband's house and go back to her cousin's house.

4. Other aspects of kinship behavior

4.1 Sago production

Gathering and processing sago is usually done in groups. If a family is small they ask the help of other clan members, who must then be given a share of the sago.

4.2 Housebuilding

When a couple is married, they are assisted in housebuilding by the husband's brothers and the sons of his paternal uncles. When a person from another clan is asked to help with house-
building, he is paid for it. Any man would be expected to assist in building the house of the relative with whom he is living, e.g. if a bachelor lives with his mother’s brother, he would be expected to help with housebuilding if such need arose.

4.3 Childbirth

In childbirth, a woman is helped by the sisters of her husband. If the wife of her own brother helps her, her husband has to pay for her services. It is also common for the mother of the wife to come to her son-in-law's house when a birth is imminent in order to assist her daughter in the delivery.

4.4 Discipline

There seems to be no rule regarding which relatives have rights or duties in regard to disciplining of a child. Even people of another clan can discipline a child, but they must then inform the parents.

4.5 Legal responsibility

When an offense is committed against another party, the family and clan of the offender are responsible to see that appropriate compensation is made. A father and close paternal relatives would try to provide compensation but if they were not able to do so, other members of the clan would come to their aid. Hence, the clan is ultimately responsible for the behavior of its members, and also bears the shame of any misbehavior.

5. The extension of kinship

In addition to consanguineal relatives and other members of one's own clan, consanguineal kinship terms may be used to refer to other people who live in close proximity. Sometimes no affinal or consanguineal connection can be traced to these people or their clans. Parents tell their children how they have to refer to these people, but the children often don't know why they use a particular kinship term for a particular person, e.g. MoSi not MoSich. Usually the only relationship evident to the speaker is whether the kin relationship is supposed to be from the mother's or the father's side.

An individual must call the members of another clan by consanguineal kinship terms, if the ancestors of the first or second ascending generation were from the same clan. For example, a man calls all of the members of his paternal grandmother's clan by consanguineal kinship terms.

Notes

1 This paper was written during a six week workshop conducted by the Summer Institute of Linguistics working in cooperation with Cenderawasih University, under the direction of Dr. and Mrs. Ken Gregerson. The workshop was held at the UNCEN-SIL center at Dauau Bira, from April 1 until mid-May, 1976.

I wish to acknowledge Mrs. Gregerson's invaluable help and to express my gratitude for her many hours of consultation throughout the research and writing. I also wish to acknowledge the willing help of Yoram Ke and Martina Yewi, both Kemtuk speakers from the villages of Merem and Denuum.

My husband and I began the study of Kemtuk language and culture in February, 1975, and have spent seven months actually living in the village of Merem. Kemtuk is spoken by approximately 2,500 people living in approximately 15 villages immediately south-west of Lake Sentani. It is part of sub-district Kemtuk-Gressi, within the Jayapura district. Kemtuk is probably originally a non-Austronesian language, but has been widely influenced by Austronesian languages. Aneaux classifies Kemtuk in the Nimboran language family.
References

Figure 3. Affinal Kinship Chart
ISIRAWA KINSHIP AND EXCHANGE MARRIAGE

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0. Introduction

The Isirawa kinship system could be characterized as a highly descriptive one. The Isirawa use 24 different kin terms for consanguineal kinsmen. Of these, three are extended to affinal kin plus an additional 19 are used for other affinal relatives. Of the 43 kinship terms, 15 are used to refer to relatives of more than one generation.

The Isirawa custom of exchange marriage is evident in their affinal kinship terminology. Even the terms used for consanguineal kin change to special terms if that person is part of the marriage exchange in which Ego is involved. Bilateral aspects of this basically patrilineal system show up also in this exchange. If a man has no sister, he may exchange certain other consanguineal kinsmen, even though they are not in his (father's) clan.

All kinship terms are used with a possessive pronoun but in this paper only the basic kinship term itself is represented.

1. Kinship terms

The Isirawa use a modified Iroquois Kinship terminology, i.e., all cousins are called by sibling terms except the children of mother's brother. Their terminology includes terms of speaker reference and terms of third person reference only. Terms of speaker reference include what Ego calls that relative when speaking about him in a direct sense. For example, 'He is my uncle' is speaker reference, but 'He is her uncle' is a third person reference to 'uncle'. When speaking about a third person, an Isirawa speaker can use either term, but often chooses the latter.

Following are a list of the terms and their referents. Terms of third person reference are in parenthesis following the appropriate term of speaker reference.

1.1 Consanguineal

aikë (ave):
  mother
  father's other wives

aka:
  older sibling (general term)
  mother's older sister's child
  father's older sibling's child

anata:
  older sister's child (female speaking)
  mother's younger sister's child's child

anāive (nāiva):
  mother's brother's child

anono (nuna):
  mother's younger sister

avistraro:
  father's mother, father's mother's sister
  father's father's older sister
  father's father's older brother's wife
  father's father's sister's husband
father's mother's sister's husband

esrara
  father's father
  father's older brother
  father's father's brother

etopəya (tərəma)
  younger sibling
  mother's younger sister's child
  father's younger sibling's child

maśta
  daughter
  older brother's daughter

masrara
  mother's father
  mother's mother's brother
  mother's father's brother
  mother's father's sister's husband
  mother's mother's sister's husband

nāinana
  younger sibling's child (female speaking)

orowa
  son
  older brother's son

papu (neva)
  mother's brother

simitimɔs
  mother's younger sister's child (if he lives in Ego's village)

takə (tate)
  father (can be used for wenu, father's younger brother)

tərəma
  older sister's child (male speaking)

trifa
  son's child
  daughter's child

usraro
  mother's mother
  mother's father's older sister
  mother's mother's older sister
  mother's father's brother's wife
  mother's mother's brother's wife

wanənawi
  mother's older sister
  mother's mother's younger sister
  mother's father's younger sister

wenu (wenava)
  father's younger sibling

werara
  younger sibling's child (male speaking)
  older sister's child's child
Figure 1: Consanguinal Kinship Chart

KEY: (MHO = masculine or feminine. Exceptions noted in parentheses).

1. aqara 10. neroa 17. nakele
2. avileranu 11. amosa 18. mara
3. avileranu 12. pasu 19. mpori
4. anakele 13. nosi
5. soro 14. akira
6. soro 15. manaccheres 20. isane (if MHO is feminine)
7. tak 16. mache 21. mites
8. wata 17. ngepetai 22. mites (if MHO is feminine)
9. wata 18. mache, except for MHO (male)
19. mache, except for MHO (female)
Figure 2. Affinal Kinship Chart

* Seems to be 6 before puberty (engaged)
and 17 after puberty (actually married)

KEY
1. umena
2. umenavi
3. saka
4. moeca
5. nare
6. onfavi
7. aike
8. avi
9. nitre
10. afoamæ
11. ngwearæ
12. nainana
13. trefa
14. anarara
15. venurarra
16. upre
17. asevei
18. orwa
19. mañeta
20. ariel

The affinal terms (marked here by *), which are extended to affinal relatives, consanguinely apply to ego's first ascending and descending generations. Affinaly, they apply to people in ego's generation.
soka
: wife's mother's brother

orowa
: husband's younger brother

umena
: wife's father
: wife's father's younger sibling

umenavi
: wife's mother
: wife's older sister
: wife's older brother's wife
: collective term for wife's female relatives
: of her parents' generation

upre
: husband

wenuarara
: husband's mother
: husband's older sister
: general term for husband's female relatives
: of his parent's generation

1.3 Person categories

Although the following terms are not classified as kinship terms, they do apply to a broader segment of Isirawa society and show relationships of a general nature.

aprēmaoaē
: someone born on the same day and year as Ego

avi
: woman

avi serāva
: very old woman, white haired girl

asimoaē
: friend of either sex

: man

asēserāva
: very old man, white haired

asēsivana
: bachelor

: namesake

ēwica
: people of Ego's generation

kawica
: friend, especially female

kānana
: offspring, either human or animal

manuca
: adult

irotēra
: boy

saparamoaē
: enemy

sasamāira
: widow

sivana
: married people who don't have children yet

sivavura
: unmarried girl

tapēnana
: orphan

tēra
: human child, can also mean follower or student

"tēra cacavre" 4
: adopted boy

"tēra cacavru" 4
: adopted girl

tātara
: stranger, foreigner

1.4 Linguistic Observations

1.41 Morphology of kinship terms

Avi, tēra, sara, and moaē show up frequently in the kinship vocabulary and related terms.

Used as a suffix, avi follows its male counterpart to indicate 'his wife' as in wācaē and wācēnavi, the exchange marriage terms, and umena and umenavi meaning 'wife's father and wife's mother', the latter perhaps better glossed as 'wife's father's wife'. Onfavi 'son's wife, or younger brother's wife' has no male counterpart but does refer to someone's wife. Sometimes avi is used to indicate the mother's side of the family as opposed to the father's. The term wanēno means 'father's older sister' and wanēnavi 'mother's older sister'.

Tera used by itself refers to human children. It can be made specific with the prefix avi- 'girl' or oro- 'boy'. It can also be used with the name of a village to indicate the inhabitants of that village, e.g. Sarmi tēra 'a person from Sarmi', or the name of a teacher, e.g. Piter tēra 'Peter's students, or followers of Peter.'

The infix -sara- applies to father's older brother and
someone in the second ascending generation in consanguineal terms, but in affinal terms used by a female ego to husband's older siblings (same generation) and to his relatives in the first ascending generation.

The suffix -moa ꞌ added to a noun creates a term that shows a relationship. For example, cacara 'ancestor' plus -moa ꞌ means 'a fellow clansman'; sapara 'arrow, war' plus -moa ꞌ means 'enemy'; and asi 'breast, milk' plus -moa ꞌ becomes 'friend'.

1.42 Comparative aspects

Throughout the island of New Guinea, one's mother's brother seems to play an important role. In kinship terminology this generally shows up in a special descriptive term. Possible cognates are seen as far as the south coast of Irian Jaya and the Sepik area of Papua New Guinea, coming from both Austronesian and Papuan language families.

In Isirawa papu ꞌ is the speaker reference term for 'mother's brother' and nava ꞌ is the third person reference term. Some possible cognates are: nava ꞌ from Kiman (Serpenti); babocai ꞌ from Segar (Oosterwal); aspi ꞌ from Baruya (Lloyd); pap ꞌ from Sepik Iwam (Rehburg); paap ꞌ from Au (Schorza); and guapu ꞌ or noror papu ꞌ 'ancestor' from Kuninaipa (Pence).

Looking further at some of the other kinship terms, the following possible cognates were found. The Isirawa term and meaning follow the number with each cognate, its language (proto-language form marked *), and source following:

1. avi ꞌ 'woman, or wife'. *habih ꞌ 'to be feminine' (Dempwolf): habine ꞌ 'man's sister' (Milke); vavi ꞌ vavin Aneua (Anceaux); vavin ꞌ vavin Seru-Laut (Anceaux); vavin ꞌ Papuma, Pom, Marau, Mor (Anceaux); habi ꞌ vavi ꞌ babi ꞌ vavin Wangamen (Anceaux); wik ꞌ Sepik Iwam (Rehburg); and auwi ꞌ 'mother' Kwoma (Laycock).

2. kana ꞌ 'child'. *hanak ꞌ (Dempwolf); *nata ꞌ (Milke); kanta ꞌ Seti (Laycock); kan Yil (Laycock); and kan ꞌ Siliput (Laycock).

3. sik ꞌ 'mother', ave third person referent term. jaka Segar, Naidjeej (Oosterwal); tata Mander (Oosterwal); jetti Ittik, Ittik Tor (Oosterwal); dadi Biak (Anceaux); dadi Wogamusin (Laycock); yaki ꞌ Au (Laycock); tete Yahan (Laycock); jak ꞌ Mountain Arapesh (Laycock); tata ꞌ Au (Schorza); and tama ꞌ which, according to Anceaux, is found everywhere in Melanesia.

4. ake ꞌ 'older sibling'. ake Segar, Naidjbeej (Oosterwal); aja Ittik, Ittik Tor, Borabora, Waf, Daranto, Berrik Bieuw and Bonerif (Oosterwal); tja ꞌ Kinhama (Serpenti); and av ꞌ Korafe (Farr).

5. afomoa ꞌ 'wife's younger sister's husband'. amoi Serui-Laut (Anceaux).

6. anéfono ꞌ 'mother's brother's child'. annai ꞌ Segar (Oosterwal).

7. umenavi ꞌ 'wife's mother'. snoa ꞌ Mander, Ittik, Ittik Tor (Oosterwal).

8. moe ꞌ 'older sister's husband'. tjomo ꞌ Segar (Oosterwal); moe ꞌ Mander, Ittik, Ittik Tor, Berrik, Bieuw, Bonerif, Bora, Bora, Waf, and Daranto (Oosterwal).

2. Marriage and divorce

2.1 Clan exogamy

Even though there is no word for 'clan' in Isirawa, the society is divided into patrilineal exogamous groups with from one to three family names. I have chosen to call these groups clans as opposed to lineages, since each has its own myth which describes their origins. There are special relationships between some groups, one being an old war alliance. These relationships
The table and figure are related to Amua's clans and marriage rules. The clans are listed in rows, and the columns indicate whether a clan is permissible to marry or not. The table also includes the meaning of clan names and the family names associated with each clan.

For example, the clan name Amuira has the meaning of cassowary fire and is permissible to marry. The family name associated with this clan is Mauila. Another clan, Seiro, has the meaning of Saveti village and is not permissible to marry. The family name associated with this clan is Saveti.

The text continues to explain the rules and customs surrounding marriage and clan membership. It is important to note that the clans have specific rules regarding marriage and the rights and responsibilities of clan members.

The text also mentions that clans can change over time due to cultural and social changes. This is evident in the examples provided, which highlight the importance of understanding the cultural context when interpreting these rules.

Overall, the text provides a detailed overview of Amua's clan system and the rules that govern marriage and family relationships. It is an important resource for anyone interested in understanding the social and cultural dynamics of this community.
grandchildren of each of these unions. There is no intermarriage among those with this relationship even if they could marry into that clan.

If a man has no younger sister, he can exchange an older sister, his mother's brother's daughter (anāive), his mother's younger sister's daughter, or his father's younger sibling's daughter. It should be noted here that of these alternative exchange women, only his father's brother's daughter is from his own clan, so providing an exchange woman is not necessarily the responsibility of Ego's clan, but of his bilateral kinsmen. The girl in question can be 'exchanged' before puberty but would remain in the home of her parents until the age of puberty. The promised husband is expected to bring food, clothing and money to the girl's father. If he doesn't, this could be grounds for 'annulling' the marriage.

There is another exchange relationship in which the members call each other nupusu. This term is used reciprocally by Ego for the couple who were the opposite pair in the marriage exchange of one of Ego's sister's (but not of Ego himself) as shown in Figure 5.

In recent years a man has been allowed to marry without this direct exchange, as long as he promises to give back one of his daughters to his wife's family as an exchange. In this case a man will give a pig or cassowary to the bride's father as a kind of earnest and will live with her relatives until his daughter comes of age.

2.3 Other acceptable marriages

2.3.1 Elopement

If a young man is unable to offer a woman in exchange for a bride, if her father or family disapproves of the union, or if he can't pay the earnest the couple may elope. Either partner of the marriage may initiate it. The verb for elope (crowana) literally means 'to grab' or 'to steal'. The couple runs into the jungle for a period of time and when they return they are
recognized as a new family unit. A euphemism for elopement is fanyava 'they ran into the jungle'. Once back in the village the husband will negotiate with his wife's family for some kind of exchange or payment. About six months ago, a young couple got married this way and returned to the village. There was no talk about payment, so the bride's paternal grandfather sent a letter to the young man and asked for either a girl for exchange, or Rp. 50,000 (approximately US $125.00). If he refuses to pay, they (the new couple) will probably move to a different village rather than face the disapproval of the bride's family.

2.32 Husband adoption

If there is no actual or promised bride exchange, the husband must come to live with the family of the bride and become a member of her clan, along with any children produced by the marriage. There are two cases in Amsira where men from other language groups have married Isirawa women and because of the above reason have stayed and been adopted into their wives' clans retaining their family name. This is not the same as the couple who stays with the girl's family until they provide an exchange woman.

2.33 Sororate

If Ego's wife dies, his mother-in-law (umenavi) bakes some sago and passes it to his wife's younger sister (nirē) who in turn gives it to Ego. This, as a symbol of a new marriage relationship, does not occur except in a sororate marriage among the Isirawa. (In contrast, in the Tor area this is the typical ceremony for all marriages, Oosterwal, 1961:100).

If Ego's deceased wife has no younger sister, or if she is already married, Ego could marry any of his other affinal relatives whom he calls nirē, i.e. his wife's older sister's daughter or his wife's older brother's daughter. In a sororate marriage, no exchange or payment is needed because it is the responsibility of the deceased woman's family to 'fill the gap' (moana kākātroyana) that the dead woman left.

2.34 Levirate

As in the Tor district (Oosterwal, 1961:114) the levirate is a common form of remarriage and here also it is a junior-levirate type (meaning that a widow marries the younger brother of her deceased husband). If a man's older brother dies, he is expected to take the widow as his wife. The junior levirate system is evident in the kinship terminology in that takō 'father' can also be used for 'father's younger brother'. The junior levirate system is extended to say that if any of Ego's cousins, whom he calls aka 'older brother' dies (and these cousins are physically older than Ego), he could also marry their widows. Three of the polygynist's marriages in Amsira fit into this category.

If none of the above are available, a woman can also marry her husband's mother's brother's son, her husband's father's younger sibling's son, or her husband's mother's younger sister's son.

2.4 Polygyny

2.41 Statistics

In October of 1973, of the 48 married men in the village of Amsira, 35 men had only one wife, 9 men had 2 wives, and only 4 men had 3 wives. The wives in some cases lived together in the same house. In one instance they had separate houses next to each other in the same village, and in another instance, one man
had one wife in one village, and another in a different village two hours walking distance away. In the two and a half years since the above survey, there has been little change. Now there are 42 married men, out of which 30 have one wife, seven have two wives, and two have three wives. Of the present monogamous marriages, four of them were polygynous but the other spouse has since died. Some of the men have had up to four wives at one time, but one or two of them are now deceased.

The only prestige connected with having many wives may be that the man is rich, for their attitude seems to be summed up in the phrase, "If they can afford them, they can have them!"

2.42 Sororal Polygyny

Among the polygynist marriages in the village of Amsira at least one involves a man who has married wives who are sisters. It would seem that while it may not be a common practice, at least there is no stigma attached to it.

2.43 Relationships within a polygynistic marriage

The order in which a man marries his wives is important to the wives and children. A first wife calls any succeeding wife ćTopēya, meaning 'younger sister', while a second or third wife would refer to the previous wife (or wives) as Aka 'older sister'. Each of the children refer to any of their father's wives as aike 'mother'. However, all the children of the previous wife are called aka 'older sibling' even though they may be younger. Each of the wives will call any of the children in this unit 'my son' or 'my daughter'.

2.5 Restrictions

A mother-in-law and her son-in-law or her daughter-in-law cannot call each other by their 'earth' names, although they can call each other by the appropriate kinship term or by their 'Christian' names. Up to about ten years ago a woman could not eat in the presence of her son-in-law, but now it is not uncommon.

There are restrictions on who can prepare sago for a man in addition to his wife. Those whom he calls aike, aka, anopevi, anonono, and wenu can prepare and offer him sago.

2.6 Relationships centering around children

Another interesting aspect of the Isirawa marriage is the
special relationship between the parents of a couple and between
the siblings of each spouse, i.e. Ego's mother and father call
Ego's parents-in-law penavi and vice versa. The people within
this relationship are responsible to help in the event that Ego
and his wife run into financial difficulties or have no food.
They help them for the sake of Ego's children. This gives a
rather interesting bilateral twist to a basic patrilineal system.

2.61 Child rearing

A child spends most of his first year in the 'cloth' that is
used for carrying children. In Isirawa the name given to this
cloth is the same as the one for 'womb'. Fathers also carry the
child in the cloth and play with him.

Little or no physical discipline is seen before the child is
at least 6 or 8 years of age, but before that time many verbal
reprimands (famasosa) are given. The physical discipline is
usually administered by the parents in the form of pulling the
ears or hitting with a broom. A child can also be disciplined by
his mother's brother, his father's younger siblings, and their
children (if they are older than Ego).

2.62 Foster children

In the case of the death of a wife, the husband will first
look to his younger sister to take care of the children, then his
younger brother and after that his deceased wife's brothers. This
is not called adoption since the child remains with his kin. For
example, one man is raising two uumwis (his father's younger
sister's child and his mother's younger sister's child), both of
whom he calls by the kinship term étőnèva 'younger sibling'.

2.63 Adoption

A child is given for adoption when the father can find no
one in his family to care for him, or when a widow remarries and
she feels her children are too many for her new husband to care
for.

Multiple births seem to be considered undesirable. In the
case of twins, it is a common practice for one of the babies to
be given to someone else. In the past, or as is still sometimes
practiced in the interior, the second of the twins is thrown into
a river.

When a child is adopted, he takes on the name of his adopted
parents, belongs to their clan, and the history and taboos of
that clan are his, just as if he were born into it. He still has
some ties with his 'real' family and often can be found in either
house. The child, though, is considered so much a part of his
adopted family and clan that he can marry into the clan into
which he was born, if the two clans have that type of relation-
ship. One man in Amisira has married his 'real' father's brother's
daughter in this way.

2.7 Divorce

If a girl's father is unhappy about the marriage (for
example, his daughter has had to move to a village quite a dis-
tance away), he can call her back, and repay the brideprice,
whether it was in the form of an exchange, promise, or money.

Other reasons for divorce originate with the couple them-
selves, the two main reasons being laziness of the partner and
cruelty. Cruelty can include wife beating and the wife is free
to go home after the third time her husband beats her. Perhaps
that is why there is so much excitement in the village when a
husband beats his wife.

Divorcees are accepted in the community. Since there is often a shortage of women, the woman will probably remarry quite quickly, although it will be more difficult for her former husband. When a woman marries into a family, she takes on her husband’s name and clan and can therefore marry back into the clan into which she was born, but not into her own consanguineal kin if they share a common ancestor in the second ascending generation.

Notes

1 Information for this paper was gathered through intermittent stays in Amsira between October 1973 and March 1976. I wish to acknowledge the help of my many friends in Amsira who share their way of life with me, and especially Filipus Mamawiso who helped with the final analysis. I also want to thank Marilyn Gregerson for her valuable suggestions and comments while drafting this paper.

2 Isirawa (also known as Saberi) is the name of a group of about 2,000 people located on the north coast of Irian Jaya, between the sub-district town of Sarmi and the Apawar river. Costerwal (1961) includes them in his ‘western interior Sarmi’ groups. The people have slowly been migrating to the coast, although there are many garden villages one or two days walking distance inland from the coast. The Isirawa live principally on wild sago, supplemented by yam, tapioca, bananas, sweet potatoes, and pigs. Their protein intake is limited to wild jungle hen eggs, small fish, fresh water shrimp, sago grubs, and an occasional wild pig or crocodile. The phonemes are a, e, o, i, o, , , , , , , , , , , and y.

3 The possessive prefixes are as follows:

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<th>1st dual</th>
<th>1st plural</th>
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<td>nenef-</td>
<td>nenef(v)-</td>
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<tr>
<td>2nd singular</td>
<td>2nd dual</td>
<td>2nd plural</td>
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<td>of</td>
<td>omar-</td>
<td>omar(v)-</td>
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<tr>
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<td>of</td>
<td>omar-</td>
<td>omar(v)-</td>
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For a further description of the possessive in Isirawa, see "Form and Meaning in the Isirawa Noun Phrase" by Hiroko Oguri in this volume.

4 The singular form of the Isirawa verb indicates masculine or feminine object, even when the verb is nominalized. See "Complexity in Isirawa Verbs" by Hiroko Oguri and Anne M. Cochran, From Nahuatl to Indonesian.

5 According to Milke (1968:160), *nau*, the Proto-Oceanic term for child has many variations and is present in all major regions of Oceania. He feels that this kinship term is totally unknown in Indonesia. If one looks at the following derivatives: *naro* Pak; *nati* Fala; *nitu* Mera Lora; *nate* Kusae; *rau*, *rai* Songasor; and *nana* Bunay (Napã), one could speculate that *mâna* and the Isirawa term for ‘son’ *orowa* could also be derived from it.

6 In Au this actually means 'father's younger brother's wife' or 'mother's younger sisters and their husbands'. The author of the Au article feels that the great emphasis placed on the role of 'big brother' in the Au society was the reason they borrowed the Neo-Melanesian term meaning 'small papa' or 'small mama'.

References


PART II

Abbreviations and symbols

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<th>Meaning</th>
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<tr>
<td>○</td>
<td>female</td>
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<td>I</td>
<td>parent-child relationship</td>
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<td></td>
<td>sibling relationship</td>
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<td>=</td>
<td>marriage relationship</td>
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<tr>
<td>M</td>
<td>mother</td>
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<td>father</td>
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<tr>
<td>H</td>
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<tr>
<td>W</td>
<td>wife</td>
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INITIAL PHONOLOGICAL INVESTIGATION
BAUZI PHONOLOGY

David Briley
Summer Institute of Linguistics

0. Introduction
1. Phonological word
2. Syllable
2.1 Syllable types
2.2 Syllable distribution
2.3 Syllable combinations
3. Phonetic segments
3.1 Distinctive features
3.2 Contrastive sets
3.3 Consonants
3.4 Vowels
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4.2 [u] and [i]
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0. Introduction

This paper is a report on the initial investigations of Bauzi sound patterns. So far as I can determine this constitutes the first such description of the language. The theoretical basis for this paper is based on the hierarchical model developed by K. L. Pike (1967). Thus, Bauzi phonology is seen as phonological layers arranged into an hierarchical order.

The phonological word, the highest level studied thus far, the syllable and phoneme are described in this paper.
1. Phonological word

The phonological word (PW) is chosen as a reference point to describe underlying stress and syllable patterns. Stress placement is summarized in the rule below:

\[ IS 'S S 'IS 'S S \]

Stress occurs on the first syllable (‘S) of a PW and reoccurs on alternating syllables thereafter, but with decreasing relative prominence (‘S., ‘IS, etc.).

Stress sequences in PWs of as many as six syllables are illustrated under Section 2.3. PWs are not necessarily coterminous with morphemes, and a single PW may contain more than one morpheme.

2. Syllable

The syllable can be described as a single mora of timing with a simple nucleus of one vowel, an optional consonant onset and an optional consonant coda.

2.1 Syllable types

The syllable types are V, VC, Cv, and CVC. All syllable types may individually constitute one syllable PWs. Examples are:

- V /i/ ['i] 'to sleep' 'tidur'
- VC /om/ ['om] 'you' 'kamau'
- CV /ke/ ['kɛ] 'stone' 'batu'
- CVC /mæt/ ['mæt'] 'yesterday' 'kemarin'

2.2 Syllable distribution

All syllable types have been observed to occur in all positions of up to three syllable PWs. The following have not been observed to occur in four syllable PWs: VC in second syllable position, CVC in third syllable position. Current data are not sufficient to definitively establish syllable distribution into PWs of more than four syllables.

2.3 Syllable combinations

\[ IS 'IS 'IS 'IS 'IS \]

V.V ['æz] 'bush knife' 'parang'
CV.VC ['tʰætʰ] 'strong' 'kuat'
CV.V ['tɛz] 'peak' 'puncah'
CV.CV ['tʰasɪ] 'to hang up' 'bergantung'
V.CV ['uαz] 'to touch' 'menyentuh'
VC.CV.CV ['sɔntʰ] 'nose' 'hidung'
CVC.CV.CV ['nɛma] 'sow' 'babai'
V.CV.CV ['basdama] 'young man' 'anak laki2'
V.CVC ['asau] 'belly' 'perut'
CV.CVC ['ngʉt] 'fat' 'gemuk'
V.VC ['ɛt] 'point' 'ujung'

\[ IS 'IS 'IS 'IS \]

V.CV.CV ['ikʰi'bi] 'waist band' 'ikat pinggang'
V.CV.CVC ['ulɔ'botʰ] 'same' 'sama'
CV.V.CV ['kʰæ'nu] 'small' 'kecil'
CV.CV.V ['kʰisa'u] 'tongs' 'tang'
CV.CV.CV ['nutʰa'bo] 'wind' 'angin'
CV.CV.CVC ['kʰbi'tʰem] 'cliff' 'karang'
CV.CV.CV.CV ['baun'su] 'to bury' 'mengubur'
CV.V.CV.CV ['sia'kam] 'hug' 'baby'
CV.CV.CV.CV ['dinaz'bo] 'tomorrow' 'besok'
V.CV.V ['tige's] 'to laugh' 'tertawa'
V.V.CV ['ou'su] 'to lay down' 'melepaskan'
V.CV.CV.CV ['kʰem'bu] 'ankle' 'mat a kaki'
V.CVC.CVC ['asim'but] 'heavy' 'berat'
3. Phonemic segments

Bauzi has thirteen consonant phonemes: /t,k,b,d,g,m,n,f,v,s,z,h,l/ and six vowel phonemes: /i,e,a,u,o/. The consonant phonemes contrast in manner of articulation as to voiceless and voiced stops, nasals, flat and grooved fricatives and lateral. The stops contrast as to labial, alveolar, and velar points of articulation. The nasals contrast as to labial and alveolar points of articulation. Vowels contrast as to high, mid and low tongue heights and front and back tongue positions.

3.1 Distinctive features

The nineteen Bauzi phonemes may be identified by seven distinctive features. These are found in Figure 1. They are: lingual, labial, syllabic (syll.), continuant (cont.), sonorant (son.), nasal (nas.), voicing (voi.). Plus (+) and minus (-) mark the values on each of these phonological dimensions.

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Figure 1: Segment and Feature Chart
3.2 Contrastive sets

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<td>'type of' fish</td>
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<td>'teman'</td>
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<td>'heart beat'</td>
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54 / IRIAN

/ä/ and /a/

/amo/ 'charcoal'
/mabo/ 'type of bird'
/nubā/ 'seed'
/o/ and /â/

/é/ 'poison tree'
/amo/ 'type of bird'
/e/ 'name'
/a/ 'to eat'
/ahula/ 'heart'
/ohula/ 'head'
/vao/ 'water'
/voa/ 'air'
/o/ and /u/
/toha/ 'back'
/tuha/ 'type of bird'
/viso/ 'to take'
/tisu/ 'to lie down'

3.3 Consonants (-syll.)

3.3.1 Labials

/l/ Labial con-continuants.

/b/ Voiceless bilabial stop occurs in coda position of a closed syllable word medially preceding a voiceless segment.

/mabso/ 'bamboo'
/subte/ 'to fail'
/nebso/ 'sugarcane'

/b/ Voiced bilabial stop occurs word initially and medially.

/bume/ 'bird'
/beke/ 'full'

/f/ Voiceless labial continuants.

/o/ Voiceless glottal fricative alternates with [f] intervocally following a stressed back vowel.

/sauhole/ ['auw', 'bah', 'le'] ['auw', 'flies', 'le'] 'five' 'lima'

/f/ Voiceless labiodental fricative occurs word initially and medially.

/tu/ 'to erase'
/biro/ 'blister'
/tete/ 'to shed'

/v/ Voiced labial continuants.

/w/ Voiced labiodental fricative with rounding occurs word initially preceding [u] and [õ].

/va/ 'louse'
/vusu/ 'to grasp'
/vo/ 'to throw out'

/v/ Voiceless labiodental fricative occurs word initially preceding front and low vowels and medially preceding back low vowel.

/vesu/ 'dog'
/vama/ 'crocodile'
/va/ 'flower'
/visi/ 'to die'

/m/ Labial nasals.

/m/ Voiced bilabial nasal occurs word initially, medially and finally.

/muma/ 'snake'
/amo/ 'charcoal'
/nam/ 'down'
/bume/ 'bird'

3.3.2 Non-back linguals

/t/ Voiceless non-back lingual non-continuants.

[t] Voiceless aspirated alveolar stop occurs word initially,
medially and finally.
/toha/ [tʰbɐ] 'back' 'punggung'
/tom/ [tʰm] 'up' 'keatas'
/ete/ [tʰtʃ] 'leaf' 'daun'
/buto/ [tʰtʃ] 'sore' 'luka pedih'
/a/ Voiced non-back lingual non-continuant.
/doho/ [dɔhɔ] 'pig' 'babi'
/date/ [dɛtʃ] 'male' 'laki-laki'
/bode/ [bɔdɛ] 'navei' 'pusat'
/tade/ [tʰdæ] 'to sew' 'menjahit'
/s/ Voiceless non-back lingual non-continuant.
/sete/ [sɛtʃ] 'to lose' 'kehilangan'
/nusu/ [nusu] 'to sit' 'duduk'
/viso/ [vis] 'to take' 'ambil'
/gus/ [gus] 'bird [type]' 'macam' burung'
/z/ Voiced non-back lingual continuant.
[6] Voiced alveopalatal affricate occurs word initially and medially preceding high front vowel /i/.
/zie/ [dʒi] 'path' 'jalanan'
/zi/ [dʒi] 'to climb' 'nakl'
/bozit/ [bɔdʒɪtʃ] 'red' 'merah'
/bouzi/ [bʊdʒɪ] 'fish [type]' 'macam' ikan'
[dz] Voiced alveolar affricate occurs elsewhere word initially and medially.
/zagusu/ [dʒagu'su] 'to bite' 'menggigit'
/zait/ [dʒait] 'dull' 'dempak'
/nzubu/ [nudʒu'ba] 'floor' 'lantai'
/duzu/ [dʒi] 'to stand' 'berdiri'
/n/ Lingual nasal continuants.
/neba/ ['n̥e̥ba] 'seed' 'biji'
/ni/ 'here' 'disini'
/banana/ ['bana' 'n̥a] 'sternum' 'tulang dada'
/bunhu/ ['bunhu' 'n̥a] 'buttocks' 'pantat'
/1/ Non-nasal lingual sonorants.
[1] Voiced alveolar lateral occurs word initially and medially.
/lahi/ ['l̥ahi] 'wife' 'isteri'
/loha/ ['l̥oha] 'upper arm' 'lengan atas'
/aliso/ ['al̥iso] 'vein' 'pembuluh darah'
/balim/ ['balim] 'earthquake' 'gempa bumi'

3.33 Back linguals
/k/ Voiceless back lingual non-continuant.
[6] Voiceless aspirated back velar stop occurs word initially and medially preceding back vowels.
/kohu/ [kʰo] 'bread fruit' 'sukun'
/kuku/ [kʰuk] 'chicken' 'ayam'
/fako/ [fako] 'eye' 'mata'
/kamia/ [kʰami] 'axe' 'kapak'
[kh] Voiceless aspirated velar stop occurs word initially and medially preceding front vowels and finally.
/ke/ [kʰe] 'stone' 'batu'
/kilat/ [kʰiˈl̥at] 'tall' 'tinggi'
/oketo/ ['skʰeˌko] 'to turn over' 'terbalik'
/nobu/ [n̥o] 'fork' 'buku' 'jungle' 'hutan'
/g/ Voiced back lingual non-continuant.
[6] Voiced velar stop occurs word initially and medially preceding front and high back vowels.
/gesi/ [ˈgezi] 'bird [type]' 'macam' 'burung'
/gobut/ [ɡibut] 'blue' 'biru'
/kwegi/ ['kʰegi] 'to dance' 'menari'
/giha/ [ˈgiha] 'shoulder' 'bahu'
[6] Back velar stop varies from voicing to voicelessness preceding mid and low back vowels.
/gha/ ['ɡha] 'green' 'hijau'
/gago/ ['ɡa] 'to speak' 'berbicara'
3.4 Vowels (+syll.)

3.41 Non-back vowels

/i/ High non-back vowels.

[i]/ High front unrounded vocoid with palatal transition
occurs intervocally and word initially preceding other
vowels.

/ie/ [i'ɛ] 'bird [type]' ['macam'] burung

/ia/ [i'ə] 'firewood' 'kayu api'

/oia/ [i'ə'a] 'mother' 'ibu'

/beia/ [bii'əa] 'to fly' 'terbang'

/i/ High front unrounded vocoid elsewhere word
initially, medially and finally.

/ita/ [i'ta] 'shadow' 'bayang'

/is/o 'tongue' 'lidah'

/bis/u/ [biss] 'to lie down' 'berbaring'

/gi/ [gill] 'to rub' 'menggosok'

/e/ Mid non-back vowels.

[e]/ Mid front unrounded vocoid occurs word initially and
medially preceding /i/ and /ə/.

/eaki/ [eakh] 'bird [type]' ['macam'] burung

/loke/a/ [lokhe'a] 'rat' 'tikus besar'

/eleot/ [ei'məθ] 'sharp' 'tajam'

/bea/ [bea] 'grub' 'tempayak'

/æ/ Low non-back vowels.

[æ] Low front unrounded vocoid occurs initially, medially
and finally.

/åde/ [ədə] 'bird [type]' ['macam'] burung

/mæt/ [məθ] 'yesterday' 'kemarin'

3.42 Back vowels

/u/ High back vowels.

[u]/ High back rounded vocoid with labial transition
occurs initially and medially preceding other
vowels.

/bue/ [bu'ɛ] 'become large' 'menjadi besar'

/bui/ [bu'i] 'bird [type]' ['macam'] burung

/kugui/ [k乎u'ui] 'to dance' 'menari'

/ubae/ [u'bae] 'fish [type]' ['macam'] ikan

/u/ High back rounded vocoid occurs elsewhere word
initially, medially, and finally.

/una/ [una] 'to squeeze' 'memeras'

/u/o/ [ulu] 'cloud' 'awan'

/agute/ [agutə] 'to break' 'mematah'

/εh/ [εh] 'to bathe' 'mandi'

/ο/ Mid back vowels.

[ɔ]/ Mid back rounded vocoid occurs initially and
medially preceding /u/.

/ouha/ [ou'ha] 'knee' 'lutut'

/λoube/ [λoube] 'banana [type]' ['macam'] pisang

/ouda/ [ou'da] 'to align' 'melurusan'

/gouia/ [gouia] 'coffin' 'peti mayat'

/ɛ/ Lower mid back rounded vocoid occurs elsewhere.

/ɔhe/ [ɔhe] 'to breathe' 'menafasi'
3.5 General restrictions on segments and features

In Section 2.1 syllable types were described. In the present section segment distribution within the syllable may be stated in terms of the following formula:

\[(C_1) V (C_2)\]

We may now specify the members of the consonant - vowel classes as follows:

- \(V\) represents any vowel.
- \(C_1\) represents any consonant.
- \(C_2\) represents only \(b, t, k, m, s/\).

We may restate some separate aspects of these conditions on occurrences for \(C_2\) as follows:

1. A consonant is labial if it is a syllable final (.) nasal.

\[\text{[-syll.]} \rightarrow \text{[labial]} / \text{[nasal]}\]

Examples are:

/\text{tom}/ \quad /\text{tom}/ \quad /\text{migim}/ \quad /\text{migim}/

/\text{knife}/ \quad /\text{pisau}/ \quad /\text{knife}/ \quad /\text{pisau}/

2. A non-nasal consonant is voiceless in syllable final position.

\[\text{[-nas.]} \rightarrow \text{[voi.]} / \_

\]

Examples are:

/\text{mabo}/ \quad /\text{mabo}/

/\text{bamboo}/ \quad /\text{bamboo}/

3. A consonant is alveolar if it is a syllable final fricative.

\[\text{[-syll.]} \rightarrow \text{[lingual]} / \text{[cont.]}\]

Examples are:

/\text{chusot}/ \quad /\text{chusot}/

/\text{in back of}/ \quad /\text{dibelakang}/

/\text{fa}sba/ \quad /\text{fa}sba/

/\text{arrow shaft}/ \quad /\text{tangkai anak}/

/gua/ \quad /\text{gua}/

/\text{bird [type]}/ \quad /\text{macam}/

/burung/

Some further phonetic detail is added by the following general processes:

1. Following /\text{h}/ vowels tend to be laryngealized. This is restated in the following formula:

\[\text{V} \rightarrow \hat{\text{V}} / \_\_\_.\]

Examples are:

/\text{aha}/ \quad /\text{aha}/

/\text{mouth}/ \quad /\text{mulut}/

/\text{bana}/ \quad /\text{bana}/

/\text{sternum}/ \quad /\text{tulang dada}/

2. Vowels are lengthened in word final position. This is restated in the following formula:

\[\hat{\text{V}} \rightarrow \text{V} / \_\_\_.\]

Examples are:

/\text{digehi}/ \quad /\text{digehi}/

/\text{h}i/: \quad /\text{bow}/ \quad /\text{busur}/

/\text{bohu}/ \quad /\text{bohu}/ \quad /\text{buttocks}/ \quad /\text{pantat}/

A very restricted bit of phonetics turns up in the nasalization of vowels following /\text{h}/ in these forms:

/\text{hutedi}/ \quad /\text{hutedi}/

/\text{spider}/ \quad /\text{lababoba}/

/\text{hohu}/ \quad /\text{hohu}/

/\text{spirit name}/ \quad /\text{nama}/

/\text{semangat}/

Historically, these glottal fricatives /\text{h}/ were probably true nasal consonants.
4. Vowoid interpretation

4.1 Vowoid clusters

From two to three vowoids have been observed in sequences across syllable boundaries. They are summarized pair-wise in Figure 2.

<table>
<thead>
<tr>
<th>ii</th>
<th>ie</th>
<th>ia</th>
<th>iu</th>
<th>io</th>
</tr>
</thead>
<tbody>
<tr>
<td>ei</td>
<td>ee</td>
<td>ea</td>
<td>eu</td>
<td>eo</td>
</tr>
<tr>
<td>ai</td>
<td>ae</td>
<td>aa</td>
<td>au</td>
<td>ao</td>
</tr>
<tr>
<td>ui</td>
<td>ue</td>
<td>uä</td>
<td>ua</td>
<td>uu</td>
</tr>
<tr>
<td>oi</td>
<td>oe</td>
<td>oa</td>
<td>ou</td>
<td>oo</td>
</tr>
</tbody>
</table>

Figure 2. Vowoid Sequences

Examples of the above vowel sequences are:

| /bilibat/ | [ˈbiiˈbat] | 'thin' |
| /fleda/ | [ˈfliˈda] | 'underneath' |
| /tia/ | [ˈtie] | 'sago' |
| /flu/ | [ˈfiu] | 'ironwood' |
| /blo/ | [ˈbiːlo] | 'one' |
| /meida/ | [ˈmeiˈda] | 'weak' |
| /beete/ | [ˈbeet] | 'rat' |
| /lokea/ | [ˈlokeɪˈa] | 'to blow' |
| /teu/ | [ˈfeʊ] | 'peak' |
| /seo/ | [ˈfeʊ] | 'bad' |
| /fais/ | [ˈfeɪs] | 'language' |
| /dae/ | [ˈdaɪ] | 'foot' |
| /naaba/ | [ˈnaabá] | 'to smell' |
| /naufe/ | [ˈnaufá] | 'fire' |
| /nao/ | [ˈnao] | 'leg' |
| /kugui/ | [ˈkʊguˈwiː] | 'to dance' |
| /sue/ | [ˈsuˈe] | 'clothing' |
| /muá/ | [ˈmuˈa] | 'pakaian' |
| /vua/ | [ˈvʊa] | 'to cover' |
| /suusu/ | [ˈsuˈsʊ] | 'five' |
| /suohole/ | [ˈsuˈhoʊəˈli] | 'lima' |
| /toa/ | [ˈtəʊa] | 'bird' |
| /tia/ | [ˈtəɪa] | 'markings' |
| /tloa/ | [ˈtəʊəˈlu] | 'rope' |
| /tousu/ | [ˈtuəˈsu] | 'to aim' |

/doole/ | [ˈdʊəˈlu] | 'to hiccup' |

The bases for claiming these clusters as sequences of two or three nuclei are: (1) a sequence of two simple nuclei is two mora's timing; a sequence of three nuclei is three mora's timing; (2) these are not glides. There are the non-suscept clusters /oa/ and /oe/; there are reverse sequences: /ei/ and /ie/; /ai/ and /ia/; /ui/ and /iu/; /oi/ and /io/; /ea/ and /ae/; /ou/ and /ue/; /eo/ and /oe/; /au/ and /ua/; /ao/ and /oa/; /uo/ and /ou/.

4.2 /i/ and /u/

High front vowoids are phonemicized as /i/, never as /y/ since there is never a contrast between vowel and semivowel function. Furthermore, occurrences of /i/ are all susceptible to interpretation within established syllable and FW patterns as /i/. See under /i/ in the vowel section above for a description of the allomorphs of /i/.

High back vowoids are clearly interpretable as /u/ in all instances, except the form [wiˈba] 'fish [type]' [maˈcam] 'ikan', in which the stress would apparently be on the wrong syllable if [w] were viewed as /u/. For example [uˈiba] violates the regular first syllable stress pattern. Even so, there is no contrast between [wiˈba] and [uˈiba], the latter not occurring. So even in this solitary instance the sequence could be interpreted as an underlying /uiba/ [uˈiba] with a stress adjustment rule in that FW initial environment which shifts stress to the right. In any case it is the only instance of /u/ initial before another vowel. It appears that [wiˈba] complicates the description no matter what route is chosen. The interpretation /uiba/ will be adopted here as most consistent with general phonemic patterns. Also see under /u/ in the vowel section above for a description of the allomorphs of /u/.
5. A morphophonemic process

Word medially /t/ is deleted before /d/, /n/, and /l/. This is restated below:

\[ t \rightarrow \emptyset / x \{ d \} / i \{ i \} \]

\( (x = \text{another segment in the same PW}) \)

Examples are:

/teut/ + /-de/ /teude/ 'to cause to be strong'
'menjadi kuat'

/teut/ + /-na/ /teuna/ 'strength'
'kekuatan'

/teut/ + /-le/ /teule/ 'become strong'
'bikin kuat'

the other hand, creates requisite conditions for raised and advanced tongue blade position and the unimpeded air flow which yields consonant voicing as in the [g] allophone.

References


Notes

1 Work on the Bauzi language began in December, 1975 by my wife, Joyce and me under the auspices of the Summer Institute of Linguistics in cooperation with Cenderawasih University. Initial investigations were carried out mainly in Danau Bira with the help of language informants from Sololibusi. Isak and Tomat, two young men from Agoiogoa, have been our main language teachers. The data upon which this description is based were collected over a five month period. I wish to express my appreciation to Ken Gregerson for reading early drafts of this paper and making helpful suggestions.

2 Bauzi is spoken by an estimated 1000 people living in approximately twelve villages located north of Buremeso on the Mamberamo River, to Bill in the south. A partial listing of village names is located in the map below.

3 The devoicing of this allophone, on the surface of it, may appear unusual, but recent work on tongue root effects in phonology (Gregerson, 1976) describes the mechanism whereby tongue root retraction co-occurs with vowel lowering and devoicing of consonants, among other features. Tongue root advancement, on
1. The phonological word

The phonological word (FW) is established as the domain of a single stress peak. The placement of this peak is predictable by the following general rules:

(1) a. Stress occurs on the penultimate syllable when the word ends in an open syllable ($S_{\text{open}}$).

b. Stress occurs on the ultimate syllable when the word ends in a closed or laryngealized syllable ($S_{\text{closed or laryngealized}}$).

These rules generate the following polysyllabic FWs (where $S = \text{syllable}$):

(2) \[
\begin{align*}
S & \quad S_{\text{open}} \\
S & \quad S_{\text{open}} \\
S & \quad S_{\text{closed or laryngealized}} \\
S & \quad S_{\text{closed or laryngealized}}
\end{align*}
\]

Numerous monosyllabic forms exist, of course, but so far no unambiguous instances of four and five syllable sequences have been found.

The forms in (3) a - e illustrate the varieties of syllable sequences detailed above.

(3) a. $S$

/fo/ 'anak' 'child'
/ha'/ 'darah' 'blood'
/u/ 'tidak ada' 'there is none'

b. $S_{\text{open}}$

/e.ne/ 'pinggir' 'edge'
/kh.h/ 'kebun' 'garden'
/ka.hi/ 'tanah' 'earth'

c. $S_{\text{open}}$

/pe.ta.kas/ 'sabuk' 'loin cloth'
/te.ta.ta/ 'kotoran' 'dirt'
/to.ma.u/ 'pintu' 'door'

d. $S_{\text{closed}}$

/o.hen/ 'lebah' 'bee'
/fo.ken/ 'pendek' 'short'
/te.i.a/ 'perkumpulan' 'meeting'
e. S S $\dot{\text{S}}$ closed /a.fo.\text{ga}/ 'burung hantu' 'spirit bird'

2. The syllable

Central Sentani has three basic syllable types:

(4) V /u/ 'tidak ada' 'there is none'
/o/ 'pohon' 'tree'
CV /ha/ 'tali' 'rope'
/pu/ 'air' 'water'
/î/ 'sagu' 'sago'
CVC /hex/ 'cacing' '[type of] worm'
/hax/ 'darah' 'blood'
/fex/ 'paruh' 'bill/beak'

These syllables combine to manifest the PW patterns summarized above in (2). Restating S as C and V sequences, we may now record the following combinatory possibilities:

(5) S V /u/ 'tidak ada' 'there is none'
/o/ 'pohon' 'tree'
CV /mi/ 'kutu' 'louse'
/ka/ 'ikan' 'fish'
/to/ 'lakilaki' 'man'
CVC /kin/ 'betis' 'calf (of leg)'
/to/ 'telur' 'egg'
/fen/ 'paruh' 'bill/beak'
S$\dot{\text{S}}$ open V.V /au/ 'kapur' 'betel lime'
/ii/ 'api' 'fire'
V.CV /ika/ 'arang' 'charcoal'
/fo/ 'setengah' 'half'
/ana/ 'ibu' 'mother'
CV.V /toa/ 'tuan' 'sir'
/mix/ 'perempuan' 'woman'
/nex/ 'dia/mereka' 'he/they'
CV.CV /hêk/ 'kebun' 'garden'
/hêh/ 'mati' 'dead'
/îli/ 'dahi' 'forehead'
S$\dot{\text{S}}$ open V.V.CV /eina/ 'didalam' 'in'
/aana/ 'dibawah' 'under'
/uuma/ 'rambut' 'hair'

V.CV.V /afəu/ 'bahasa' 'language'
/afau/ 'jauh' 'far'
/epəu/ 'penyu' 'turtle'
V.CV.CV /apulau/ 'lobang' 'hole'
/ifale/ 'barat' 'west'
/upəna/ 'jawab' 'answer'
CV.CV.CV /hokolo/ 'muda' 'young'
/fetëli/ 'kakerlak' 'cockroach'
/tamene/ 'pisau' 'knife'
CV.CV.V /hokau/ 'kantung' 'bag'
/hahai/ 'merah' 'red'
/tomau/ 'pintu' 'door'
CV.V.CV /peikau/ 'busuk' 'bad'
/neuma/ 'bersih' 'clean'
/meuke/ 'kanan' 'right'

SS$\dot{\text{S}}$ closed V.CV /iha/ 'duri' 'thorn'
/ohen/ 'lebah' 'bee'
/iyem/ 'lurus' 'straight'
CV.CV /helen/ 'banyak' 'many'
/himen/ 'gabus' 'type of fish'
/pukun/ 'kancing' 'knot'

In addition to the syllable types already mentioned, Central Sentani also contains a very limited number—three so far—of VC syllables. Two of these are Vowel + Nasal combinations, and the other is a laryngealized vowel (interpreted as Vowel + Glottal). These are:

[em ʃau] /em fəu/ 'pisang' 'banana'
[mix an] /mix an/ 'bujang' 'bachelor'
[tirə] /tirə?/ 'perkumpulan' 'meeting'

Because of the paucity of these syllable types, they are clearly a marginal pattern.

2.1 Limitations on possible patterning of syllables

The patterns of stress alternation, as reflected in the definition adopted above for PW in Section 1, limit the length of
FW to two or three syllables, i.e., all phonological strings longer than three syllables are actually nothing more than a repetition of the basic two or three syllable stress pattern. Theoretically this could lead to an analysis resulting in two or more FWs manifesting one morpheme, but to date no unambiguous examples of this possibility have been discovered.

CVC patterns, phonemically, are limited to isolation or word final position (see Section 3.22 for a discussion of the interpretation of medial nasals and surface CVN syllable patterns). This, together with the virtual non-occurrence of VC patterns proves restrictive to the generation of syllable combinations.

3. The phonological segments

3.1 The distinctive features and allophonic variants

The following chart summarizes the segmental phonemes of Central Sentani:

<table>
<thead>
<tr>
<th>syll. cont.</th>
<th>son. nas.</th>
<th>voi.</th>
<th>-back</th>
<th>+back</th>
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<tbody>
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<td>+</td>
<td>+</td>
<td>-</td>
<td>a</td>
<td></td>
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</tbody>
</table>

Figure 1: Segmental Phonemes

3.11 Consonants

/p/ Labial, non-continuant, non-sonorant, non-nasal, non-syllabic consonant.

[pʰ] Voiceless, bilabial, aspirated stop occurs word initially only.

[pʰa] /pʰa/ 'baha' 'shoulder'

[pʰe] /pʰe/ 'dua' 'two'

[pʰi] /pʰi/ 'busuk' 'bad'

[bʰ] Voiced bilabial stop or fricative occurs word medially and syllable initially.

[bʰa] /bʰa/ 'teman' 'friend'

[bʰe] /bʰe/ 'penyu' 'turtle'

[bʰe] /bʰe/ 'pimping' 'sword grass'

/t/ Front, lingual, non-continuant, non-sonorant, non-nasal, non-syllabic consonant.

[tʰ] Voiceless, aspirated, alveolar stop occurs intervocally before front vowels.

[tʰa] /tʰa/ 'minta' 'ask'

[tʰu] /tʰu/ 'piring' 'plate'

[tʰe] /tʰe/ 'perl' 'go'

[d] Voiced alveolar stop occurs after phonetic syllable nasal. See comments under Section 3.22 for my handling of syllabic nasals.

[dʰa] /dʰa/ 'pancak' 'apex'

[dʰe] /dʰe/ 'sekarang' 'now'

[dʰe] /dʰe/ 'mungkin' 'maybe'

[f] Voiceless alveolar flap occurs word initially and intervocally before middle and back vowels.

[fʰa] /fʰa/ 'sayap' 'wing'

[fʰe] /fʰe/ 'petaka' 'sebul' 'loin cloth'

[fʰo] /fʰo/ 'to' 'orang' 'person'

/k/ Back, lingual, non-continuant, non-sonorant, non-nasal, non-syllabic consonant.

[kʰ] Voiceless, aspirated velar stop occurs in word initial position, and unexpectedly, contiguous to /i/.

[kʰa] /kʰa/ 'perahu' 'canoe'

[kʰi] /kʰi/ 'lurus' 'straight'

[kʰi] /kʰi/ 'busuk' 'bad'
Voiced velar fricative occurs in syllable initial position intervocally, but not contiguous to /i/. [yogu] /yoku/ 'anjing' 'dog' [age] /aka/ 'kanak' 'older'
[hëgë] /hëkë/ 'kebun' 'garden'

Voiced velar stop occurs following a syllabic nasal. See Section 3.22 for my handling of syllabic nasals.
[mëngë] /men/ 'kudu' 'claw'
[këngë fa] /manaka fa/ 'gadis' 'young girl'
[yëngë] /yanako/ 'orang hutan' 'bush man'

Glottal stop occurs word finally only.
[ha] /ha/ 'darah' 'blood'
[he] /he/ 'garam' 'salt'

Back, lingual, non-sonorant, non-nasal, non-syllabic, consonantal continuant.

Voiceless alveolar spirant occurs after V syllable /i/, after /n/, and dissimilates in words beginning with [h].

[isë] /isë/ 'pintar' 'clever'
[manse] /manase/ 'dingin' 'cold'
[hasale] /hahale/ 'cepat' 'fast'

Voiceless glottal spirant occurs word and syllable initial, except for context mentioned under [s] above.

[nahibi] /nahi/ 'terus' 'straight'
[nu] /nu/ 'matahari' 'sun'
[ehe] /he/ 'ya' 'yes'

Following the common process of historical change, it is possible that [s] was the original phonetic characteristic, now being replaced by [h] in all environments where it has not been reinforced by a tongue feature such as /i/, or affected by dissimilation or nasal voicing.

Labial, non-sonorant, non-nasal, non-syllabic, consonantal continuant.

Voiceless labiodental fricative occurs word and syllable initially.

Voelar nasal consonant occurs before velar consonants. See Section 3.22 on syllabic nasals.

[yëngë] /yanako/ 'orang hutan' 'bush man'
[mëngëi] /me neKëi/ 'kudu' 'claw'
[këngë ungu] /kë unuku/ 'sapi' 'broom'

Velar nasal with high rounded offglide occurs after V syllable /u/ medially within words or compound words.
[kë neun'we] /kë neune/ 'panggil' 'call'
[hu reu'nwë] /hu teune/ 'mendorong' 'shoot'
[waunë] /waune/ 'berkata' 'speak'

Alveopalatal nasal occurs after /i/ which manifests a medial V syllable, within words or compound words.

[foine mogale] /foine mokale/ 'memperbaiki!' 'fix'
[huine koge] /huine koge/ 'tawang' 'arrest'
[magelë] /makei na/ 'di mana' 'where'

Alveolar nasal occurs word and syllable initial and freely varies with [n] and [m] in syllable and word final position.

[na] /na/ 'kabut' 'fog'
[nano] /nano/ 'pusat' 'central'
[nea pan] /nea pan/ 'tidak' 'no'

Labial nasal consonant continuant.

Labial nasal occurs word and syllable initial, and freely fluctuates with [n] and [m] in syllable and word final position.

[moni] /moni/ 'ilapar' 'hungry'
[bâme] /bame/ 'tiga' 'three'
[YUM]/yüm]/yum] /yum/ 'kepala' 'head'

See Section 3.2 for comments on this neutralization of nasals.

Non-nasal, non-syllabic lateral, consonant, consonantal continuant.

Voiced lateral occurs syllable initial.
3.12 Vowels

/ɛ/ Non-consonantal, non-nasal, sonorant continuant, in high

[ɛ] High front open vocoid freely varies with [ɛ] before

/ɛ/ Non-consonantal, non-nasal, sonorant continuant, in high

[ɛ] High front open vocoid occurs as the nucleus of all

/ɑ/ Non-consonantal, non-nasal, sonorant continuant, in low

[a] Low back open vocoid occurs as the nucleus of all

/e/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs as the nucleus of all

/æ/ Non-consonantal, non-nasal, sonorant continuant in mid

[c] Mid front close vocoid occurs before consonantal

/e/ Non-consonantal, non-nasal, sonorant continuant, in mid

[ɛ] Mid front open vocoid occurs before consonantal

/ɑ/ Non-consonantal, non-nasal, sonorant continuant in low

[a] Low back open vocoid occurs before consonantal.

/æ/ Non-consonantal, non-nasal, sonorant continuant in mid position.

[ɛ] Central mid open vocoid occurs before consonantal.

/ɑ/ Non-consonantal, non-nasal, sonorant continuant in low

[a] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.

/ɛ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/a/ Non-consonantal, non-nasal, sonorant continuant in low

[a] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in central

[ɛ] Central mid open vocoid occurs in all vocalic slots.

/æ/ Non-consonantal, non-nasal, sonorant continuant in low back

[ɑ] Low back open vocoid occurs in all vocalic slots.
/u/ Non-consonantal, non-nasal, sonorant continuant in high back position.
[ɔ] High back open rounded vocoid occurs in all syllabic slots.

[unulu] /unulu/ 'jiwa' 'spirit'
[hu] /hu/ 'mahatari' 'sun'
[ahau] /ahau/ 'jahu' 'far'

[u ɡʷ] Rounded high back open vocoid with [ɡʷ] or [hʷ] offglide occurs when [u] stressed occurs between two non-stressed vowels.
[unugʷa] /uua/ 'badan' 'body'
[enugʷa] /ua/ 'mulut' 'mouth'
[ka iugʷa] /ka iua/ 'pancing' 'fish hook'

/o/ Non-consonantal, non-nasal, sonorant continuant in mid back position.
[ɔ] Mid back open rounded vocoid occurs in all syllabic slots.

[ho] /ho/ 'kelapa' 'coconut'
[ɔ] /o/ 'pohon' 'tree'
[ŋo] /oko/ 'bulan' 'month'

3.11 Vowel Sequences

The following chart outlines the variety of vowel sequences which can occur across syllable boundaries. Further data will no doubt provide evidence of further variety. In contrast, as only nasals and glottal stop can form the closure of a CVC pattern, and as these patterns are limited phonemically to word final position, no consonant sequences occur.

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<th>i</th>
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</table>

Figure 2. Vowel Sequences

3.2 General phonological conditions

Certain general features characterize the nasal consonants of Central Sentani. These are outlined below.

3.21 Nasal assimilation

The following rules govern nasal assimilation:

(a) When words with a final nasal consonant are uttered in isolation, that final nasal is predominantly velar.

[+ nasal] → [+ velar] / ___ #

(b) When words with a final nasal consonant are uttered in a string, those nasals assimilate to the rounding and point of articulation of the following consonant.

[nasal] → [ɔ back] / ___ . 0

(where ɔ = identical; */= value for a feature; "dot" = syllable division)

Example: [kim fau] / en fau/ 'pisang' 'banana'

(c) Nasals assimilate to the advancement position and rounding of preceding high vowels which manifest a V syllable type.

[+ nasal] → [ɔ front] / [ɔ front] + high + syllable type V

Thus, [ŋ] occur following V syllable [i].

Examples: [ʃ kœŋʷ] / i kœn̩/ 'member' 'give'
[niŋa] /iina/ 'didalam' 'in'

3.22 Syllabic nasals

In Central Sentani a great number of homorganic syllabic nasal plus voiced stop clusters occur phonetically. These are open to three different interpretations: (a) nasal plus consonant sequence; (b) prenasalized stops; or (c) nasal plus phonetically elided vowel plus stop. To choose alternative (a) would be to posit a great number of consonant clusters, a feature quite
uncharacteristic of the language as a whole. Alternative (b) does no more than state that these combinations occur with no explanation of their homorganic nature. I have chosen Alternative (c) for the following reasons:

1. It shortens the inventory of phonemes.
2. It reflects more accurately the general patterns of clustering.
3. It explains and unifies the morphology, e.g.
   \[ \text{erê -rê-m} \rightarrow \text{bo nde} \]
   look-I-him-one time-agreement particle
   'I will see him.'
   \[ \text{erê -u -nê} \rightarrow \text{bo nde} \]
   look-you-him-one time-agreement particle
   'You will see him.'
4. It conforms to phonetically predicted patterns of syllabification of nasals, i.e. nasal plus vowel reduces to syllabic nasal.
5. It explains the restriction of nasal and stop to homorganic pairs where they are suspiciously interdependent.

Rules for syllabification:
1. Vowel elision occurs when a vowel, of the exact phonetic quality as the vowel in the preceding syllable, occurs between a nasal and a stop, nasal, or sibilant, e.g.
   \[ \text{erere} \rightarrow \text{bontone} \text{ BUT erere} \rightarrow \text{bonbo} \text{tone} \]
   is pronounced \text{erere} \rightarrow \text{bontone} \text{ BUT erere} \rightarrow \text{bonbo} \text{tone} \]
   is unaffected.
2. Once the elision occurs, the nasal assimilates to the rounding and point of articulation of the stop, nasal, or sibilant. In return, the stops assume the voicing characteristics of the nasal, e.g.
   \[ \text{/anaken/} \rightarrow \text{*anken} \rightarrow \text{[angen]} \]
3. When the elided vowel is one on which the normal word stress falls, the stress moves back one syllable toward the beginning of the word, e.g.
   \[ \text{/kamâbu/} \rightarrow \text{[kambu]} \]

Rule restrictions:
1. Vowel elision cannot occur in the initial syllable of a word except in the cases where that word forms the second unit of a compound word with one meaning, e.g.
   \[ \text{mê} \rightarrow \text{mêkêi} \text{ 'kuku' 'claw'} \text{ is reduced to [mêngêi]} \text{ BUT hand} \]
   \[ \text{makei} \rightarrow \text{na} \text{ 'di mana' 'where'} \text{ is unaffected.} \]
   \[ \text{where} \rightarrow \text{at} \]
2. Two elisions in a row cannot occur, e.g.
   \[ \text{erê} \rightarrow \text{mê-mê-bonde} \text{ reduces to } \text{erê} \rightarrow \text{mê} \text{ -mê-bonde only.} \]
   \[ \text{look} \rightarrow \text{he-me} \text{ look-he-me.} \]
   Notice that the first \text{mê} \text{ is affected, but not the second.} \]
3. Suggested orthography
   Because of the influence of the national language, Bahasa Indonesia, in the Sentani area, and because it is believed that literateness in one's own language should lead to increased ability to read in another, I am proposing that the Sentani orthography should, as much as possible, comply with the orthographic requirements of Bahasa Indonesia. Suggested symbols, therefore, are:

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Bahasa Indonesia</th>
<th>Central Sentani</th>
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Elided vowels will not be reintroduced. Naturally, considerable testing will need to be carried out before any orthography is accepted.

3 Voorhoeve's comparison is based primarily on Cowan's description of the Eastern dialect. It is interesting to note, however, that while the Eastern and Western dialects share a similar origin story—that of originating from the east—the Central dialect maintains a tradition of arising from a hole in the ground on the island of Ifale.

4 I would like to gratefully acknowledge the patient assistance of Rudi Sekol and Beris Monim who provided the data upon which this report is based. Information was also contributed by Eli Yuangka of Ifale, who was able to provide us with further insight.

5 This rule was first pointed out by Cowan (1965:9).

6 Under the general heading of "ambiguous" morphemes I have included compound words, verbs (with heavy morphology), and words which contain syllabic nasals.

7 Two examples do not comply with this analysis: hatoo 'beilang' 'grasshopper', and retara 'kotoran' 'dirt'. Further investigation of these forms is necessary.

8 One example, ofreu 'gempa bumi' 'earthquake' does not lend itself to this analysis. Further investigation may clarify the interpretation of this form.

References


INFORMATION concerning publication policy and submission of manuscripts is outlined below.

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